United States
Department of
Agriculture

Forest
Service

Intermountain
Region

Wasatch-Cache
National Forest

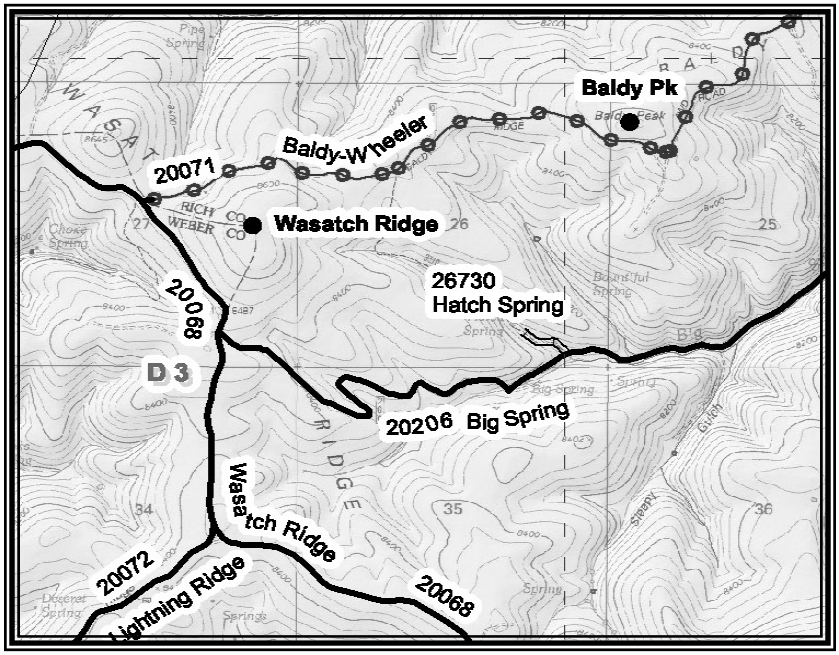
March 2006

Record of Decision

and

Final Environmental Impact Statement

Ogden Ranger District Travel Plan Revision



Ogden Ranger District

Travel Plan Revision

Final Environmental Impact Statement

March 2006

Box Elder, Cache, Morgan, Weber and Rich Counties, Utah

Lead Agency:

USDA Forest Service
Ogden Ranger District
Wasatch-Cache National Forest
507 25th Street, Suite 103
Ogden, Utah 84401
(801) 625-5112

Responsible Official:

Chip Sibbernsen, District Ranger
Ogden Ranger District
Wasatch-Cache National Forest
507 25th Street, Suite 103
Ogden, Utah 84401
(801) 625-5112

For Futher Information Contact:

Rick Vallejos, Recreation Manager
Ogden Ranger District
Wasatch-Cache National Forest
507 25th Street
Ogden, UT 84401
(801) 625-5112

ABSTRACT: The Final Environmental Impact Statement (FEIS) documents the analysis of six alternatives that were developed for possible travel management of motorized trails and roads for areas of the Wasatch-Cache National Forest administered by the Ogden Ranger District. Alternative 1 was designed primarily to consider the values inherent in inventoried roadless areas. Alternative 2 was designed to emphasize a variety of motorized recreation and access opportunities. Alternative 3 was designed to consider important aspects of wildlife habitat management. Alternative 3a is the preferred alternative in the Draft EIS that balances considerations in Alternatives 1 through 3, emphasizing wildlife hababitat as in Alternative 3, but also providing for very important access needs to private lands and for administrative purposes. Alternative 4 is the "No Action" Alternative that would continue current management under the existing Ogden Travel Map. Alternative 5 was formulated from additional public comments and analysis. The Deciding Officer for this action is Chip Sibbernsen, District Ranger for the Ogden Ranger District, Wasatch-Cache National Forest. For more information, please contact Rick Vallejos at the District Office at 801-625-5112.

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDAs TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202)720-6382 (TDD).

USDA is an equal opportunity provider and employer."

Executive Summary

Introduction

This summary presents an overview of the Ogden Travel Plan Final Environmental Impact Statement (FEIS). It briefly describes the Purpose and Need for Action, significant issues and major changes between the draft and final. It also summarizes the alternatives and their effects including relevant mitigation and monitoring. It concludes with a discussion of the decision to be made.

Purpose and Need

There are a number of reasons for updating the Travel Plan including specific direction from the Revised Forest Plan (USDA Forest Service 2003) and an overall Agency Strategic Plan of improving motorized recreation management. Further, a revised travel plan is needed to address the substantial increase of in ATV use in recent years. There is a need to systematically analyze routes to determine which should be incorporated into the system and which should be closed and rehabilitated. This FEIS reviews the road/trail system in an effort to provide quality motorized recreation and enhance other resources values.

Issues

The following significant issues were identified from public comments and internal interdisciplinary review by the Forest Service. These issues drove alternative development.

Wildlife Issue

Wildlife habitat may be affected negatively by increased road densities. From comments received during scoping, it is apparent that this is a significant issue for both the public and the USFS.

Some people felt the connectivity of the regional wildlife corridor might be impacted by motorized travel and routes. Road densities have been tied to fragmentation and the need to maintain connectivity of habitats for the movement of wildlife through the area. The concern was raised during scoping that increased road density and changing uses of roads and trails have an effect on fragmentation of wildlife habitats.

Roadless Areas Issue

Some comments expressed concerns that values of inventoried roadless areas may be negatively affected by creating new access routes into them. Changes to the values identified for inventoried roadless areas are perceived by the public as a significant issue.

Recreation Issue

Comments from forest users expressed that the USFS is not providing diverse trail-based recreation opportunities. In addition, there was a concern whether additional ATV activity would dramatically change the nature and number of both motorized and non-motorized recreation users to the District.

Changes between Draft and Final EIS

The most significant change between the draft and final EIS is a new alternative (#5). Alternative 5 was developed in response to comments on the draft EIS and the changes from the proposed alternative 3a are summarized below. The final management decisions on some specific roads was based on continuing discussions with local governments, landowners, users, and resource issues identified by Forest Service specialists. A number of other less significant changes were made in all chapters of the EIS. These were mostly clarifications and corrections to improved readability.

Summary of Alternatives

This analysis considers four action alternatives (1, 2, 3, 3a, and 5) to the original proposed action presented to the public through scoping in 2003. A No Action Alternative is also presented (4). Brief statements on the intent of the alternatives are provided here.

Alternative 1
Alternative 1 is designed to divert motorized use away from inventoried roadless areas in order to preserve their integrity and to minimize motorized impacts on other resources including wildlife habitat, watershed protection and public appreciation of the forest. This alternative emphasizes the value and importance of maintaining roadless and non-motorized landscapes. It focuses on protecting inventoried roadless areas and concentrating motorized recreation in areas where this type of use is already occurring.

Alternative 2
In Alternative 2, travel route management proposals were based on providing additional and improved motorized recreation opportunities. This alternative has new routes proposed that would create loop trails using the existing system of roads. It also allows public use on routes that in the past were closed, open only for administrative use, or were not on the previous travel plan as an open route. This alternative responds to the public comment for additional motorized routes.

Alternative 3
Alternative 3 was created in response to the numerous comments from the scoping process on the negative effects of motorized recreation on wildlife populations and habitat. This alternative provides an array of road and motorized trail experiences while minimizing or reducing the effects to a broad range of wildlife species and their habitats. Alternative 3 concentrates motorized access in areas where these activities are presently occuring, while reducing existing routes or avoiding new trail and road construction in areas that are more isolated, have less disturbance, and provide generally higher quality wildlife habitat. This alternative also minimizes the creation of new roads and motorized trails within the forest carnivore habitat/corridor especially within the Curtis Creek and Monte Analysis areas.

Alternative 3a (DEIS Preferred)
This alternative is similar to and derived from Alternative 3, the wildlife emphasis alternative, but with some different actions on a limited number of routes. This difference is primarily due to administrative need or to emphasize another resource in specific areas. Substantial additional interdisciplinary analysis went into the development of this alternative considering tradeoffs between the various alternatives and there was considerable line officer input.

Alternative 4 (No Action)
Under Alternative 4, the existing 2004 Wasatch-Cache National Forest Travel map for the Ogden and Logan Ranger Districts would determine the status of most of the system of routes. Although there are other routes that exist and are being used by the public, the No Action alternative would aggressively manage routes limiting the transportation system to only those roads on the current Travel Plan map and any road used for administrative access.

Alternative 5 (Forest Service Selected)
Alternative 5 was developed by the Forest Service after public comments on the five alternatives described in the draft environmental Impact statement had been reviewed. The purpose was to improve resolution of issues raised in public comments. Most of the actions to roads and trails of the DEIS Preferred Alternative 3a were retained.

Summary of Effects

In general, the effects of the alternatives are largely predictable given the intent of the alternative development described above. Specific effects of the alternatives as they related to individual resources and uses are described in more detail in Chapter 4 of the Draft Environmental Impact Statement.

Table 1 Comparison of Alternatives

	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 3a**	**Alternative 4**	**Alternative 5 (Selected Alternative)**
Route Status	**Miles**	**Miles**	**Miles**	**Miles**	**Miles**	**Miles**
Open Road*	187	206	202	208	198	202
Closed Route*	56	48	56	50	66	50
Motorized Trail*	39	61	35	49	46	58
Non-Motorized Trails*	141	107	128	116	110	113
Unauthorized routes*	55	55	56	55	57	54
Total**	**477**	**477**	**477**	**477**	**477**	**477**
Miles of Open roads and Motorized Trails	226	267	237	256	244	260
Miles of Seasonal Closures	1	8	5	11	7	13
Miles of Administrative Closures	53	49	61	57	51	60
Miles open without any closures	171	210	171	189	185	187
Miles of new Open Motorized trails	34	29	10	13	0	18
Miles of Unauthorized Routes to be reclaimed	55	55	56	55	57	54
Number of New Gates	11	10	11	9	0	15
Number of Relocated Gates	1	2	1	2	0	2
Significant Issues to which Alternatives Respond	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**
Motorized activities negatively affect wildlife habitat	Moderate protection of wildlife habitat.	Least protection of wildlife habitat.	Best protection of a range of wildlife habitats.	Good protection of wildlife habitat.	Moderate protection of wildlife habitat.	Good protection of wildlife habitat.
Motorized activities negatively affect regional wildlife corridor	Good protection of wildlife corridor.	Least protection of wildlife corridor.	Best protection of wildlife corridor.	Good protection of wildlife corridor.	Good protection of wildlife corridor.	Good protection of wildlife corridor.
Negative effects to roadless areas	Best protection of roadless areas values.	Least protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.
Inadequate range of trail-based recreation opportunities	Good range of motorized trails opportunities.	Best range of motorized trails opportunities.	Least range of motorized trails opportunities.	Good range of motorized trails opportunities.	Moderate range of motorized trails opportunities.	Good range of motorized trails opportunities.

*Open Road: Roads open to motorized use, seasonally closed, administrative use only, county or state jurisdiction; Closed route: system routes already closed or will be closed to public use and will be scheduled for removal from the road management inventory; Motorized trails: existing and new proposed trails open to motorcycles or ATVs; Unauthorized routes: routes created by users or previous land owners which will not be managed as part of the Forest Service transportation system.
**Approximate mileage within plus or minus one mile.

Mitigation and Monitoring Common to All Alternatives

Many aspects of this project will be monitored as part of the Forest Plan monitoring program. Additionally, the Ogden Ranger District will be monitoring the implementation of this plan including mitigation. The mitigation is designed to avoid or minimize a variety of impacts including those on water quality, aquatic species, wildlife, recreation etc. Specific mitigation requirements are described in Appendix D.

Decisions to be Made

The project Record of Decision (ROD) will document the system of summer roads and motorized trails on the ORD. The ROD will describe what types of vehicles can be used, seasonal restrictions, other timing restrictions and those routes that are open only to Forest Service "administrative use" for the purpose of law enforcement, infrastructure maintenance and fire protection. The ROD will also document mitigation measures to reduce environmental impacts associated with the transportation system and its use.

The decision will be made by the Ogden District Ranger of the Wasatch-Cache National Forest and will be subject to public review and appeal.

Table of Contents
Final Environmental Impact Statement

Executive Summary S - 1

Chapter 1 Purpose and Need 1-1
1.1 Introduction 1-1
1.2 Proposed Action 1-2
1.3 Purpose and Need 1-1
1.3.1 Purpose and Need 1-2
1.3.2 Forest Service Direction 1-3
1.3.2.1 Forest Service Manual 1-3
1.3.2.2 Forest Service Handbooks 1-3
1.3.2.3 Forest Plan 1-3
1.3.2.4 Incorporation by Reference 1-10
1.4 Forest Plan Consistency 1-10
1.5 Decisions to be Made 1-11
1.6 Public Involvement 1-11
1.6.1 Public Comments 1-12
1.6.2 Issues and Indicators 1-12
1.6.3 Significant Issues 1-12
1.6.4 Significant Issues that Prescribe Mitigation 1-13
1.6.5 Public comments Not Addressed in this Analysis 1-14
1.7 Permits and Authorizations 1-15

Chapter 2 The Alternatives 2-1
2.1 Introduction 2-1
2.2 Formulation of Alternatives 2-1
2.3 Alternatives Considered and Eliminated from Detailed Analysis 2-2
2.4 Alternatives Considered in Detail 2-3
2.4.1 Alternative 1 2-3
2.4.2 Alternative 2 2-4
2.4.3 Alternative 3 2-4
2.4.4 Alternative 3a 2-5
2.4.5 Alternative 4 – No Action 2-5
2.4.6 Alternative 5 – The Selected Alternative 2-7
2.5 Actions Common to All Alternatives 2-7
2.5.1 Annual Operations and Maintenance Plans 2-7
2.5.2 Concentrated Use Areas and Dispersed Recreation Sites 2-7
2.5.3 Emergency and Administrative Use of Roads 2-7
2.5.4 Gravel Sources 2-8
2.5.5 Mixed Use Analysis 2-8
2.5.6 Non-Motorized Use on Motorized Trails 2-8
2.5.7 Noxious Weeds 2-9
2.5.8 Private Lands and other Non-National Forest System Lands 2-9
2.5.9 Revised Forest Plan Guidance 2-9
2.5.10 Roadless Areas 2-10
2.5.11 Roads Analysis 2-10
2.5.12 R.S. 2477 Roads 2-10
2.5.13 Forest Roads and Trails 2-10
2.5.14 Temporary Closures 2-10
2.5.15 Heritage Preservation 2-10
2.6 Monitoring Activities Common to all Alternatives 2-11
2.7 Alternative Comparisons 2-11
2.7.1 General Comparison 2-11

2.7.2 Relative Changes to Transportation System 2-13
2.8 Mitigation 2-16
2.9 Implementation 2-17
2.10 Forest Plan Consistency 2-17

Chapter 3 Affected Environment 3-1
3.1 Introduction 3-1
3.1.1 Travel Planning on the Ogden RD 3-2
3.2 Transportation Systems 3-2
3.2.1 Area of Influence 3-3
3.2.2 Existing Conditions 3-3
3.3 Watersheds and Aquatic Resources 3-5
3.3.1 Area of Influence 3-5
3.3.2 Existing Conditions 3-5
3.3.2.1 Hydrology 3-5
3.3.2.2 Water Quality 3-5
3.3.2.3 Wetland and Riparian Resources 3-6
3.3.2.4 Aquatic Resources 3-6
3.4 Soils 3-8
3.4.1 Area of Influence 3-8
3.4.2 Existing Conditions 3-8
3.5 Vegetation 3-9
3.5.1 Area of Influence 3-9
3.5.2 Existing Conditions 3-9
3.5.2.1 Rare Plants 3-9
3.5.2.2 Noxious Weeds 3-10
3.6 Wildlife 3-11
3.6.1 Area of Influence 3-11
3.6.2 Existing Conditions 3-13
3.6.2.1 Big Game Species 3-13
3.6.2.2 WCNF Management Indicator Species 3-17
3.6.2.3 Threatened, Endangered, Proposed and Candidate Species 3-23
3.6.2.4 Forest Service Intermountain Region Sensitive Species 3-27
3.6.2.5 Neotropical Migratory/Song Birds 3-33
3.6.2.6 Species at Risk 3-34
3.7 Recreation 3-35
3.7.1 Area of Influence 3-35
3.7.2 Existing Conditions 3-35
3.7.3 General Recreation 3-35
3.7.4 Motorized Recreation 3-36
3.7.5 Non-Motorized Recreation 3-37
3.7.6 Recreation Opportunity Spectrum (ROS) 3-38
3.8 Scenery Resources 3-38
3.8.1 Area of Influence 3-38
3.8.2 Existing Conditions 3-38
3.9 Private Lands, Permitted Uses, and Fire Management 3-39
3.9.1 Area of Influence 3-39
3.9.2 Existing Conditions 3-39
3.10 Roadless Areas 3-40
3.10.1 Area of Influence 3-40
3.10.2 Background 3-40
3.10.3 Existing Condition 3-41
3.10.3.1 Values of Roadless Areas as Wilderness or as Roadless 3-41
3.11 ORV Business Environment and Social Setting 3-43
3.11.1 Existing Conditions 3-43

3.12 Air Quality 3-44
3.12.1 Existing Conditions 3-44
3.13 Heritage Resources 3-44
3.13.1 Background 3-44
3.13.2 Area of Influence 3-45
3.13.3 Existing Condition 3-45

Chapter 4 Environmental Effects 4-1
4.1 Introduction 4-1
4.1.2 Introduction to Alternative 4-1
4.2 Effects on Transportation System 4-2
4.2.1 Introduction 4-2
4.2.2 Issues Addressed 4-2
4.2.3 Effects Analysis Methods and Assumptions 4-2
4.3 Effects on Watersheds and Aquatic Resources 4-3
4.3.1 Introduction 4-3
4.3.2 Issues Addressed 4-3
4.3.3 Area of Influence 4-4
4.3.4 Effects Analysis Methods and Assumptions 4-4
4.3.5 Direct and Indirect Effects 4-5
4.3.5.1 Effects common to all Alternatives 4-5
4.3.5.2 Effects by Alternative 4-6
4.3.5.3 Mitigation 4-8
4.3.5.4 Unavoidable Adverse Effects 4-8
4.3.5.5 Short Term vs. Long Term Productivity 4-8
4.3.5.6 Irreversible and Irretrievable Commitments 4-8
4.4 Effects on Soils 4-11
4.4.1 Introduction 4-11
4.4.2 Issues Addressed and Management Indicators 4-11
4.4.3 Effects Analysis Methods and Assumptions 4-11
4.4.4 Direct and Indirect Effects 4-11
4.4.4.1 Effects Common to all Alternatives 4-12
4.4.4.2 Effects by Alternative 4-12
4.4.4.3 Unavoidable Adverse Effects 4-13
4.4.4.4 Short Term vs. Long Term Productivity 4-13
4.4.4.5 Irreversible and Irretrievable Commitments 4-13
4.4.4.6 Mitigation 4-13
4.5 Effects on Vegetation 4-14
4.5.1 Introduction 4-14
4.5.2 Issues Addressed and Management Indicators 4-14
4.5.3 Effects Analysis Methods and Assumptions 4-14
4.5.4 Direct and Indirect Effects 4-14
4.5.4.1 Effects Common to all Alternatives 4-14
4.5.4.2 Effects by Alternative 4-15
4.5.4.3 Unavoidable Adverse Effects 4-16
4.5.4.4 Short Term Uses vs. Long Term Productivity 4-16
4.5.4.5 Irreversible and Irretrievable Commitments 4-16
4.5.4.6 Mitigation 4-16
4.6 Effects on Wildlife 4-16
4.6.1 Introduction, Issues Addressed and Indicators 4-16
4.6.2 Effects Analysis Assumptions 4-16
4.6.3 Direct and Indirect Effects 4-17
4.6.3.1 Effects on General Wildlife 4-18
4.6.3.2 Effects on Management Indicator Species 4-27
4.6.3.3 Effects on Federal Listed/Candidate Species 4-30

4.6.3.4 Effects on Intermountain Sensitive Species 4-34
4.6.3.5 Effects on Migratory Birds 4-39
4.6.3.6 Effects on Species at Risk 4-41
4.6.4 Mitigation 4-42
4.7 Effects on Recreation 4-42
4.7.1 Introduction 4-42
4.7.2 Issues Addressed and Measurement Indicator 4-42
4.7.3 Effects Analysis Methods and Assumptions 4-42
4.7.4 Direct and Indirect Effects 4-43
4.7.4.1 Effects Common to all Alternatives 4-44
4.7.4.2 Effects by Alternative 4-47
4.7.4.3 Unavoidable Adverse Effects 4-47
4.7.5 Mitigation 4-47
4.8 Effects on Scenery 4-47
4.8.1 Introduction 4-47
4.8.2 Issues Addressed and Measurement Indicator 4-47
4.8.3 Effects Analysis Methods and Assumptions 4-47
4.8.4 Direct and Indirect Effects 4-48
4.8.4.1 Effects Common to All Alternatives 4-48
4.8.4.2 Effects by Alternative 4-49
4.8.4.3 Unavoidable Adverse Effects 4-52
4.8.5 Mitigation 4-52
4.9 Effects on Private Lands, Permittee Uses and Fire Management 4-52
4.9.1 Issues Addressed 4-52
4.9.2 Effects Analysis Methods and Assumptions 4-52
4.9.3 Effects Common to all Alternatives 4-52
4.10 Effects on Roadless Areas 4-54
4.10.1 Issues Addressed 4-54
4.10.2 Methods and Assumptions 4-54
4.10.3 Direct and Indirect Effects 4-54
4.10.3.1Effects Common to all Alternatives 4-54
4.10.3.2 Effects on Roadless Areas by Alternative 4-56
4.11Effects on ORV Business Environment 4-59
4.12 Effects on Air Quality 4-59
4.13 Effects on Heritage Resources 4-59
4.13.1 Introduction 4-59
4.13.2 Issues Addressed and How Considered 4-59
4.13.3 Effects Analysis Methods and Assumptions 4-59
4.13.4 Effects Common to all Alternatives 4-59
4.13.5 Direct and Indirect Effects 4-59
4.13.6 Mitigation 4-60
4.14 Cumulative Effects Analysis 4-60
4.14.1 Actions Considered in Cumulative Effects Analysis 4-60
4.14.2 Past, Present and Reasonably Foreseeable Future Actions 4-60
4.14.3 Cumulative Effects on the Transportation System 4-62
4.14.4 Cumulative Effects on Watershed, Soils and Aquatic Resources 4-63
4.14.5 Cumulative Effects on Vegetation 4-65
4.14.6 Cumulative Effects on Wildlife 4-66
4.14.7 Cumulative Effects on Recreation 4-68
4.14.8 Cumulative Effects on Scenery 4-69
4.14.9 Cumulative Effects on Private Lands and Permitted Uses 4-69
4.14.10 Cumulative Effects on Roadless Areas 4-70
4.14.11 Cumulative Effects on Heritage Resources 4-71
4.14.12 Cumulative Effects on Air Quality 4-72

Chapter 5 List of Preparers 5-1

Chapter 6 Consultation and Coordination 6-1

Chapter 7 Literature Cited 7-1

Chapter 8 Response to Comments 8-1

Glossary G-1

Appendices

Appendix A Table of Current Roads on the Ogden Ranger District
Appendix B Wildlife Tables
Appendix C Dock Flat and Dry Bread Concentrated Use Areas
Appendix D Mitigation and Monitoring Best Management Practices

Maps

Record of Decision Maps for the five Analysis Areas.
(Curtis Creek, Monte Cristo - Wheatgrass, South Fork, Ogden Front, and Willard - Public Grove)

Final Environmental Impacts Statement (FEIS) packet of maps for Alternatives 1, 2, 3, 3a, 4 and 5 for the five analysis areas on the Ogden Ranger District.

Intentionally left blank

Chapter 1
Purpose and Need

1.1 Introduction

This chapter outlines the environmental review process; introduces the proposed action and the purpose and need it addresses; identifies the decisions to be made regarding the proposal; describes the scoping process and issues; lists permits and consultations which may be required to implement the proposal, and specifies the decisions to be made regarding the proposal.

Subsequent chapters in the document describe the alternatives (Chapter 2), provide information on the current condition of potentially affected resources (Chapter 3), identify environmental consequences of the alternatives (Chapter 4), lists the preparers of this Final environmental impact statement (FEIS) (Chapter 5), and document consultation and coordination with other organizations (Chapter 6). A glossary and references section is also provided.

Because the proposed action has the potential to significantly affect the human environment, the National Environmental Policy Act (NEPA) of 1969, as amended, requires that an EIS be prepared to assess and disclose the environmental affects of the proposal and alternatives for the proposed action.

Function of the EIS

The primary purpose of an EIS is disclosure of the environmental effects of implementing a proposed action or any of the alternatives. The EIS is not a decision document. The USDA Forest Service decision associated with this analysis will be documented in a separate Record of Decision (ROD) signed by the District Ranger. Decisions to be made in consideration of this environmental analysis are described later in this chapter. In particular, the EIS is intended to:

- Document the development and evaluation of the proposed action, and alternatives as the basis for a Forest Service decision.
- Provide the site-specific environmental analysis of the activities encompassed by the range of alternatives.
- Describe, analyze, and disclose the biological, physical, and social impacts associated with implementing each of the alternatives.
- Identify the long-term, direct, and indirect effects of the alternatives (40 CFR 1508.8).
- Disclose the effects of past, present, and reasonably foreseeable future actions that interact in a cumulative fashion with the direct and indirect impacts (40 CFR 1508.7).
- Indicate possible mitigating measures that may be used to avoid, minimize, eliminate, or reduce adverse impacts (40 CFR 1508.20).
- Provide a comprehensible, reliable, and informative document for interested public agencies, groups, individuals and affected parties.

1.2 Proposed Action

The USDA Forest Service (FS) proposes to update the travel management plan for the Ogden Ranger District (ORD). This plan focuses on summer season motorized travel routes and how these routes will be used. This analysis and disclosure will assess the effects of alternatives on physical, biological and social resources.

The Forest Service proposed action for the Draft EIS was similar to the wildlife emphasis alternative, but with some different actions on a limited number of routes. This difference is primarily due to administrative need or to emphasize another resource in specific areas.

The proposed action would provide:

1. 208 miles of classified road that would be managed as open.
2. 50 miles of classified road that would be managed as closed.
3. 49 miles of motorized trail would be managed as open.
4. 55 miles of unauthorized routes would be rehabilitated.

5. 9 new gates and two relocated gates.
6. The Skyline Trail from North Ogden Divide to Inspiration Point will not be open to motorized use until July 15th to protect goat-kidding areas.
7. Tilda Springs will have additional motorized ATV trails.

The final alternative selected in the Record of Decision is a modification of this proposed action. This new alternative 5 has been analyzed and the effects disclosed in chapter 4 of this EIS.

1.3 Purpose and Need

This section includes both the **specific rationale** for the proposed action, which identifies the purpose and need for action, and the **sources of guidance**, which form the context within which the proposal was developed.

1.3.1 Purpose and Need for the Proposed Project

The **purpose** of this project is to begin to implement the framework of the 2003 Forest Plan Revision for the Wasatch-Cache National Forest (WCNF), for the objectives of motorized travel management. Objective **2.a.** Update the Salt Lake, Ogden and Logan Ranger District Travel Management Plans within 5 years (includes user created route inventory, maintenance levels 1 and 2 roads analysis, updating of Road Management Objectives, and refining of winter decisions where appropriate).

The USDA Forest Service Strategic Plan for Fiscal Years 2004-08 includes a goal to provide outdoor recreation opportunities with improved management of off-highway vehicle use (USDA Forest Service, FS-810, November 2004). Forest Service Chief Dale Bosworth has identified unmanaged outdoor recreation, especially inappropriate OHV use, as one of the four main threats to public lands today (Bosworth, January 16, 2004). In response to this concern, the agency recently proposed a National Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule to mitigate problems with unmanaged motorized use (Federal Register, November 9, 2005). The Ogden Travel Plan revision will complement national policy.

As a site-specific action the purpose of the proposed action is to provide the public a safe and reliable system of roads and motorized trails that provide for quality motorized recreation and motorized administrative access for agency personnel and permittees while providing for healthy wildlife habitat, vegetation, stable soils, and high quality water.

Utah Department of Motor Vehicles data on the number of ATV registrations from 1998 to 2004 shows a statewide increase of 153 percent. Similarly, registrations for Weber, Box Elder, Davis, Cache and Rich Counties increased 231%. The same data also shows that the number of registered ATV's for the same five counties makes up approximately 28.5% of the total number of ATV's for the entire state. In other words, over a quarter of all the vehicles registered in the State of Utah are owned by citizens who live within a 15 to 30 minute drive from the Ogden RD (Utah Department of Motor Vehicles 2004). A travel plan revision is **needed** to address this dramatic increase in demand for motorized recreational experiences since the last Ogden RD travel plan revision in 1991.

The system of roads and motorized trails on the Ogden RD has been evolving since the mid-20th century. The area being studied in this analysis contains a number of historic roads and trails that were established before they were incorporated into the National Forest System (NFS). Some of these historical roads and trails were incorporated into the Ogden RD travel system when the 1988 and 1991 travel management plans were completed. Traces of many other routes have remained on the ground but these were not identified on the travel plan map. Many of these trails have continued to be used by the public even though they were not part of the approved system of roads and trails. Unauthorized motorized recreational use has resulted in a proliferation of user created trails, eroded hillsides, and introduction of noxious weeds, trail user conflicts, and disturbance to wildlife. There is a **need** to systematically analyze which of these historic and user created trails should be incorporated into the system and which should be closed and rehabilitated to begin to correct these problem areas.

By carefully considering what should be included in its transportation system, the Ogden RD will be in position to provide quality motorized recreation opportunities, better manage increased demand, provide reliable admin access and reduce environmental damage.

1.3.2 Forest Service Direction

Direction for the management and administration of NFS lands is provided from many sources, including the USFS Manual (FSM), USFS Handbooks (FSH), the revised Forest Plan (USDA Forest Service, 2003). The following summarizes the direction provided from these sources.

1.3.2.1 Forest Service Manual

Forest Service Manual (FSM) sections 2352 and 2353 provide the policy for managing National Forest roads and trails. FSM 7710 provides policy for transportation system analysis and planning. These portions of the agency manual provide general guidance on the topic of transportation and recreation planning and are derived from laws enacted by Congress that authorize the Secretary of Agriculture to administer the National Forests and to issue necessary regulations.

1.3.2.2 Forest Service Handbooks

Forest Service Handbooks (FSH) also provide guidance for the management and administration of national forests. Direction and guidance relevant to travel management is contained in the following handbooks:

- FSH 2309.18 Trails Management Handbook
- FSH 7709.55 Transportation Management Planning Handbook

1.3.2.3 Forest Plan

Forest Plans establish guidance for project level decisions. The Wasatch-Cache (WCNF) has recently revised the 1985 Forest Plan. The Final EIS, Record of Decision, and Revised Forest Plan were released in March 2003. Management direction, standards, and guidelines from the Revised Forest Plan have been incorporated into the proposed action and alternatives for this proposal. Provided below are those management areas desired future conditions, goals, sub-goals, standards and guidelines that directly discuss or relate to travel management, as well as management prescriptions present on the Ogden RD. Other management direction for protection or use of biological or physical resources is also in effect though not specifically stated below. For these and other less directly pertinent Forest Plan direction, see Chapter 4 in that revised Forest Plan. A copy of the WCNF Plan is available in the project file, and it can be viewed on the forest website (USDA Forest Service, 2003 at http://www.fs.fed.us/r4/wcnf/projects/planning)

The Ogden RD and Forest wide Desired Future Conditions

Desired future conditions (DFCs) for the Ogden RD can generally be understood by referring to Forestwide DFCs. The details of these DFCs are not presented here, but the Forest Plan broadly covers desired conditions for Air Quality, Soil, Water, Aquatic, Riparian, Wildlife, Vegetation, Botanical, Weeds, Fire Management, Minerals, Special Uses, Facilities and Roads, Recreation, Scenic, Heritage, Tribal, Wilderness, Roadless, and Rivers eligible for Wild and Scenic classification (USDA Forest Service, 2003, pp. 4-5 to 4-15).

Specific Direction by Management Area

The Ogden Ranger District has three separate Management Areas in the Revised Forest Plan. (See Forest Plan, pp 4-118). These Management areas are the Bear, Cache Box Elder, and North Wasatch-Ogden Valley.

Bear Management Area (USDA Forest Service, 2003, pp. 4-119 to 4-127)

The Bear Management Area is located along the extreme eastern edge of the Ogden Ranger District. It is approximately Rich County.

Bear Management Area – Roads, Trails and Access Desired Future Conditions

Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and /or alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Seasonal road closures will be used to protect the road surfaces when wet, to minimize impacts to wildlife, and/or to provide non-motorized hunting experiences.

Gravel sources for improvement and maintenance of forest roads will be evaluated and developed. Roads and trails will be clearly marked to inform visitors of allowed types of uses, and users stay on designated routes. Compliance with the current travel plan will be excellent and users will assist with monitoring. Roads and travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Opportunities for motorized recreation will be provided through a series of roads and trails (mostly derived from existing routes) with varying degrees of difficulty, opportunities for viewing scenery, and access to attractions.
Loops will be provided where possible.

Efforts will be made to obtain right-of-ways for public access to the National Forest. Existing right-of ways are maintained.

Bear Management Area – Dispersed Recreation Desired Future Conditions

Dispersed recreation activities and areas will meet a wide variety of user preferences. Separation of some types of recreation uses will be used in reducing conflicts. Opportunities for horse use will be enhanced in suitable areas, such as the Monte Cristo area. The Curtis Creek road will be improved to disseminate recreation from other areas where demand exceeds supply and to provide for increased recreation opportunities. Dispersed opportunities will be emphasized along corridors including Highway 39, Wasatch Ridge, Dairy Ridge, Baldy Ridge loop, and Old and New Canyons, particularly during the fall. Motorized vehicles will stay on clearly marked, designated open, roads and trails. Opportunities for motorized loop systems for ATVs will be evaluated (focusing on existing roads or routes), and trails and trailheads will be considered for development where suitable. Recreationists will keep vehicles and camping impacts within marked areas, and outside of sensitive areas to ensure watershed and other resource protection.

Recreation impacts will be monitored, users will be informed and assist with needed changes in management. Hardening of sites and use of barriers in and near riparian areas will be employed to reduce or prevent unacceptable impacts. Closure of some riparian areas to camping will be accomplished where that use cannot be made compatible with standards for resource protection.

Cache Box Elder Management Area (USDA Forest Service, 2003, pp. 4-128 to 4-138)

The Cache-Box Elder management area is located in the northeast mountain ranges of northern Utah. This is the western portions of the Monte Cristo and Curtis Creek areas on the Ogden Ranger District.

Cache Box Elder Management Area – Roads, Trails and Access Desired Future Conditions

Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and /or alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Gravel sources for improvement and maintenance of forest roads will be evaluated and developed. Seasonal road closures will be used to protect the road surfaces when wet, to minimize impacts to wildlife, and/or to provide non-motorized hunting experiences. Roads and trails will be clearly marked to inform visitors of allowed types of uses, and users will stay on designated routes.

Compliance with the current travel plan will be excellent and users will assist with monitoring. Roads and travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Opportunities for motorized recreation will be provided through a series of roads and trails (mostly derived from existing routes) with varying degrees of difficulty, opportunities for viewing scenery, and access to attractions. Loops will be provided where possible.

Efforts will be made to obtain right-of-ways for public access to the National Forest. Existing right-of ways will be maintained. A priority for right-of-ways will be the linkages to community trails along the front.

Cache Box Elder Management Area – Dispersed Recreation Desired Future Conditions

Dispersed recreation activities and areas will meet a wide variety of user preferences. Separation of some types of recreation uses will be used in reducing conflicts. The headwater area of Curtis Creek and Sinks areas will be explored for accommodating increased dispersed recreation.

Motorized vehicles will stay on clearly marked, designated open, roads and trails. Opportunities for motorized loop systems for ATVs are evaluated, and trails and trailheads will be considered for development where suitable (e.g. Sinks area, Left Hand Fork, Elk Valley, and Tilda Springs).

Recreationists will keep vehicles and camping impacts within marked areas, outside of sensitive areas, to ensure watershed and other resource protection. The Franklin Basin, Curtis Ridge and Monte Cristo areas will be considered for enhancing horse camping opportunities. Adequate parking, loading, and other support facilities will need to be provided. Recreation impacts will be monitored, users will be informed and assist with needed changes in management. Hardening of sites and use of barriers in and near riparian areas will be employed to reduce or prevent unacceptable impacts. Closure of some riparian areas to camping will be accomplished where that use could not be made compatible with standards for resource protection. Some upland areas will be identified and hardened to accommodate increased dispersed recreation use (e.g. Sinks area and upper Curtis Creek). Some sensitive areas will be closed and rehabilitated. Investments in a variety of trail opportunities, hardened sites, or other amenities will make the new areas more attractive to users, while reducing impacts. Enforcement of the travel plan will be a priority to protect resources and inform users.

North Wasatch-Ogden Valley Management Area (USDA Forest Service, 2003, pp. 4-140 to 4-150)

This Management Area is portions of the Ogden Ranger District along the Ogden Front and Pineview Reservoir, Willard and Public Grove, Middle and South Fork, and the southern portion of the Monte Cristo and Wheatgrass areas.

North Wasatch Ogden Valley Management Area – Roads, Trails and Access Desired Future Conditions

Trails and trailheads will be designed to support year-round use where possible. A connection for the Bonneville Shoreline Trail will be created through the North Ogden area in cooperation with the cities of North Ogden, Pleasant View and Willard. Needed access and rights of way will be maintained or acquired to complete the Bonneville Shoreline trail along the Wasatch Front. Public access to National Forest in Davis and Weber Counties will be a priority to obtain or maintain, as development continues from Fruit Heights, Kaysville, Ogden, North Ogden, Pleasant View and Ogden Valley.

The Ogden front will continue to be closed to winter motorized use, providing non-motorized designated trail opportunities while providing maximum protection to these high value watersheds. Opportunities exist for motorized summer use on designated routes (i.e. Skyline Trail/Great Western Trail in Lewis Peak Area).

In the Public Grove area, trails, roads, and routes will be evaluated and appropriate actions determined. ATV loop opportunities will be explored, designated routes will be clearly marked and users will assist with monitoring. Compliance with the current Travel Plan will be high priority. Deterioration of resources from illegal user trails and OHV activity will be minimized and restored.

A backcountry link in the Forest will be provided for the Great Western Trail through North Davis and Morgan Counties. An integrated trail/transportation network, including loop trails linked into a National Forest trails system, will be provided adjacent to Ogden Valley and from Pineview Reservoir.

The Ogden River Canyon Scenic Byway will be managed to protect scenic values while offering a variety of recreation opportunities.

North Wasatch Ogden Valley Management Area – Dispersed Recreation Desired Future Conditions

The area will have a stronger management presence than in the past in order to provide opportunities while protecting resources, minimizing user conflicts and providing key education messages. Regulation or controls such as designation of parking and dispersed camping areas, and enforcement will be emphasized.

The existing network of motorized routes will be clearly signed and enforced. Compliance with the current Travel Plan will be excellent. Partnerships with counties will continue to provide recreation opportunities, education, and enforcement. Motorized access will specifically be coordinated with Box Elder County through their access management plan.

Access issues involving private land, urban interface, continued growth, and loss of access will be resolved; and trails will be maintained for single track motorized, hiking and biking in the Davis County area and on the Skyline Trail in Weber County.

The Great Western Trail route will be managed for recreation within the area. The Willard area will continue to provide dispersed recreation opportunities with emphasis on day use. Opportunities for dispersed camping will be provided in the Dock Flat area. Along the Front, Pineview and South Fork Ogden River will be day use, with overnight use allowed only in designated areas.

Dispersed recreation sites will be managed to protect resource values. Opportunities for dispersed camping and parking will be clearly defined. Areas where use is not sustainable will be restored to production of vegetation and watershed protection.

In the Dry Bread area of Monte Cristo, designated dispersed overnight settings will be provided and users will understand concerns for resource protection, making use of the area accordingly.

Dispersed recreation sites will be managed to protect resource values. Opportunities for dispersed camping and parking will be clearly defined. Areas where use is not sustainable will be restored to vegetation productivity and watershed protection.

Forest-wide Goals and Subgoals

The Revised Forest Plan lists the following Goals and Subgoals related to transportation on the National Forest.

Forest-wide Goal 5-Road/Trail and Access Management

Provide a road and trail system that is safe, responsive to public and agency needs and desires, affordable, and efficiently managed. Provide an access system that minimizes negative ecological effects and is in balance with available funding. Focus on achieving an integrated transportation system that serves multiple functions and is consistent with desired future conditions for a given area.

Forestwide Subgoal - Road/Trail and Access Management

5a. Work closely with city, county, state and tribal governments to provide for integrated, coordinated development and management (including enforcement) of OHV activities.

Forestwide Subgoal - Travel Management

5b. Manage National Forest and State Scenic Byways and Backways for their intrinsic values as identified in corridor management plans.

5c. Provide a variety of opportunities for motorized access while avoiding or reducing undesirable social and resource impacts.

5d. Manage trails to provide desired recreation opportunities for recreation users and to meet USFS standards.

Forestwide Goal 6-Recreation

Manage for an array of recreation opportunities and settings to improve the quality of life for a variety of Forest recreation users. Balance growth and expansion of recreation by managing within the capability of sustainable ecosystems found on the Forest for today and the future.

Forestwide Subgoals – Recreation

6a. Increase Forest recreation user stewardship of resources and strengthen awareness of user ethics for reducing resource and social conflicts.

6b. Involve Forest users in developing strategies for managing recreation to meet desired future conditions and address recreation pressures and demands.

6c. Manage uses of new recreational technologies to provide for opportunities while preventing or minimizing negative social and/or resource impacts on the Forest.

6d. Encourage private enterprise to develop recreational facilities on and off the Forest that provide for a range of recreation opportunities, such as camping and picnicking areas, trailheads, and interpretive sites.

Forestwide Subgoal - Recreation in Undeveloped Areas

6e. Manage recreation use of undeveloped areas on the Forest to provide for desirable opportunities while preventing or reducing resource impacts and social conflicts.

Forestwide Goal 7-Education
Increase public understanding of and appreciation for natural and cultural resources and their management, in order to foster Forest users' active participation in ownership, wise use, and conservation.

Forestwide Goal 8-Enforcement

Increase USFS field presence in key areas, improve effectiveness of public information on restrictions, and increase participation of individuals and organized groups in monitoring uses.

Standards and Guidelines -Road/Trail and Access Management

(S17) All decommissioned roads/trails will be properly drained.

(S18) Summer motorized and mechanized access is managed on an "open on designated routes" basis.

(S19) If the only access to National Forest requires crossing private land where public access is restricted, the adjacent National Forest land will be closed to motorized and mechanized use without a permit authorizing motorized use.

(S20) When constructing or maintaining roads, trails and facilities, use Best Management Practices (BMP) to minimize sediment discharge into streams, lakes and wetlands.

(G40) Limit uses on trails when necessary to protect resource values, resolve user conflicts, and/or create unique opportunities. For example, snowshoeing, snowboarding, hiking and/or dogs may be prohibited on groomed cross-country/skate ski and/or snowmobile routes to reduce track damage and/or user conflicts.

(G42) When revising Travel Management Plans, provide specific direction for managing mechanized transport such as mountain bikes.

(G44) When constructing and reconstructing roads, trails, and facilities minimize potential effects on habitat of plant species at risk and key big game winter and spring ranges.

(G45) Access routes for heavy equipment should be selected to limit disturbance to riparian vegetation and to limit the number of stream crossings.

(G46) Specify and control locations for water supply points, service areas, and any other needs for road and facility construction projects.

(G47) Waste material should be handled in a manner to avoid sidecasting materials to areas where they may enter a stream.

(G48) Include motorized access in authorizations such as term grazing permits, communication sites, transmission lines, permits to drill, reservoirs and weather stations when needed for management, consistent with management prescription and coordinated to mitigate impacts. In Lynx Analysis Units in winter, motorized use in these authorizations will be authorized only on designated routes.

Guidelines for Recreation Management

(G49) Manage recreation opportunities consistent with Management Prescriptions Categories (MPCs), Recreation Opportunity Spectrum (ROS) Classes, Landscape Character Themes (LCTs), Scenic Integrity Objectives (SIOs), and in accordance with Winter Recreation Maps as well as District Travel Management Plans.

(G50) Design, construct, and operate recreation facilities, trails and concentrated use areas to provide a beneficial recreation experience, reducing social conflicts and minimizing or avoiding adverse effects on watershed integrity, soil productivity, aquatic/riparian systems, terrestrial species and their habitats, and cultural resources.

(G51) In Semi-Primitive Non-Motorized areas, use of motorized equipment may be approved for administrative purposes.

(G52) Explore opportunities for separation of conflicting uses in time (for example alternating days) as well as space (closure of area to specific uses) to resolve conflicts while continuing to offer varied recreation opportunities.

(G53) Where recreation demand exceeds resource capabilities or significantly changes the recreation setting available to users, determine limits of acceptable change and take actions to manage within those limits.

(G54) Use interpretation and environmental education to assist in improved understanding and ownership of forest stewardship needs.

Forestwide Objectives

OHV and Non-Motorized Travel Management (Forest Plan p. 4-28 and 4-29).

As mentioned in the Purpose and Need section above, implementing these objectives from the revised Forest Plan is a primary aim of this proposal and its alternatives.

Purpose: To provide a variety of recreation access opportunities for both motorized and non-motorized users that meet user needs and desires, while at the same time protecting and restoring watersheds and providing for the needs of wildlife. To reduce conflicts between recreation users.

Need: Comments from the public proved that this issue is one of the most important to visitors to the Wasatch-Cache. Motorized uses are increasing rapidly in areas close to population centers. Technology continues to evolve, resulting in previously seldom used areas being frequented by many. User-created trails are causing unacceptable resource damage and perpetuating undesirable use patterns. This may be the result of trails/areas that are not well marked or users that are not well informed. Some travel management plans are over ten years old and do not address mechanical uses, such as mountain biking, or distinguish routes designated only for ATV use. Motorized users desire loop trails and adequate mileage for quality motorized opportunities and these are lacking especially in the Logan and Ogden areas. Users far outnumber enforcement abilities.

Objectives to accomplish desired conditions

2.a. Update the Salt Lake, Ogden and Logan Ranger District Travel Management Plans within 5 years (includes user created route inventory, maintenance levels 1 and 2 roads analysis, updating of Road Management Objectives, and refining of winter decisions where appropriate).
2.b. Expand communication media (signs, maps, brochures, and websites) to improve user knowledge of opportunities, restrictions, and riding conditions. Complete this within 2 years for messages common to all areas.

2.d. Expand or initiate peer education through motorized use organizations and dealerships within 2 years for winter and 3 years for summer.

Management Prescription Categories (MPCs)

Management Prescriptions are defined as "management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives." Management Prescription Categories (MPCs) provide a general sense of the management or treatment of the land intended to result in a particular condition being achieved or a set of values being restored or maintained. Each Prescription includes a set of standards and guidelines showing activities that are not allowed, and parameters within which activities that are allowed should be conducted. Each Category identifies emphasis and focus, highlighting considerations that must be included in the harmonious and coordinated management of the various resources there, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources and are consistent with the definition of multiple-use. Prescriptions are meant to identify the tools/activities that can be used to achieve objectives. *Emphasis* as used in these Prescriptions is defined as focus or highlighting, not exclusive or "dominant" use. In the event of a conflict between uses, resolution will be based on the specific merits of the situation rather than assuming that the Prescription implies prioritizing one resource over another. The entire Management Direction package for the area must be considered, not just the Prescription (Forest Plan, 4-58).

In the case of new road and new trail construction, clear definitions of these terms are provided in the revised Forest Plan (4-61) and most MPCs have specific limiting direction on road and trail construction (4-61 to 4-78) that has been considered in this analysis.

As the area covered by the Ogden RD is broad and diverse and many uses are supported, a variety of management prescriptions are applied by the Forest Plan. The following prescriptions are present on the Ranger District and standards related to the prescriptions either allow or do not allow new road and trail building and reconstruction; other standards also pertain to allowance or denial of common activities: timber and vegetation management, use of motorized equipment, use of prescribed fire, allowable scale of recreation development, etc. See revised Forest Plan, pp. 4-57 to 4-78.

Forest Plan Consistency and MPC Standards and Guidelines – This analysis has considered the intent of management prescriptions as they have been applied to areas on the Ogden District. Individual Forest Plan MPC standards and guidelines are stated below only where a possible inconsistency with them has been identified in an alternative proposal (See Chapter 2). A consideration of the environmental effects of possible inconsistencies with Forest Plan MPCs is provided in the Wildlife Section of Chapter 4 in this analysis.

Summary of MPCs applied on the ORD – (Bold letters show general MPC, while letters not in bold indicate subdivisions within the MPC).

1.0 Wilderness

1.5 Recommended Wilderness

2.0 Special Management Areas

2.1-2.3 Wild, Scenic, and Recreational Rivers (not used on revision maps)

2.4 Research Natural Areas

2.5 Scenic Byways

2.6 Undeveloped Areas

2.7 Special Interest Areas and Special Areas

3.0 Protection, Maintenance or Restoration of Aquatic/Watershed or Terrestrial Integrity

3.1 Aquatic Habitat/Watershed Emphasis (A - Aquatic, W - Watershed)

(G3.1A-3) Road construction is not allowed except for road crossings.

(G3.1A-4) New trail construction is allowed if consistent with site-specifically defined riparian management objectives.

(G3.1W-3) New trail construction is allowed with consideration of existing road/trail densities.

3.2 Terrestrial Habitat Emphasis (D - Development allowed, U - Undeveloped)
(S3.2U) Timber harvest, road construction, and new recreation developments are not allowed.
(G3.2U-2) New trail construction is allowed with consideration of existing road/trail densities and site-specifically developed habitat objectives.
(G3.2D-3) New recreation development and new trail construction are allowed with consideration of existing road/trail densities and site-specifically defined terrestrial habitat desired conditions.

4.0 Multiple Resource Uses With Recreation Needs and Opportunities

4.3 Emphasis on Backcountry Motorized recreation settings
4.4 Emphasis on Dispersed Motorized recreation settings
4.5 Emphasis on Developed Recreation Areas

5.0 Multiple Resource Uses With Forested Vegetation Management Needs and Opportunities

5.1 Emphasis on maintaining or restoring forested ecosystem integrity while meeting multiple resource objectives.

6.0 Multiple Resource Uses With Rangeland Vegetation Management Needs and Opportunities

6.1 Emphasis on maintaining or restoring non-forested ecosystem integrity while meeting multiple resource objectives.

1.3.2.4 Incorporation by Reference

Some material in this document tiers to or incorporates by reference related information in order to reduce the size and degree of redundancy in this document. Material incorporated by reference includes the following:

- Material specifically cited or otherwise used in preparation of this document is hereby incorporated by reference.
- Information in this document tiers to the direction in the WCNF Revised Forest Plan and its Record of Decision. Information in the Revised Forest Plan FEIS is hereby incorporated by reference.
- The entirety of the supporting project record is hereby incorporated without further reference.
- The project record for the Travel Plan Revision FEIS is available for review at the Ogden Ranger District, 507 25th Street, Ogden, UT 84401.

1.4 Forest Plan Consistency

All uses of the National Forest must be consistent with the Forest Plan. If the proposed action and alternatives to it are not consistent with the forest plan, there are three options to consider: Modify the proposal to make it consistent, reject the proposal, or amend the plan to permit the proposal.

The revised Forest Plan provides clear definitions of Forest Plan standards and guidelines, and provides a discussion when a forest plan amendment is needed with respect to them (page 4-36). In the case of the alternatives developed in this FEIS, none will require an amendment to the Forest Plan. That is, all are consistent with forestwide and management prescription Forest Plan standards identified in Chapter 4 of that document. Specific MPC standards and guidelines called into question in this analysis are presented in the section on Management Prescriptions in this chapter (above).

The determination of Forest Plan consistency has been arrived at by the comparison of alternative proposals for road and trail construction related to Management Prescription Categories (MPC) through a GIS analysis. This GIS analysis identified several instances where intersections of new road or trail construction proposals in alternatives occurred within management prescriptions that do not allow these types of activities (violation of a MPC standard) or require further site-specific consideration if trail or road construction is proposed.

Individual alternative proposals for road or trail construction considered potentially inconsistent with a Forest Plan MPC are identified in Chapter 2. The consideration of the effects of these situations as directed in the MPCs is addressed in Chapter 4.

1.5 Decisions to be Made

The project Record of Decision (ROD) will document the system of summer roads and motorized trails on the Ogden RD. The ROD will describe what types of vehicles can be used, seasonal restrictions, other timing restrictions; those routes that are open only to Forest Service "administrative use" for the purpose of law enforcement, infrastructure maintenance and fire protection; development of two new gravel sources; construction of new motorized trails; and, development of two concentrated use areas. The ROD will also document mitigation measures to reduce environmental impacts associated with the transportation system and its use.

1.6 Public Involvement

An important aspect of the environmental analysis process is the participation of the public and other agencies in identifying issues and concerns regarding the potential impacts of a proposal. The issues and concerns are then considered in developing alternative ways of meeting the proposal's purpose and need.

1.6.1 Public Comments

Mailings

On July 18, 2003, a scoping document detailing a proposed action of 28 specific projects and solicitation of comments was sent to nearly 200 individuals, organizations, and agencies on the District mailing list. Over 50 responses to that scoping were received and that included detailed comments, a variety of concerns, and suggestions about the proposal.

During the winter months of 2003-2004, the content of the public input was analyzed, information on the status of the transportation system was refined, and a roads analysis for Type 1 and 2 was completed pursuant to 36 CFR 211. As a result of this analysis, it was determined that the project could have significant effects on the human environment, and a notice of intent to produce an environmental impact statement (EIS) was published in the Federal Register on March 31, 2004 (Fed. Reg. V69, No. 2, p 16889-92). The Ogden RD sent out a newsletter in April 2004 to update the recipients of the scoping letter on the project, identify preliminary issues and alternatives, and of the intent to produce an EIS.

On December 27, 2004, approximately 140 printed copies and 250 Compact Discs of the Draft Environmental Impact Statement were mailed to interested parties. On January 24, 2005, an additional letter was sent to each party extending the comment period and including a list of corrections.

This analysis was listed in the Federal Register Notice of Availability on January 14, 2005. An Amended Notice was published in the Federal Register on February 4, 2005 and again on February 18, 2005 extending the opportunity to comment an additional 30 days.

One hundred and twenty four written letters were received containing over five hundred separate comments.

Briefings

Twenty separate briefings or meetings were held with interested federal and state agencies, local governments, permittees, and interested local groups. This includes congressional staff, county commissions from Weber, Rich, Cache, and Box Elder, Shoshone Tribe representative, Utah Resource Development Coordinating Committee, and Division of Wildlife Resources.

Newspaper

Newspaper articles on the intent and progress on the project work and subsequent letters to the editor on public issues were published on several occasions by the Standard Examiner (August 5, 11, 13, 25; and September 8, 2003). The Ogden Valley News published articles on the Travel Plan scoping and on OHV impacts in August and September 2003 (Francis, 2003).

The Utah Chapter of the Sierra Club published an article on the Travel Plan Update in its September 2003 issue (Sierra Club, Vol. 36, No. 3, 2003).

Legal notices for the DEIS were printed in the Standard Examiner on January 21, 2005 and February 25, 2005.

Miscellaneous articles about travel planning, motorized uses on National Forest including references to the National OHV rule changes, and ATV uses that had a direct or indirect reference to the Ogden Travel Plan were printed in all of the Northern Utah newspapers from Salt Lake to the Idaho border.

Public Meetings

An open house was conducted on February 10, 2005 at Ogden Union Station. This meeting had sixty-two citizens who signed the entry log.

Two field trips were made to the Mantua Loop trail in October 2005. Attendees included representatives from the private land owners, Mantua City, Brigham City, Ogden Chapter of the Sierra Club, Box Elder County Commission, Box Elder County Sheriff Department, Cache County Sheriff's Department, Utah Division of Parks and Recreation, Utah Division of Wildlife Resources, and the Forest Service.

Availability

The Forest Service website for the Wasatch-Cache National Forest had the entire document in .pdf format. (http://www.fs.fed.us/r4/wcnf/projects/proposed/ord/travel_plan/).

CDs or hardcopies of this DEIS were available at local libraries in Weber, Cache and Box Elder counties as well as the Forest Service offices and visitor centers in northern Utah.

1.6.2 Issues and Indicators

The ID Team identified issues to be addressed in the EIS based on input from the public, from other agencies, and internal comments. Initially, a large number of specific issues were identified. After reviewing each of the responses, a number of common themes began to emerge. Table 1.6.1 depicts the issues that were used to guide the formulation of alternatives. Table 1.6.1 also identifies the indicators that are used to analyze and compare the effects of each alternative (Chapter 4).

Significant issues are used to formulate alternatives, prescribe mitigation measures, or analyze environmental effects (40 CFR 1500.4 and 1501.7). Issues may be significant because of the extent of their geographic distribution, the duration of their effects, or the intensity of interest or resource conflict (FSH 1909.15.11).

Given these guidelines the following significant issues were derived from scoping responses, review of Forest Plan direction, and internal USFS concerns.

1.6.3 Significant Issues that drove Alternative Development

The following significant issues drove alternative development.

Wildlife General Issue

Wildlife habitat may be affected negatively by increased road densities. Indicators can include total miles of roads, new miles of roads, and changes to forest patch size. From comments received during scoping, it is apparent that this is a significant issue for both the public and the USFS.

Some people felt the connectivity of the regional wildlife corridor might be impacted by a change in motorized travel and route configuration. The effect of road density has been tied to fragmentation and the need to maintain connectivity of habitats for the movement of wildlife through the area. Comments received during scoping stated concerns that increased road density and changing uses of roads and trails have an effect on fragmentation of wildlife habitats. This is considered a significant issue by the public and the USFS.

Roadless Areas General Issue

Some comments expressed concerns that values of inventoried roadless areas may be negatively affected by creating new access routes into these areas. Possible changes to access into identified inventoried roadless areas are perceived by the public as a significant issue.

Recreation General Issue

Comments from forest users expressed that the USFS is not providing diverse enough trail-based recreation opportunities in the current plan. In addition, a significant issue would be whether the proposed travel plan addressed the interests of diverse users. In addition, there was a concern whether additional ATV trails would dramatically increase the number of out of area users to the District.

1.6.4 Significant Issues that Prescribe Mitigation or Analyze environmental Effects

The first section of Table 1.6.1 includes significant issues which drove the development of alternatives and indicators used in comparing the alternatives. The second section identifies other issues that prescribe mitigation measures, or were used to analyze environmental effects across alternatives,. In many cases the indicators are quantifiable and interpreted for each alternative in Chapter 4. When quantifiable indicators are not used, a qualitative interpretation of effects is presented.

Table 1.6.1 Significant Issues and Indicators

Issues that are used to develop alternatives and that are analyzed across alternatives	
Wildlife General Issue	
Motorized activities and routes may negatively affect **wildlife habitat** for selected species	Indicators: 1) Acres of disturbed land within select species quality habitat. 2) Road density including motorized trail density. 3) Changes to patch size for select species habitat.
Motorized activities and routes disrupt the connectivity of the **regional wildlife corridor** described in the Forest Plan.	Indicators: 1) Miles of roads and motorized trails within Curtis Creek, Monte Cristo and Causey areas. 2) Road density including motorized trail density in the same areas.
Roadless Issue	
The proposed action creates access into **inventoried roadless areas** that may negatively affect their identified values.	Indicators: Narrative describing effects on values identified in Forest Plan revision for both: 1) Values as Wilderness 2) Values as roadless based on Intermountain Region protocol.
Recreation General Issue	
The USFS is not providing an adequately diverse range of **motorized recreation** in the current travel system	Indicator: Change in ROS acres from the existing Revised Forest Plan ROS maps of recreation opportunities settings. Narrative describing effects on different types of users
Scenery as seen from other travel routes or viewpoints may be negatively affected by new trail construction.	Narrative consideration of effects to scenery is presented. Indicator: Change in integrity as seen from high and moderate concern level travel routes.
New roads or trail reconstruction through known **heritage resource sites** may have negative effects on them.	Indicator Narrative consideration of the effects of the alternatives on known sites is provided.
Water and Aquatic Species General Issue	
Roads that are located too close to streams and road crossings can cause sediment delivery and impacts **to water quality.**	Indicators: Roads or trails within Riparian Habitat Conservation Areas (RHCAs). For soils: amount of Total Soil Resource Commitment (TSRC).

Roads that are located too close to streams and road crossings can cause sediment delivery and impacts to **sensitive fish populations**.	Indicators: Roads or trails within Riparian Habitat Conservation Areas (RHCAs)
Vegetation General Issue	
Building new motorized trails provides additional vectors by which **noxious weeds** can spread into previously unoccupied areas.	Narrative consideration of effects of noxious weeds.
Rare plants in the Willard Peak area may be impacted by existing motorized use and proposals for additional motorized trails.	Narrative consideration of effects to rare plants.

1.6. 5 Public Comments Not Addressed in this Analysis

The analysis of effects was based on the Significant Issues listed in section 1.6.4. Additional issues and sub-issues were listed in the Draft EIS as non-significant. Issues can be considered non-significant and therefore not addressed for any of these reasons:

1) outside the scope of proposed action;
2) already decided in law, regulation or policy;
3) irrelevant to decision to be made;
4) conjectural and not supported by science or facts.

The following table partially lists those issues that were non-significant and therefore not addressed in this analysis.

Table 1.6.2 Public Comments Not Addressed in this Analysis

Public Comment	Disposition
USFS implementation of the **Shoshone Trail** motorized trail system and adding motorized trails in the proposed action will advertise motorized opportunities to such an extent that non-motorized recreation experiences (district-wide) and other resources are compromised.	The Revised Forest Plan endorsed the "concept" of a Shoshone-like trail system. OHV use might increase on this motorized trail system regardless of any marketing campaign. Any additional miles of roads or trails proposed to be built are analyzed in this document whether or not they are identified as part of a "Shoshone-like" trail system. It is not considered a significant issue because it is outside the scope of this action. Discussion of the Shoshone Trail is provided in the affected environment and Cumulative Effects sections of this analysis.
The **USFS is not maintaining the existing roads and trails system** because of funding limitations or other problems. How can it maintain or build additional roads or trails and maintain these as well as the existing routes?	The different costs by alternative of building and maintaining roads and trails can be estimated. Knowledge of this is of value to management, but it does not resolve issues
The USFS should **provide a better map** than the current Travel Map that is difficult to comprehend and use. Better on-the-ground signing is needed. User education programs should be implemented to modify user behavior.	An improved travel map and education program is needed regardless of which alternative is selected. Map printing is an administrative action, not a NEPA decision. It is not considered a significant issue because it is outside the scope of the proposed action.
The **USFS is not enforcing travel plan restrictions** on the existing roads and trails system because of funding limitations or other problems. How can it now provide more enforcement given proposals for additional roads or trails as well as the existing system?	A more effective enforcement program is needed regardless of which alternative is selected. Enforcement is an administrative action, not a NEPA decision.
The **public is illegally using unclassified and low standard system roads** that are not on the current travel plan. The USFS needs to determine the appropriate management of	Enforcement of the current travel plan is an administrative action, not a NEPA decision. This is not considered a significant issue because it is outside the scope of this action. The purpose of this analysis is to decide the appropriate management of unauthorized and low standard roads.

these roads based on whether there is environmental damage occurring.	
The potential **proliferation of more user developed routes** from existing and proposed motorized routes can threaten riparian areas and associated soil, hydrological and biological values.	User developed routes are illegal. They will be addressed by increased education and enforcement. Enforcement is an administrative action, not a NEPA decision. This is not considered an issue because it is outside the scope of this action.
Legal access to private land, permitted special uses, and forest administrative access, such as range use by livestock permittees or fire management, could be limited by the proposed action or alternatives.	The USFS must provide access to private land, or appropriate access for permit holders and fire management under any alternative. This is not considered an issue because it is already decided by law, regulation and policy.
Air quality can be degraded from exhaust emissions and dust created by vehicles using roads and trails.	A very limited effects discussion is presented for this issue. State air quality monitoring has found that the air quality on the Ogden RD is within allowable standards. Dust created by use on classified routes dissipates quickly after vehicle passage.
Dispersed camping and parking off motorized routes can negatively affect vegetation, wildlife, soils, public sanitation, air quality and non-motorized recreation values.	Identifying all locations for dispersed or hardened dispersed sites was considered as part of this analysis, but not included in the analysis. For two sites, Dry Bread and Dock Flat, concentrated use area site proposals are presented in Appendix C that do not change for any action alternative.

1.7 Permits and Authorizations

Some of the permits, approvals, authorizations, and consultations listed below will be required for implementing the decision for the Ogden RD Travel Plan update. The list of required actions given below will depend on the specific activities associated with each alternative.

Table 1.7.1 Permits, Approvals, Authorizations and Consultations

Agency	Type of Action	Description of Required Action
USFS	Preparation of a Biological Assessment (BA) Preparation of a Biological Evaluation (BE)	In accordance with the Endangered Species Act, the USFS must complete a BA assessing the impact of the proposed action or any of the alternatives on federally listed threatened or endangered species. In compliance with agency policy, a BE must be prepared assessing the potential impacts to Regional Forester-listed sensitive plant and animal species.
Environmental Protection Agency (EPA)	Review and comment regarding: Federal Water Pollution Control Act, as amended by the Clean Water Act, 33 U.S.C.A. Section 1251-1376 (PL 95-500, PL 95-217) Safe Drinking Water Act, 452 U.S.C.A. Section 300F-300J-10 (PL95-523)	Under NEPA, the EPA is required to review and comment on "major federal actions that have a substantial impact on the human environment." The EPA's responsibility and role is to provide scoping comments, review EISs and provide information and appropriate technical assistance during and following the environmental analysis process. Specific environmental legislation for which the EPA is responsible and which may be applicable to the proposal is shown at left.

Agency	Type of Action	Description of Required Action
Fish and Wildlife Service (FWS)	Endangered Species Act, Section 7 Consultation	If impacts to federally listed threatened or endangered species are possible, the USFS will consult with the FWS. A Biological Opinion will be issued by the FWS if required.
State of Utah Resource Development Coordinating Committee (DRCC), especially Department of Natural Resources, Division of Wildlife Resources (DWR) Division of Parks and Recreation	Review and comment.	The DWR is responsible for the management and protection of wildlife and fish resources. Utah Parks and Recreation has oversight on motorized trail uses relative to licensing and registration.
State Historic Preservation Office (SHPO)	Consultation on National Historic Preservation Act, Section 106 (review and compliance process)	SHPO is responsible for consideration of effects and consultations related to heritage resources in the state.
Northwest Band of the Shoshone Nation	Consultation on sacred sites.	Protection of sacred sites.

Chapter 2
The Alternatives

2.1 Introduction

This chapter describes the formulation of the proposed action and alternatives, and discusses the alternatives considered but not analyzed in detail. In order to efficiently analyze the Ranger District, five analysis areas were created. (Curtis Creek, Monte Cristo & Wheat Grass, South Fork, Ogden Front & Pineview Reservoir, and Willard & Public Grove). Maps were developed of these five areas describing the proposed road management by alternative and in the case of Alternative 1, the effected roadless areas from the Revised Forest Plan (USDA Forest Service, 2003).

The alternatives were developed in response to the issues under 1.7.2 and present an appropriate range of analysis options, as required under the National Environmental Policy Act (NEPA) regulations (40 CFR 1502.14). Another alternative described in 2.4.6 was created after public comments on the five alternatives considered in this DEIS, including the proposed action described in 2.4.4, four action alternatives and a No Action alternative described in 2.4.5. The No Action alternative in this case would continue the current travel plan including normal road management functions. Factors common to all alternatives in 2.4 are designed to protect other resource uses and values. Monitoring and Evaluation of implementation of the Forest Plan will occur in all alternatives. The details of this monitoring are found in the Forest Plan (USDA Forest Service, 2003 Page 4 – 104 to 117). This monitoring is designed to ensure that the mitigation measures are effective and that the Purpose and Need in 1.3 for this proposal are being met.

2.2 Formulation of Alternatives

Subsection 1502.14 of the NEPA regulations require that agencies should "vigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. The alternatives should achieve the same or similar purpose as the proposed action and should address issues raised and include appropriate mitigation measures not already included in the proposed action. Alternatives that would not be reasonable, either because they do not meet the purpose and need or because of other considerations, may be eliminated from detailed study. A brief discussion of the reasons for their having been eliminated is given. An EIS must also "address the alternative of no action", disclosing the effects of not undertaking the actions comprising the proposed action or any of the action alternatives.

The process of formulating alternatives began with the scoping process described in Chapter 1. Analysis of comments identified the following issues as sufficiently important to warrant alternatives addressing them. The issues include: 1) Wildlife; 2) Roadless Areas; and, 3). Recreation Opportunities;

The Forest Service ID team evaluated the proposed action in consideration of the significant issues described in 1.6.1 Issues. Alternatives to the proposed action addressing the significant issues were developed. If alternatives were identified which were not reasonable, they were recorded but not analyzed in detail as described in 2.3 below.

The resulting range of alternatives is consistent with the purpose and need for action and with the issues raised. Any of the elements included in the proposed action, or any of the action alternatives, could be implemented independently of each other. Therefore, the Forest Service decision maker may ultimately choose and combine elements from any of the alternatives. This chapter identifies those actions that are considered the preferred action. This analysis fully discloses the effects of all activities considered, regardless of the alternative in which they are included.

If you compare the number and scope of the proposed actions presented in the original Scoping Document to the other action alternatives, you will see that additional new road management actions have been included. This was the result of the thorough review of the status of the existing system of roads. Appendix A – Table of Current Roads on the Ogden Ranger District was created to aid our decisions in road management. This road-by-road process of review identified additional management or resource problems with existing roads. As the ID Team reviewed the status of these lower standard roads, it became apparent that a number of new management decisions were needed on these roads and should be included in this analysis.

2.3 Alternatives Considered and Eliminated from Detailed Analysis

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). As public comment became available in response to the initial scoping effort, the decision was made to modify the original proposed action to incorporate the additional input that was received.

During scoping, comments and suggestions were received from individuals or organizations relative to specific roads and trails. Typically, these comments and suggestions were incorporated into one or more of the action alternatives. In other cases, however, they were not carried forward into an alternative because either the action presented an administrative or regulatory conflict, or the action was in conflict with direction provided in the Revised Forest Plan (2003), or the action was outside of the scope of the analysis. A complete listing of the individual comments that were received during the scoping process is included in the project file. A description of the alternatives that were not carried forward into detailed analysis follows.

1. **An Alternative emphasizing Soil and Water Quality protection.** An alternative that could be described with a theme of protection of Soil and Water Quality protection was considered but the opinion of the ID Team members, in particular the Hydrologist, Soil Scientist, and Fisheries Biologist, was that the effects to Soil and Water were mitigatable or projects not included in action alternatives and therefore didn't justify a separate alternative.

2. **Broad suggestions were made to close all or some lower standard roads to motorized use.** Lower standard roads maintained for high clearance vehicle use are the focus for many of the administrative actions described in this EIS. The purpose and need emphasizes providing a diversity of motorized experiences. Low standard roads typically provide this backcountry experience. In some cases they are expressly required for administration of the National Forest. An alternative that would make broad decisions on low standard roads did not meet the purpose and need of the analysis.

3. **Open all existing routes to motorized public use.** Some roads are not or cannot be made to be environmentally sound to accommodate motorized use. The Desired Future Condition in the revised Forest Plan recognizes non-motorized use on the district. This suggestion has similar rationale as number 2 above for not including it as a separate alternative for analysis.

4. **Restrict OHV use to limited areas.** It was suggested that only certain geographic areas of the Ranger District should allow motorized recreation. Specifically, eliminate motorized uses along the Ogden Front. This suggestion was similar to number 2 above and did not meet the purpose and need direction of looking at our entire transportation system.

5. **Restrict OHV use to limited routes.** Another similar issue raised was the use of unlicensed OHV on routes with licensed vehicles. This alternative would focus on closing routes to OHVs where problems are currently occurring or where other forest values are more important. A determination of how unlicensed vehicles use Forest Roads will be addressed in a Mixed Use analysis referenced in this decision. Rather than creating a separate alternative for this issue, the Mixed Use analysis of current OHV uses is included in all alternatives.

6. **Include non-motorized trails and determine which are open for mountain biking in this analysis.** The Responsible Official determined the scope of the analysis was limited to the District Transportation System for motorized vehicles. The analysis is limited to the effects on non-motorized user because of this defined purpose and need.

7. **Ranger District-wide plans for dispersed camping**. The issue of how dispersed camping will be managed is a component of our motorized recreation use. However, this issue did not justify creating a separate alternative for this management. Management activities to reduce the problems associated with dispersed camping will be included in mitigation. Two areas of concentrated dispersed camping are included in the proposed action and described in Appendix C.

8. **Limiting administration of improvements such as range structures to non-motorized travel**. This comment suggested that the use of some roads for administrative access for structure maintenance was not necessary. The assumption is that any maintenance activities associated with these structures could be done using non-motorized techniques. This question is always considered when granting a permittee access. This decision is determined based on the resources issues and potential impacts each individual maintenance project rather than as a broad decision.

9. **Include Winter Travel Management decisions.** The Wasatch-Cache Forest Plan (USDA Forest Service, 2003) includes as a part of its decision the use of motorized vehicles for winter travel. The purpose and need for this analysis is limited to summer-motorized recreation, so this alternative would be outside of this analysis.

10. **Specific road decisions not carried from Scoping to the final analysis.** The July 18, 2003 Scoping Document had twenty-eight specific route proposals. A number of proposals were not carried forward in any alternative for the Draft EIS based on comments received during scoping or research on those routes.

2.4 Alternatives Considered in Detail

The interdisciplinary team recommended and the District Ranger approved the following alternatives in addition to the required no action alternative. The alternatives respond to public input and the issues, while addressing the purpose and need. Each alternative has specific effects associated with it, and how and to what degree it addresses the purpose and need. The environmental effects of implementing each of the alternatives are discussed in Chapter 4, Environmental Consequences. Management actions common to all alternatives is provided in Section 2.5. Monitoring activities common to all alternatives are provided in Section 2.6.

An additional Alternative 5 was created from comments received during review of the Draft Environmental Impact Statement. The changes from the proposed alternative 3a (section 2.4.4) were minor but the effects could be analyzed, measured, and therefore needed to be disclosed in another alternative.

The Responsible Official determined the scope of the analysis was limited to the District Transportation System for motorized vehicles. The analysis is limited to the effects on non-motorized user because of this defined purpose and need. See chapter 4 for effects by alternative on non-motorized recreation.

The relative differences between alternatives are displayed in Section 2.7. Table 2.7.2 displays the relative differences between alternatives for each analyzed road and trail on the ORD.

Note: The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be: developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. This information was released February 2003. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification.

2.4.1 Alternative 1

The objective of Alternative 1 is to divert motorized use away from inventoried roadless areas in order to preserve their integrity and to minimize motorized impacts on other resources including wildlife habitat, watershed protection and public appreciation of the forest. This alternative emphasizes the value and importance of maintaining roadless and non-motorized landscapes. It focuses on protecting inventoried roadless areas as delineated in the Revised Forest Plan (2003) and concentrating motorized recreation in areas where this type of use is already occurring.

Alternative 1 includes several new OHV loops and it eliminates a number of dead-end roads and trails currently being used by OHV's.

Alternative 1 would provide:

1. 187 miles of classified road that would be managed as open.

2. 56 miles of classified road that would be managed as closed.
3. 39 miles of motorized trail would be managed as open.
4. 55 miles of unauthorized routes would be rehabilitated.
5. 11 new gates and one relocated gate.
6. The Skyline Trail from Pineview Reservoir to Inspiration Point will not be open to motorized use.
7. The Tilda Springs trails will be non-motorized use only.

2.4.2 Alternative 2

Under Alternative 2, travel route management proposals were based on providing additional and improved motorized recreation opportunities. This alternative has new routes proposed that would create loop trails using the existing system of roads. It also allows public use on routes that in the past were closed, open only for administrative use, or were not on the previous travel plan as an open route.

As described in 1.3.1 Purpose and Need, the system of roads and motorized trails on the ORD has evolved over time. The parcels of land acquired over the last fifty years have come to the Forest Service with an established pattern of use responsible for many of the unauthorized routes we find on the ranger district today. Additionally, the dramatic increase in popularity of motorized recreation vehicles, both ATVs and SUVs, has made it challenging to effectively manage the unauthorized use that is occurring on many of these low standard routes.

This alternative responds to the public comment for additional motorized routes. The Recreation Opportunity Spectrum (Clark, Stankey, 1979) classes from the Revised Forest Plan (2003) were used to identify areas where additional motorized use was appropriate. It also took into consideration the existing situation relative to trails that are receiving motorized use but are not designated as open on the current travel plan map. Field observations by Ranger District personnel over the past several years have identified those trails where this type of unauthorized use is occurring and resource impacts are non-significant.

Alternative 2 would provide:

1. 206 miles of classified road that would be managed as open.
2. 48 miles of classified road that would be managed as closed.
3. 61 miles of motorized trail would be managed as open.
4. 55 miles of unauthorized routes would be rehabilitated.
5. 10 new gates and two relocated gates.
6. Tilda Springs will have additional motorized ATV trails.

2.4.3 Alternative 3

This alternative was created in response to the numerous comments that were received during the scoping process concerning the negative effects of motorized recreation on wildlife populations and habitat. The objective of this alternative is to provide an array of road and motorized trail experiences while minimizing or reducing the effects to a broad range of wildlife species and their habitats. This alternative concentrates motorized access in areas where these types of activities are presently occuring while reducing existing routes or avoiding new trail and road construction in areas that are more isolated, have less disturbance and provide generally higher quality wildlife habitat.

This alternative also minimizes the creation of new roads and motorized trails within the forest carnivore habitat/corridor especially within the Curtis Creek and Monte analysis areas.

Alternative 3 also maintains or increases the size of habitat patches for elk in many locations.

Alternative 3 would provide:

1. 202 miles of classified road that would be managed as open.
2. 56 miles of classified road that would be managed as closed.
3. 35 miles of motorized trail would be managed as open.

4. 56 miles of unauthorized routes would be rehabilitated.
5. 11 new gates and one relocated gate.
6. The Skyline Trail from North Ogden Divide to Inspiration Point will not be open to motorized use to reduce impacts to Mountain Goats in general.

2.4.4 Alternative 3a

Alternative 3a was the Forest Service preferred alternative for the Draft EIS. It is similar to Alternative 3, the wildlife emphasis alternative, but with some different actions on a limited number of routes. This difference is primarily due to administrative need or to emphasize another resource in specific areas.

Alternative 3a would provide:

1. 208 miles of classified road that would be managed as open.
2. 50 miles of classified road that would be managed as closed.
3. 49 miles of motorized trail would be managed as open.
4. 55 miles of unauthorized routes would be rehabilitated.
5. 9 new gates and two relocated gates.
6. The Skyline Trail from North Ogden Divide to Inspiration Point will not be open to motorized use until July 15th to protect goat-kidding areas.
7. Tilda Springs will have additional motorized ATV trails.

2.4.5 Alternative 4 - No Action

Under Alternative 4, the existing 2004 Wasatch-Cache National Forest Travel map for the Ogden and Logan Ranger Districts would determine the status of most of the system of routes.

Roads that are managed for Administrative Access Only are not shown as an open road on the public Use Maps or old Travel Plan maps. However, it is a common management practice on National Forest Ranger Districts to close and gate some appropriate routes for administrative use only. Approximately fifty-two roads on this Ranger District are administered through a Special Use Permit for private occupancy of National Forest or closed to the public as administrative use only. For example, water systems permitted to local municipalities, private land access driveways, electronic sites, or church camps have roads that are administratively closed to the general public but can be used with permission from the permittee. This is noteworthy to mention since numerous roads in this situation can be found on the Ranger District.

Although other routes exist and are being used by the public, the No Action alternative would aggressively manage routes, limiting the transportation system to only those roads on the current Travel Plan map and any road used for administrative access.

Alternative 4 would provide:

1. 198 miles of classified road that would be managed as open.
2. 66 miles of classified road that would be managed as closed.
3. 46 miles of motorized trail would be managed as open.
4. 110 miles of non-motorized trail would be managed as open.
5. no new gates.

2.4.6 Alternative 5 – The Selected Alternative

Alternative 5 was developed by the Forest Service after public comments on the five alternatives described in the draft environmental Impact statement had been reviewed. The purpose was to improve resolution of issues raised in public comments. Most of the actions to roads and trails of the DEIS Preferred Alternative 3a were retained.

Key changes that make it different from Alternative 3a, the DEIS preferred alternative include:

- Laketown Spur 1 and 2 (26717, 26718) will remain closed to public motorized use as in Alternative 4, Existing Condition, rather than new open roads.
- Red Spur Electronic (20205) will be a new open road as proposed in Alternatives 1, 2 and 3 rather than an Administrative Use Only road proposed in Alternative 3a.
- Curtis Ridge Trail (3309) will become a motorized trail as proposed in Alternative 1 and 2 rather than remain a non-motorized trail in Alternative 3a.
- Otter Creek Private (xx36) will be an Administrative Use Only road rather than an Open road proposed in Alternative 3a.
- Baxter Sawmill 2 (26994) will be a new open road on the Travel Plan but it will be closed seasonally from approximately November 15 to June 15.
- Pole Hollow (26109) will be managed as an Administrative Use Only road on the Travel Plan rather than a closed as proposed in Alternatives 1, 2, 3, and 3a.
- Pete's Hollow Trail (26022) will become a motorized trail as proposed in Alternative 2 rather than a non-motorized trail proposed in Alternative 3a. This trail will be open only to single-track motorcycles, not ATVs. A seasonal use restriction from November 15 to April 31 will be applied to this trail to match the restrictions on the Brigham Face Wildlife Management area.
- Mantua Church Camp road (xx31) will be closed seasonally approximately from November 15 to June 15. This closure will likely be on National Forest land but we will coordinate with Box Elder County and the private landowners for the exact location of this gate.
- Sink Hollow Loop (26012) will be a new open road as proposed in Alternative 3a but it will be closed seasonally from approximately November 15 to June 15.
- Three Mile road (20113) located in the Willard & Public Grove Analysis Area will be closed seasonally from approximately November 15 to June 15. This management action was not proposed in the Draft EIS.
- The Willard Mountain Road (20084) will be seasonally closed from approximately November 15 to July 15 above the junction of the Grizzly Peak Road (20091). A gate will be installed near this junction where room for a turn-around is available.
- The Skyline Trail from North Ogden Divide to Inspiration Point will not be open to motorized from approximately November 15 until July 15th to protect goat-kidding areas.
- Public Grove 4x4 (20220) will become a motorized ATV trail as proposed in Alternative 1 rather than an open road as proposed in Alternative 3a. This trail will be seasonally closed to motorized use from approximately November 15 to June 15.
- New constructed trails will be: Inspiration Point extension (6091) to Skyline trail (6001), 0.1 miles, open to motorcycles; Tilda spring 3 extension (xxx4), 0.7 miles, open to ATVs; Dairy Wash ATV (xx14), 1.07 miles, open to ATVs; Dry Mitchell ATV (xx13), 1.78 miles, open to ATVs; Lower Dry Bread ATV (xx11), 0.2 miles, open to ATVs; Devils Hole ATV (xx30), 1.8 miles, open to ATVs; Box Elder Creek ATV (xx34), 1.24 miles, open to ATVs.
- Reconstructed trails will be: Curtis Ridge Trail (3309), 2.2 miles, existing trail widened to accommodate motorized ATV uses.

Alternative 5 would provide:

1. 202 miles of classified road that would be managed as open.
2. 50 miles of classified road that would be managed as closed.
3. 58 miles of motorized trail would be managed as open.
4. 54 miles of unauthorized routes would be rehabilitated.
5. 15 new gates and three relocated gates.
6. The Skyline Trail from North Ogden Divide to Inspiration Point will be closed to motorized use from November 15 until July 15th to protect goat-kidding areas.
7. Roads and trails in the Willard, Three mile, Rocky Dugway and Public Grove areas will be closed seasonally.

2.5 Actions Common to All Action Alternatives

This section discloses components that are common to all action alternatives. Normal management actions necessary to maintain and operate the existing system of routes are will be continued to be done

2.5.1 Annual Operations and Maintenance

Annual operation and maintenance plans will be developed for the Ranger District transportation facilities, describing how they will be operated and maintained to meet management needs. The annual plans will identify intended vehicles and type of use for each route, seasonal or yearlong restrictions, needed investment protection measures, and coordination with other cooperators (FSM 7730.3). Forest Development Roads will be maintained in a condition to safely accommodate intended uses. Commercial users will be required to perform maintenance commensurate with their use of forest development roads. Maintenance will be scheduled and coordinated with contractors, commercial users, purchasers, permittees and cooperators. When appropriate, cooperative road maintenance agreements with counties will be used to define maintenance responsibilities. (FSM 7732.03)

All authorized roads and trails will be maintained to Forest Service Standards.

The District's annual road maintenance budget will be spent to repair urgent problems from flooding or windfall, to finance a minimum of a two person seasonal crew that coordinates and implements signing, does minor maintenance, and enforces travel management violations to our special orders.

Each year on average, the District is allocated approximately three weeks of the Forest's road crew's time and equipment to accomplish its annual road maintenance work. This work includes blading and shaping of roads, cleaning of culverts, spot graveling, graveling, clearing of brush and decommissioning (closing unauthorized roads and trails). Routes identified as unauthorized will be closed and rehabilitated. In some years there is funding for additional contract work for maintenance, especially for asphalt roads. This maintenance with heavy equipment will be strategically planned to maintain our entire road system on approximately a five year cycle.

The system of trails on the Ranger District will be managed to meet Forest Service standards. Urgent repairs will be the priority for allocation of annual funding. Each trail will be surveyed on a pre-determined five year cycle based on the assigned trail class.

2.5.2 Concentrated Use Areas and Dispersed Recreation Sites

A development plan for two Concentrated Use Areas is included for Dock Flat in the Willard area (26010) and Dry Bread in the Monte Cristo area (20107). Implementation of the plan will occur in all action alternatives. These two areas are popular dispersed camping sites that have become a base for ATV use. Camping with associated use of ATVs in these areas has created new management problems that require special attention. It is critical to begin implementation of these controls as soon as possible to efficiently and effectively manage the recreation uses of Dock Flat and Dry Bread. These plans are included as Appendix C.

The travel plan analysis has identified minor system side roads that access dispersed recreation sites. Strategically located signing as well as other information sources will state that dispersed camping must be accessed by either an open system road or direct access using existing routes, provided the access does not involve crossing live streams and would not result in damage to vegetation, wet meadows or riparian areas. The travel use maps and specific Forest Special Orders (regulations) will contain direction of a general nature describing the authority to drive motor vehicles to dispersed sites within 150 feet of open roads. Access to dispersed camping sites within 150 feet of open roads which do not have a reasonable route will be closed and restored as appropriate based on resource concerns. Mitigation to protect resources in and around dispersed camps is described in Appendix D.

2.5.3 Emergency and Administrative Use of Roads

Access for permitted activities (i.e. livestock operations, mineral exploration and development, maintaining water developments, timber management, ski area management, outfitter and guide operations, recreation events) on NFS land is independent of general public access. Individuals or groups with special permits are allowed to conduct their

business within the terms and conditions of their permits. The Forest Service can control when and how access is achieved through approval of annual operating plans. It is the responsibility of all permittees to adhere to the terms and conditions of their permits or in another separate decision. Where permittee access requirements are not part of a special use permit, and would require reconstruction of existing routes, a Road Use Permit or Road Use Easement may be required that directs actions and responsibilities of the permittee. (FSM 2355.32)

Access routes available to permittees but closed to general public motorized use will be signed according to Forest Service guidelines or policy.

With prior Forest Service approval, or in the event of emergency fire suppression activities or a life threatening situation, permission may be given to any federal, state, tribal or local official exempt from prohibitions on motorized access while in the performance of an official duty (36 CFR 261.50 (e), FSM 2355.32). Use of motorized equipment in the South Fork recommended Wilderness requires Forest Supervisor permission and is only granted in extraordinary situation.

Forest Service personnel may be allowed administrative motorized use of any route, area, or land for the purpose of protection or management of forest resources.

2.5.4 Gravel Sources

An item common to all action alternatives will be the development of two new gravel sources. The first will be located at the south end of the Dairy 2 road (26732) in the Monte Cristo area and the second will be on the south end of the Red Spur Electronic Site road (20205) in the Curtis Creek area. Each site will have an excavation footprint of one-half acre or less. The extracted material will be used for gravel surfacing on existing roads in the general area. This material will not be available for commercial uses. Creation of new gravel sources is a common occurrence and is a direct result of the maintenance of the road system. After the gravel is removed, the sites will be re-contoured to a natural appearance; saved top soil will be reapplied, and seeded to native vegetation. Reclamation will also address appropriate treatment of noxious weeds.

See Appendix D Mitigation and Monitoring Best Management Practices for soil protection at gravel sources.

2.5.5 Mixed Use Analysis

Some Forest Service roads are open only to vehicles consistent with State Motor Vehicle laws, i.e. licensed vehicle/licensed driver. A Mixed Use Analysis was completed in conjunction with this analysis to designate certain roads and trails for dual or mixed use. Mixed Use Analysis documentation followed Forest Service Manual and Handbook direction (FSM 2352.1, FSH 7709.59). The conclusion of this documentation determined that there is a reasonable level of risk and consequences if unlicensed ATVs are allowed on specific Maintenance Level 2 and 3 roads managed as open to the public in the Travel Management Plan. Level 4 and 5 roads, which tend to be the highest standard roads with increased speeds and traffic, will be closed to unlicensed vehicle traffic.

Mixed use is allowed on 137.9 miles of road on the Ogden Ranger District (Mixed Use Analysis, March 6, 2006). Most of theses mile are currently being used by unlicensed vehicles.

Signs meeting Manual of Uniform Traffic Control Devices requirements will be installed on maintenance level 3 roads indicated in the Mixed Use Analysis as open to unlicensed vehicles warning users that ATVs should be expected beyond the signs.

2.5.6 Non-motorized Use on Motorized Trails

All trails in the transportation system will be open for foot and horse travel unless specifically closed to either or both classes of use. Sometimes trails are closed temporarily to a specific type of user such as equestrians or mountain bikes in order to prevent resource impacts when certain conditions exist.

Mountain bike use is allowed on all transportation routes unless specifically restricted by land designation or other rationale such as the South Fork Recommended Wilderness, east of Causey Reservoir.

2.5.7 Noxious Weeds

Noxious Weed management will follow the direction in the Wasatch-Cache National Forest Revised Forest Plan (USDA Forest Service, 2003), that provides clear direction to increase noxious weed management (USDA 2004). The Wasatch-Cache National Forest Weed Strategy outlines specific actions that need to occur immediately. As new programs and plans are created to combat noxious weeds, additional actions will be identified and implemented on our travel system.

Inventory of noxious weed outbreaks will continue to be a priority. Documentation forms have been developed for use when a population is found on and adjacent to National Forest lands.

The Wasatch-Cache National Forest is in the process of completing an environmental analysis of the effects of various treatments for noxious weeds. Effective mitigation for controlling weeds will be detailed in that analysis and will be implemented as appropriate. Also see Appendix D Mitigation and Monitoring Best Management Practices for additional mitigation.

2.5.8 Private Lands and Other Non-National Forest System Lands

Routes on private or State lands within the National Forest boundary are open to public use only through rights-of-way or easements obtained for the purposes of public access. Travel management decisions considered here relate only to Forest Service lands, not private land. The miles of routes on private land have not been included in this analysis unless necessary to portray road effects at a larger scale such as a watershed level.

Routes that exist on lands acquired by the Forest Service through purchase or exchange may be added to the existing Forest road inventory. A determination of the route status will be made at that time. The route will be appropriately posted at that time.

During the public comment period, the county roads in eastern Box Elder County were raised as both an impact and an opportunity. Since, the county opened these roads through their normal procedures of county ordinances (No. 04-13), the Forest Service considered these as a part of the current public access to the National Forest. Private concerns of impacts to wildlife populations and uncontrolled motorized use were considered in our development of alternatives and management mitigations needed on our roads and trails in this area. The Cache County Attorney provided a letter to this office on February 27, 2006 regarding the roads continuing on to Box Elder County in the Three Mile area on the Willard & Public Grove Analysis area. These are considered public roads by Cache County and essential roadway rights.

2.5.9 Revised Forest Plan Guidance

Additional implementation actions common to all alternatives can be found in the Forest Plan Implementation Guidance, Appendix X, page X – 4 Road/Trail and Access Management.

2.5.10 Roadless Areas

When roadless areas were mapped during the Forest Plan revision, roads that were designated open on existing travel plans that extend into roadless areas were excluded from the roadless area by placing corridors around them that are referred to as “cherry stems”. In other cases open roads were used to delineate roadless area boundaries. In 2004 the Forest was able to acquire more precise and accurate mapping data that has revealed several minor errors in the roadless area delineation that was done for the Forest Plan revision. Typically these mapping errors give the appearance that several roads are located within designated roadless areas. The extent and significance of these mapping errors relative to roadless area boundaries will be detailed in Chapter 4, Effects.

In May 2005 a Roadless Area Management Rule replaced the 2001 Roadless Area Conservation Rule. The 2005 Rule establishes a process for Governors with National Forest System inventoried roadless areas in their state to petition the Secretary of Agriculture to establish or adjust management requirements for these areas. The Revised Forest Plan (USDA Forest Service, 2003) and associated Final Environmental Impact Statement provides

management direction for inventoried roadless areas. Until such time that Governor of Utah petitions Secretary of Agriculture to adjust any or all of this direction, it will continue to be followed in all project planning and activities.

Regardless of the final outcome, the Ogden Ranger District Travel Management Plan will be consistent with all laws and agency regulations.

2.5.11 Roads Analysis

The Road Analysis for the Ogden Ranger District (USDA Forest Service, January 2004) documents the resource values and impacts for the managed system of maintenance level 1 and 2 roads. No road in this analysis had a serious level of concern. The main roads on the Ranger District currently open on the Travel Plan map that have not been identified individually for a change in management will continue to be managed as open. Those routes not shown on the Travel Plan map will remain closed to public use unless a change is proposed. Alternatives describe only the routes where a management decision has been proposed. The Record of Decision will include a list of each route, its disposition or management status, and the final management designation. The Wasatch-Cache National Forest Road Analysis (USDA, Forest Service 2002) completed as part of the 2003 Revised Forest Plan describes the condition of maintenance level 5, 4, and 3 roads. That analysis is incorporated by reference into this environmental analysis.

2.5.12 R.S. 2477 Roads

The Travel Management Plan decision will be made with the understanding that individuals and entities may have established valid existing rights under R.S. 2477. Where there is an assertion that there is a nonfederal property interest, such as a right-of-way under R.S. 2477, an in-holding, or other such interest (including easements) that may be impacted by Forest Service management activities, the Forest Service will evaluate the assertion and give due consideration to any valid existing property right that may exist. (Forest Plan Page 4 – 53). This decision will not negate or infringe on any valid rights. Forest Service regulation of occupancy occurring under valid rights will be consistent with applicable law.

2.5.13 Forest Roads and Trails

For purposes of this assessment, Forest roads are routes that are available to wheel-to-ground motorized vehicles and are consistent with state laws.

1. Motorized OHV trails are routes that are open for vehicles 50 inches or less in width.
2. Motorized single-track trails are open for motorized, two-wheel vehicles under 50 inches or less in width.
3. Non-motorized trails are not open for motorized uses.
4. The Mixed Use Analysis has determined which roads will allow unlicensed OHVs. This includes the use of the new wider sport OHVs.

2.5.14 Temporary Closures

The Forest Supervisor may by special order restrict public use on roads, trails or areas where significant resource damage is occurring. This may include seasonal restrictions on an annual basis (e.g. for calving areas, muddy springtime conditions), or temporary restrictions that address short-term issues (e.g. landslides or flooding). Federal Regulation 36 CFR Part 261 prohibits damage to the land, wildlife or vegetative resources.

2.5.15 Heritage Preservation

The USFS has issued draft policy for National Historic Preservation Act (NHPA) compliance in Travel Management. This is in response to the draft regulations published in July 2004 concerning the use of motorized vehicles on National Forest System (NFS) lands. To comply with Section 106 of the NHPA, we have obtained the appropriate clearances prior to any undertakings with potential affects to historic properties such as constructing a new road or trail, approving motorized use on routes currently closed to vehicles, and incorporating unauthorized routes into the designated open to motor vehicles routes.

2.6 Monitoring Activities Common to All Alternatives

The Standards and Guidelines described in Chapter 1 of the Forest Plan will be applied. Best Management Practices (BMP's) addressing soil, water, and noxious weeds will be applied to all construction or maintenance of roads, motorized trails, gravel source developments and route closures. These activities have been summarized in Appendix D, Mitigation and Monitoring Best Management Practices.

All projects involving new construction will be reviewed prior to ground disturbance by both the Forest Botanist and the Forest Archeologist. If impacts to rare plants or significant heritage resources cannot be avoided or mitigated, the projects will not be implemented without additional environmental analysis.

The Revised Wasatch-Cache Forest Plan (4-104 - 4-117) includes a protocol for monitoring activities that are tied closely to key goals and objectives. The Forest is required to complete an annual monitoring report but actual budget levels and funding mixes will affect accomplishment. For this reason we will reach out to user groups, members of the environmental community and other partners to assist us in this effort. Forest Plan level monitoring that will be incorporated into the management of our roads and motorized trails include the following activities:

- Education-Information: Are we delivering key education/enforcement messages? (Forest Plan 4-107)
- Are these messages effective? Do they provide resource protection and/or reduce recreation conflicts? (Forest Plan 4-107)
- Are we providing recreation opportunities for both motorized and non-motorized users while protecting and restoring watersheds and providing for needs of wildlife? Are conflicts between users being reduced? (Forest Plan 4-108)
- Are there a variety of quality recreation opportunities available? (Forest Plan 4-108)
- Are users complying with Travel Management Plans? (Forest Plan 4-108)
- Are users helping to prevent or reduce their impacts, staying on designated routes? (Forest Plan 4-108)
- Are noxious weed infestations increasing or decreasing in number and size relative to implementation of the travel management plan? (Forest Plan 4-110)
- Are we managing concentrated use areas to provide for recreational amenities while meeting standards and guidelines for resource protection? (Forest Plan 4-111)
- Are we working with the public and other agencies to complete trails using partnerships and grants as much as possible? (Forest Plan 4-112)
- Are we minimizing impacts to big game winter range, adjacent property owners, and Wilderness? (Forest Plan 4-112)
- Are forest management actions affecting Management Indicator Species (MIS) and what are the population trends and habitat relationships? (Forest Plan 4-113)
- Are the trends in populations and habitat reflective of species trends in general? (Forest Plan 4-114)
- Are we protecting Threatened and Endangered species and their habitat? (Forest Plan 4-114)
- Are we implementing terms and conditions, mitigation measures, BMP's, standards and guidelines, and are these effective on new and where appropriate, existing projects? (Forest Plan 4-115)
- Are cultural resources being protected and are mitigation measures sufficient to prevent damage to cultural resources from project activities? (Forest Plan 4-117)

This monitoring at the Forest level will compliment the program for monitoring at the Ranger District level.

The amount of monitoring needed on our roads and trails is largely dependent on the effectiveness of implementation of the Travel Plan. Monitoring is generally accomplished by District and Supervisors Office employees in conjunction with their regular duties. Specific monitoring patrols searching for newly created trails, making visitor contacts, or issuing citations for violations of travel regulations occur as a part of our ATV and dispersed recreation program.

2.7 Alternative Comparisons

2.7.1 General Comparison

Table 2.7.1 provides a summary of some of the main differences between the alternatives, showing differing miles of routes for each and how the alternatives were designed to try to address significant issues. The differences and effects listed below are described in more detail in Chapter 4.

Table 2.7.1 Comparison of Alternatives

	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 3a**	**Alternative 4**	**Alternative 5 (Selected Alternative)**
Route Status	**Miles**	**Miles**	**Miles**	**Miles**	**Miles**	**Miles**
Open Road*	187	206	202	208	198	202
Closed Route*	56	48	56	50	66	50
Motorized Trail*	39	61	35	49	46	58
Non-Motorized Trails*	141	107	128	116	110	113
Unauthorized routes*	55	55	56	55	57	54
Total**	**477**	**477**	**477**	**477**	**477**	**477**
Miles of Open roads and Motorized Trails	226	267	237	256	244	260
Miles of Seasonal Closures	1	8	5	11	7	13
Miles of Administrative Closures	53	49	61	57	51	60
Miles open without any closures	171	210	171	189	185	187
Miles of new Open Motorized trails	34	29	10	13	0.00	18
Miles of Unauthorized Routes to be reclaimed	55	55	56	55	57	54
Number of New Gates	11	10	11	9	0	15
Number of Relocated Gates	1	2	1	2	0	2
Significant Issues to which Alternatives Respond	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**	**Alternative Emphasis**
Motorized activities negatively affect wildlife habitat	Moderate protection of wildlife habitat.	Least protection of wildlife habitat.	Best protection of a range of wildlife habitats.	Good protection of wildlife habitat.	Moderate protection of wildlife habitat.	Good protection of wildlife habitat.
Motorized activities negatively affect regional wildlife corridor	Good protection of wildlife corridor.	Least protection of wildlife corridor.	Best protection of wildlife corridor.	Good protection of wildlife corridor.	Good protection of wildlife corridor.	Good protection of wildlife corridor.
Negative effects to roadless areas	Best protection of roadless areas values.	Least protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.	Good protection of roadless areas values.
Inadequate range of trail-based recreation opportunities	Good range of motorized trails opportunities.	Best range of motorized trails opportunities	Least range of motorized trails opportunities.	Good range of motorized trails opportunities.	Moderate range of motorized trails opportunities.	Good range of motorized trails opportunities.

*Open Road: Roads open to motorized use, seasonally closed, administrative use only, county and state jurisdiction; Closed route: system routes already closed or will be closed to public use and will be removed from the road management system; Motorized trails: existing and new proposed trails open to motorcycles or ATVs; Unauthorized routes: routes created by users or previous land owners which will not be managed as part of the Forest Service transportation system.
**Approximate mileage within plus or minus one mile.

2.7.2 Relative Changes to Transportation System by Alternative

Table 2.7.2 describes the relative changes to the transportation system by alternative. Immediately following it is Table 2.7.3 that provides definitions and clarification for the various abbreviations that are used in Table 2.7.2. Specific information on management action to each route is listed by alternative below. The map grid reference listed below for each road corresponds to the map set for each Alternative in this document. The highlighted titles indicate the relative location of the roads and appropriate map name for reference. An "xx" number in the Route No. column indicates that the route doesn't have a designated INFRA number.

Table 2.7.2 Summary of Proposed Activities by Alternative

CURTIS CREEK ANALYSIS AREA								
Road or Area Name	**Route No.**	**Map Grid**	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
Tilda spring 1	26001	A6	Closed	New Motor tr	Closed	Closed	Closed	Closed
Tilda spring 2	26002	A7	Closed	New Motor tr	Closed	Closed	Closed	Closed
Tilda spring 3 1/	26003	A6B6	Closed	New Motor tr	Closed	New Motor tr	Closed	New Motor tr
Tilda spring 3 extension 1/	xxx4	B6	Nonexistent	New Motor tr	Nonexistent	New Motor tr	Nonexistent	New Motor tr
Tilda spring 4	26004	A6	Closed	New Motor tr	Closed	Closed	Closed	Closed
Tilda spring overlook	26102	A6A7B7	Non-Motor tr	Motor trail	Motor trail	Motor trail	Motor trail	Motor trail
Boundary spring ATV	26736	A7	Non-Motor tr	Motor trail	Motor trail	Motor trail	Motor trail	Motor trail
Boundary spring reroute 2/	xxx5	A6	NMT	NMT	New Motor tr	New Motor tr	NMT	New Motor tr
Baxter sawmill 2	26994	B3B4	New Admin	New Admin	New Admin	New Open	Closed	Seasonal
Baxter Ridge	26714	B3C3	Closed	New Open	New Open	New Open	Closed	New Open
Davenport Hollow overlook	xxx8	B6	Non-Motor tr	New Motor tr	Non-Motor tr	Non-Motor tr	Closed	Non-Motor tr
Davenport Hollow south 1/	20196	B6B7C7	Non-Motor tr	New Motor tr	Non-Motor tr	New Motor tr	Closed	New Motor tr
Davenport Hollow north 1/	20196	B6B7C7	Non-Motor tr	New Motor tr	Non-Motor tr	Non-Motor tr	Closed	Non-Motor tr
Arbs Basin	20269	B6C6	New Open	New Open	New Open	Closed	Closed	Closed
Arbs dispersed camping	20057	C6	New Open	New Open	New Open	New Open	Closed	New Open
Arbs Private	26724	C6	Closed	Closed	New Open	New Open	Closed	New Open
Walton Gulch	xxx7	C6	New Road	New Road	New Road	New Road	Open	New Road
Tin Cup spring	20210	B7	Non-Motor tr	Open	Open	Open	Open	Open
Buck spring reroute 3/	20197	B7	Nonexistent	Nonexistent	Reroute	Reroute	Nonexistent	Reroute
Middle Davenport	20187	B7C7	New Open	New Open	New Open	Closed	Closed	Closed
North gorge canyon	xxx3	C1	New Close	New Close	New Close	New Close	Open	New Close
Curtis private	20074	C3	New Admin	New Open	New Admin	New Admin	New Admin	New Admin
Dry Gulch dispersed	xxx2	C4	New Close	Open	New Close	New Close	Open	New Close
Six Bit spring 4/	20144	D4	New Admin	New Admin	New Admin	New Admin	Open	New Admin
Zion springs	20221	C5	New Admin	New Admin	New Admin	New Admin	Open	New Admin
Running Water Ridge ATV	xxx9	C5	New Motor tr	New Motor tr	Nonexistent	Nonexistent	Nonexistent	Nonexistent
Laketown spur 1	26717	D1	New Admin	New Admin	New Admin	New Open	Closed	Closed
Laketown spur 2	26718	D1	New Admin	New Admin	New Admin	New Open	Closed	Closed
Spencer Basin gated	20103	D4	New Motor tr	New Motor tr	Admin	Admin	Admin	Admin
Red Spur electronic	20205	D3D4	New Open	New Open	New Open	New Admin	Closed	New Open
Campground springs	20082	D3	New Open	New Open	New Open	New Open	Closed	New Open
Curtis Ridge tr	3309	D4	New Motor tr	New Motor tr	NMT	NMT	NMT	New Motor tr
Six Bit -Spencer ATV	xx10	D4	New Motor tr	New Motor tr	Nonexistent	Nonexistent	Nonexistent	Nonexistent
Big Crawford creek 1	26704	D5	New Close	New Close	New Close	New Close	Open	New Close

Big Crawford creek 2	26705	D5	New Close	New Close	New Close	New Close	Open	New Close
Big Crawford creek 3	26706	D5	New Close	New Close	New Close	New Close	Open	New Close
Crawford Creek 1	26989	D5	New Close	New Close	New Close	New Close	Open	New Close
Otter Creek pvt	xx36	E1E2	New Open	New Open	New Open	New Open	Closed	New Admin
Nick Reservoir 5/	26979	E2	New Admin	New Admin	New Admin	New Admin	Closed	New Admin
Longhurst spring	26980	E2	New Admin	Seasonal	New Admin	New Admin	Closed	New Admin
Dry Canyon	26983	E3	New Admin	New Admin	New Admin	New Admin	Closed	New Admin
Pole Hollow	26109	E4	New Close	New Close	New Close	New Close	Open	New Admin
Valley ridge north	xxx1	E4	New Open	New Open	New Open	New Open	Closed	New Open
Dry Fork	20162	E5	New Close	New Close	New Close	New Close	Open	New Close
Bob Kiddys Hole	26707	E5	New Admin	New Open	New Admin	New Open	Closed	New Open
MONTE CRISTO & WHEAT GRASS ANALYSIS AREA								
Road or Area Name	**Route No.**	**Map Grid**	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
Dry Bread upper	20107	B3B4	Closed	New Open	New Motor tr	New Motor tr	Closed	New Motor tr
Dry Bread hollow ATV 6/	6324b	B2C2	Motor trail	Motor trail	Motor trail	Motor trail	Motor trail	Motor trail
Dry Mitchell ATV	xx13	B2C2	New Motor tr	New Motor tr	New Motor tr	New Motor tr	Nonexistent	New Motor tr
Dry Bread Loop	xx11	C2C3	New Motor tr	unauthorized	New Motor tr	New Motor tr	unauthorized	New Motor tr
Eli Ridge (beginning) 7/	20202	C2D1	New Close	Open	New Close	Open	Seasonal	Open
Eli Ridge (end) 7/	20202	C2D1	New Close	New Close	New Close	New Close	Seasonal	New Close
Powerline Spur 8/	26711	C2	Closed	New Open	Closed	New Open	Closed	New Open
Silvia overlook	26712	C2	Closed	New Open	Closed	New Open	Closed	New Open
Monte Cristo Pit Dispersed	20112	D1	New Open	New Open	New Open	New Open	Closed	New Open
Power line overlook 8/	26019	C2	Closed	New Open	Closed	New Open	Closed	New Open
Dairy Wash ATV	xx14	C2	New Motor tr	New Motor tr	New Motor tr	New Motor tr	Nonexistent	New Motor tr
Harriet spring 1	xx35	C2	New Open	New Open	New Open	New Open	unauthorized	New Open
Harriet spring 2	xx37	C2	New Open	New Open	New Open	New Open	unauthorized	New Open
Harriet spring 3	xx38	C2	New Open	New Open	New Open	New Open	unauthorized	New Open
Blake Hollow	20198	C1	New Admin	New Admin	New Admin	New Admin	New Admin	New Admin
Wasatch Dispersed Rec.	26733	C2D3	New Open	New Open	New Open	New Open	Closed	New Open
Blue Bell Flat – south end 9/	20201	C3	New Close	New Close	New Close	New Close	Open	New Close
Neponset cutoff	xx12	C3D3	Closed	New Open	Closed	Closed	Closed	Closed
Middle Ridge power line trail	6317	D2	New Motor tr	New Motor tr	Admin	Admin	Admin	Admin
Silvia Hollow trail	6314	D2	New Motor tr	New Motor tr	NMT	NMT	NMT	NMT
Neponset spring trail	6315	D2	New Motor tr	New Motor tr	NMT	NMT	NMT	NMT
Wasatch hunting camp	20222	D3	Open	Open	Open	Open	Closed	Open
Baldy - Wheeler before gates	20071	D3E2	New Motor tr	Open	Open	Open	Open	Open
Baldy - Wheeler behind gates	20071	D3E2	New Motor tr	Seasonal	Seasonal	Seasonal	Seasonal	Seasonal
Baldy Ridge	26708	E2	New Motor tr	New Open	Seasonal	Seasonal	Closed	Seasonal
Dairy 2	26732	E2	New Admin	New Open	New Admin	New Open	Closed	New Open
SOUTH FORK ANALYSIS AREA								
Road or Area Name	**Route No.**	**Map Grid**	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
Camp Red Cliffe	20191	F1	New Admin	New Admin	New Admin	New Admin	Open	New Admin
OGDEN FRON & PINEVIEW ANAYSIS AREA								
Road or Area Name	**Route No.**	**Map Grid**	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
Skyline Divide north 10/	6001	A1A2	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Seasonal tr
Skyline Divide south	6001	B3C4	Non-Motor tr	Motor trail	Motor trail	Motor trail	Motor trail	Motor trail
Lewis Peak Trail	6041	A3B3	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Motor trail
Coldwater Peak Trail	6087	B3	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Motor trail
City View tr (Skyline to Lewis)	6040	B3	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Motor trail

WILLARD & PUBLIC GROVE ANALYSIS AREA								
Road or Area Name	**Route No.**	**Map Grid**	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
West Fork Willard Canyon	6323	A4B4	Non-Motor tr	Non-Motor tr	Non-Motor tr	Non-Motor tr	Motor trail	Non-Motor tr
Box Elder Creek ATV trail	xx34	B2B3	Nonexistent	New Motor tr	Nonexistent	New Motor tr	Nonexistent	New Motor tr
Perry Reservoir	20070	B3	Admin	Open	Admin	Admin	Admin	Admin
Grizzly Peak 4x4 11/	20091	B3	New Close	Open	New Close	New Close	Open	New Closed
Willard Mountain 12/	20084	C2B3B4	Open	Open	Open	Open	Open	Seasonal
Inspiration Point	6091	B4	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Motor trail
Willard Lake	6090	B4	Non-Motor tr	Non-Motor tr	Non-Motor tr	Non-Motor tr	Motor trail	Non-Motor tr
Skyline Divide north 10/	6001	A1A2	Non-Motor tr	Motor trail	Non-Motor tr	Motor trail	Motor trail	Seasonal tr
Dock Flat to Perry reservoir	26010	B2C2	Closed	New Motor tr	Closed	New Motor tr	Closed	New Motor tr
Dock Flat Loop east of 20084	26010	C2	Open	Open	Open	Open	Closed	Open
Dock Flat parking west of 20084	26010	C2	Open	Open	Open	Open	Closed	Open
Pete's Hollow trail 13/	26022	B2	Closed	New Motor tr	Closed	Non-Motor tr	Closed	New Motor tr
Upper Dock Flat	xx29	C2	New Open	New Open	New Open	New Open	unauthorized	New Open
Devils hole canyon ATV 14/	xx30	C2	New Motor tr	New Motor tr	New Motor tr	New Motor tr	Nonexistent	New Motor tr
Mantua church camp	xx31	C3	New Admin	New Open	New Admin	New Open	Closed	Seasonal
Clay Valley	26011	D1	New Open	New Open	New Open	Closed	Closed	Closed
Sink Hole loop	26012	D2	Closed	New Open	Closed	New Open	Closed	Seasonal
Public grove 4x4 – west 15/	20220	D3E3	New Motor tr	New Open	Closed	Seasonal	Closed	Seasonal tr
Public grove 4x4 – east 15/	20220	D3E3	New Motor tr	Open	New Motor tr	Seasonal	Open	Seasonal
Avon gravel 1	26743	E3	New Motor tr	Open	Closed	Closed	Closed	Closed
Dip Hollow ATV	xx33	E3	New Motor tr	New Motor tr	Nonexistent	Nonexistent	Nonexistent	Nonexistent
Public Hollow loop 4x4 - north	20092	E3E4	New Motor tr	Open	New Motor tr	Seasonal	Open	Seasonal
Public Hollow loop 4x4 - south	20092	E3E4	New Close	New Close	Admin	New Close	Admin	New Close
Jensen ranch 4x4	20114	E3E4	Admin	Admin	Admin	Admin	Closed	Admin
Jensen spur	26018	E3E4	New Motor tr	Closed	Closed	Closed	Closed	Closed
Little Bear ATV	xx32	E3E4	New Motor tr	Nonexistent	Nonexistent	Nonexistent	Nonexistent	Nonexistent

Table 2.7.3 Clarification of Management Actions Listed in Alternatives Table 2.7.2

Admin	An existing system road controlled by a gate or signs that is open for "official use only" by Forest Service personnel (forest management and protection) or permittees (approved care and maintenance of infrastructure or improvements). Synonymous with administrative use road.
Closed	An existing system route that is not managed as open to public use on the existing Travel Map. These routes are being reclaimed.
Motor Trail	A system trail that is open to motorized use, either motorcycle single-track trail or an ATV motorized trail. Or a system road that will be managed as a Motorized trail.
NMT	A non-motorized system trail that does not have any changes proposed by the alternative. They do not appear on alternative maps since the maps only depict motorized routes.
New Admin	A road that is tracked in the INFRA database that will be open for administrative use and will be controlled by a gate or sign. This could be a road under special use permit or a road that is needed for maintenance of a stock pond.
New Close	An existing system road that will be closed to motorized use. It will be reclaimed.
New Motor tr	A non-motorized system trail that will be opened to either single track or ATV use; or a new constructed route that will be managed as a motorized trail; or a previously closed system road that will be managed as a motorized trail.
New Open	An existing road that is tracked in the INFRA system that will be open to motorized use.
New Road	An existing route that is **not** presently tracked in the INFRA system that will be managed as a system road.

Nonexistent	A route proposed to be built. Nothing currently exists on the ground. It is listed in alternatives as something other than Nonexistent if it only proposed to be built in that alternative. They are only shown on alternative maps where proposed.
Non-Motor tr	A system road or motorized trail that that is tracked in INFRA that will be managed as a non-motorized trail.
Open	A system road that that is a system road that is currently open on the travel plan. Managed as a road.
Reroute	An existing road or trail that will have a portion replaced with a new constructed alignment. The abandoned section will be rehabilitated.
Seasonal or Seasonal tr	A road or trail that will be seasonally open or closed and is managed with either a gate or signs.
Unauthorized	Unauthorized or unclassified road or trail. A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas (INFRA). Note: the term unclassified is no longer used in 36 CFR 212.1 which uses 'unauthorized". For the purpose of this document, we will continue to use unclassified and the same definition applies to both.

1/ - The Tilda Spring 3 trail would be extended to link to the Davenport Hollow (20196). This extension will create an ATV loop and an alternate route in and out of the Tilda Complex. The Davenport Hollow (20196) road will be closed at this junction to motorized uses going north creating a non-motorized trail to Johnson Draw but open south for ATVs.
2/ - Boundary Spring will be protected from motorized vehicle impacts by re-routing a short segment of trail around the west side of the pond. It is a very short section and difficult to see on the maps.
3/ - Buck Springs will have a small section of the road moved uphill away from the pond for protection of the aquatic resources. The old road section by the pond will be ripped and seeded to restore the native ground cover. This re-route would extend to connect to the Tin Cup spring road (20210).
4/ - Six-Bit Spring road (20144) will be gated as an administrative closure at the east end only. A gate will be installed just past a group of dispersed campsites.
5/ - Nick Reservoir (26979) shows as a loop road on the maps. Administrative need to access the reservoir will be done with only one end of this loop. The southern portion of this loop will be abandoned and will be ripped and seeded.
6/ - Dry Bread Hollow ATV is shown in this table even though no changes are proposed to this trail because any new Travel Use Maps will show the configuration of the trails will change. The 1997 Travel Map is in error and does not correctly show the open trails. Other new trails are proposed in this immediate area. Reference the Monte Cristo maps.
7/ - Eli Ridge road will be gated just past a group of dispersed campsites about ½ mile from the beginning. The existing gate will be moved to this location, changing the management of the "beginning" section and the "end" section.
8/ - This small road adjacent to SR39 is inventoried as two routes. Power Line Spur (26711) and Power Line Overlook (26019) are very close together and it is difficult to depict them on the map as separate routes. They will be managed in a similar manner.
9/ - Blue Bell Flat road will be closed just past the dispersed camps at the old gravel pit. The closed section will be managed as a part of the non-motorized Blue Bell Hollow trail (6099).
10/ - The Skyline trail (6001) beginning at the North Ogden Divide Trailhead, will be closed to motorized use from November 15 to July 15 to improve the habitat for Mountain Goats around Ben Lomond and Willard peaks.
11/ - Grizzly Peak 4x4 road will be closed at the junction of the Willard Peak Road. This will close this road to motorized vehicles.
12/ - The Willard Mountain Road (20084) will be seasonally closed from approximately November 15 to July 15 above the junction of the Grizzly Peak Road (20091). A gate will be installed near this junction where room for a turn-around is available.
13/ - Pete's Hollow trail will be managed for single-track motorcycle only. A seasonal use restriction for motorized use from November 15 to April 31 will be applied to this trail to match motorized access restrictions on the Brigham Face Wildlife Management area.
14/ - Devils Hole Canyon ATV trail will be a newly constructed trail. The portion of this trail west of the main Willard Road will is included to provide a link to the Box Elder Creek Trail.
15/ - The west end of Public Grove 4x4 will be managed as an ATV trail with a seasonal closure from November 15 to June 15. The east end will also have a seasonal closure from November 15 to June 15.

2.8 Mitigation

Mitigating the impacts from use of the National Forest is an important role of the Forest Service. Impacts caused by any number of reasons such as development projects or public recreation use must not be allowed to change our continued

ability to manage the lands effectively. The Forest Service Manuals and Handbooks have specific guidance for reducing or eliminating impacts from the construction or maintenance of trails and roads (FSM/FSH 2350, 7700).

Mitigation is also listed in Appendix D, Mitigation and Monitoring Best Management Practices. The listed appropriate site specific or general mitigation measures will be an integral component of implementing this decision.

Prior to any construction, a final review will be done by the resource specialist for the Wasatch-Cache National Forest. Site specific Mitigation measure to reduce or eliminate effects to sensitive resources will be developed and implemented during the construction activity.

The Ogden RD also has a document for Trail Mitigation and Monitoring that combines Best Management Practices, direction and techniques for the management and development of both motorized and non-motorized trails within this jurisdiction (USDA Forest Service, Ogden RD BMP Mitigation and Monitoring). Much of Appendix D was created from this previous document.

2.9 Implementation

Once the Record of Decision is final, the decision of how and when the plan will be implemented will be made by the District Ranger in coordination with the Forest Engineer. The mechanics of implementation of the decision will first consist of prioritization of the work to be done. It is expected with the current budget that implementation will occur over a number of years. The reality is that lower priority implementation may not occur at this time.

Priorities for managing the road system on the ORD is expected to be as follows: 1) Improved public information in the form of a new and improved Travel Plan Map, implement seasonal closures, correct signing on each road, corrected computer inventory data, active user education and involvement programs, improved coordination with adjacent landowners, permittees, and local governments; 2) continued, and increased if possible, annual road maintenance and decommissioning programs; and, 3) physically closed and/or gated routes based on the determination of priority.

2.10 Forest Plan Consistency

Alternative 5, the preferred alternative, is consistent with the revised Forest Plan (USDA Forest Service, 2003). No amendment or changes are proposed from the mix of route management activities summarized in the final Record of Decision.

Intentionally left blank

Chapter 3
The Affected Environment

3.1 Introduction

This chapter provides a summary of the physical, biological, and human resources that could be affected by the proposed action or alternatives to it. Chapter 3 provides a baseline from which comparisons can be made for the effects analysis in Chapter 4. The Council on Environmental Quality (CEQ) regulations directs agencies to describe the environment that could be affected as it relates to the importance of the projected impacts (40 CFR 1502.15). The affected environment information is provided by resource/discipline in the same order as Chapter 4 (Effects).

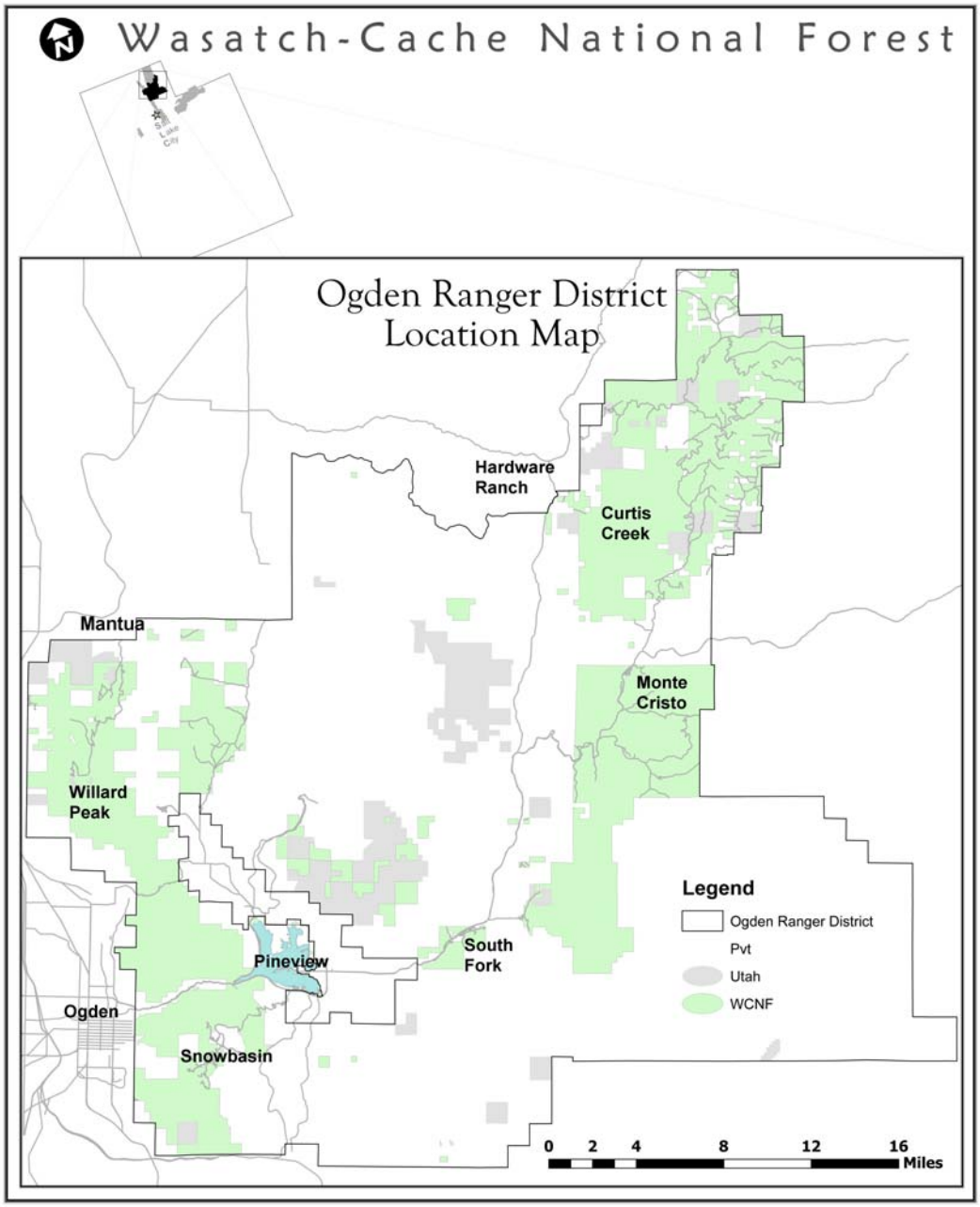


FIGURE 3.1: Land Ownership on the Ogden Ranger District of the Wasatch-Cache National Forest, Utah.

3.1.1 Travel Planning on the Ogden Ranger District

In 1977, President Carter issued Executive Order Executive Order 11989 to clarify the agencies management of Off-Road Vehicles (ORV) on public lands. It directed each agency to adopt a policy that portions of the public lands within its jurisdiction should be closed to use by ORV's except those areas or trails which are suitable and specifically designated as open to such use. (E.O. 11989, May 24, 1977).

The chronology of travel planning on the Ogden Ranger District follows:

- The initial effort at travel planning was in 1980 and it included a travel plan map for both summer and winter use and a Special Closure Order that was signed by Forest Supervisor Chandler St. John on May 1, 1980 (USDA 1980).
- The first revision of the 1980 map and Special Closure Order was signed by Forest Supervisor Dale Bosworth on August 15, 1988 (USDA 1988).
- The 1988 plan and map were again amended three years later with a Decision Memo, signed by Forest Supervisor Susan Giannettino (March 5, 1991). This decision changed twenty-two roads or areas in the previous Travel Management Plan. A new travel plan map for the Ogden and Logan Ranger Districts was also printed (USDA 1991).
- The District released a new travel plan map in 1991 (USDA 1991).
- The 1991 travel plan map was again revised in 1997 with updates based on new land acquisitions (USDA 1997).
- The 2003 WCNF Forest Plan Revision provided a stand alone winter motorized travel map USDA 2003).
- A new combined Logan and Ogden Ranger Districts printed a new stand-alone summer motorized travel plan map in.
- Changes were made to correct minor landownership errors and reprinted in 2005 (USDA 2005).

The 2003 Forest Plan stated an objective to update the Salt Lake, Ogden and Logan District Travel Management Plans within 5 years. This objective includes a user created route inventory; maintenance levels 1 and 2 road analysis, updating of Road Management Objectives, and refining of winter decisions where appropriate (USDA 2003 p4-28).

3.2 Transportation Systems

In 2003, the Ogden RD began the current travel plan analysis with a road-by-road review of the electronic version of the Forest Transportation Atlas for roads. This atlas names and assigns a number to each road and describes how the road is being managed. In addition, the Wasatch-Cache completed a Roads Analysis (2002) of all maintenance level 1and 2 roads on the Ogden RD (see table below for maintenance level description). Level 3, 4 and 5 roads are in the Road Analysis for the 2003 Wasatch-Cache Forest Plan. This road analysis lists each road and the relative effects of each road on key resources both social and natural. The USFS also uses an electronic database to inventory its system roads. The database is called INFRA, which refers to the Forest Service infrastructure (includes buildings, campgrounds, roads, etc). The following table lists the number of roads by maintenance level inventoried in INFRA for the Ogden Ranger District. It also shows the percentage of all road miles by each maintenance level. User created routes and trails are not described in the table.

Table 3.2.1 The number of roads by maintenance level and their percentage of total miles on the Ogden District.

Maintenance Level	Maintenance Level Description	# of Roads	% of Road Miles
Maintenance Level 1	Basic Custodial Care or Closed	9	4 %
Maintenance Level 2	High Clearance Vehicles	131	56%
Maintenance Level 3	Suitable for Passenger Cars	22	31%
Maintenance Level 4	Moderate Degree of User Comfort	4	1%
Maintenance Level 5	High Degree of User Comfort	22	8%
Total		**188**	**100%**

This environmental analysis used two sources of data for the roads and trails in this area. The first is the Geographic Information Systems (GIS) which is used primarily for analysis and computer-generated mapping. The GIS computer-

generated data includes calculations of the linear length of each route. This data was considered to be the most accurate data measuring the routes on National Forest.

The second source of data is the Forest Service INFRA database where the agency lists system roads and trails as managed assets (Infrastructure). When INFRA mileage was originally entered approximately seven years ago, it came from existing data such as maps, old surveys, and estimates.

The mileage from INFRA and the GIS, however, did not match perfectly. The current INFRA database is being linked with GIS data and will fix this consistency error. All of the tables used for the analysis in Chapter 4 used the GIS mileage.

A road analysis for the maintenance level 1 and 2 roads on the Ogden Ranger District was completed in January of 2004. This roads analysis is intended to provide the interdisciplinary team a review of the existing District's road system, and identifies issues that were considered for both existing roads and possible future roads. It considered environmental threat and access benefit considerations for each road segment. This review of the resource impacts and public values of these roads used a spreadsheet format. This was modified from the spreadsheet used for the Wasatch-Cache Roads Analysis (2002) of maintenance level 3, 4 and 5 roads. The road analysis for the Ogden District roads showed that none of these roads had a high rating for any of the items reviewed. (USDA Forest Service, 2004)

The Ogden Ranger District has for the last few years an annual discretionary budget of between $22,000 and $30,000 for minor maintenance of the roads and road signs. This funding has been sufficient to have a two-person road maintenance crew for minor repairs, law enforcement, and monitoring. Sign installation and maintenance is the responsibility of the Ogden RD. This funding is also used to finance administration staff salaries and vehicles in the District office. Annually, the Wasatch-Cache Road Maintenance crew works approximately three weeks on the Ogden Ranger District with heavy equipment. This work includes blading and shaping of roads, cleaning of culverts, spot graveling, graveling, clearing of brush and decommissioning (closing unauthorized roads and trails). In some years there is also money for additional contract work for maintenance, especially for asphalt roads. This amount has been mostly adequate to keep the system of road operational. See section 2.5.1 for additional information on maintenance.

Because this annual budget is limited, it has to be carefully allocated to the highest priority projects and as a result, some low priority work may not occur in a timely manner. The allocation and management of scarce resources has been one of the challenges with managing the transportation system. If weather destroys a sign or when a sign is vandalized, on the ground information regarding the status of the road may not be immediately available.

Trail maintenance and administration is the responsibility of the District. The annual discretionary funding for projects is approximately $25,000 to $30,000. This money is used for salary for a two to four person crew and to buy materials and tools. A portion of this money is used every year to match one or more financial grants from the State of Utah motorized or non-motorized program. Additional funding is allocated to finance administration staff salaries and vehicles. This funding has been sufficient to manage and maintain our system of trails to Forest Service trail standards.

3.2.1 Area of Influence

The area of influence is the Ogden Ranger District of the Wasatch-Cache National Forest. (See map page 3-1).

The Ogden RD manages 160,926 acres of National Forest system lands.

3.2.2 Existing Conditions

General

The transportation system on the Ogden RD is in generally good condition. One of the main reasons for this is that the annual maintenance and repair program includes the placement of gravel on critical sections of road. Over the years, the percentage of improved graveled sections of road has steadily increased and is now a common condition of much of the main road system.

The system roads that comprise the backbone of the Ogden RD's transportation system are in good condition and do not need to be changed.

The main roads (collector) that are open on the existing travel plan that are currently open will remain open under all of the alternatives considered in this analysis. Chapter 2.6.2 of this EIS identifies the roads and motorized trails that were analyzed for change by alternative. The routes that will not be changed under any alternative are included in Appendix A.

Shoshone ATV Trail

In April of 2002, H.R. 3936 to provide recreational trail opportunities for motorized users in northern Utah was proposed. The bill described a system of existing routes throughout public and private lands from the Idaho border south to SR 39, the Monte Cristo Highway, and west of Brigham City to Laketown, Randolph, and Woodruff in Rich County. The routes making up the Shoshone Trail totaled 623 miles of roads and motorized trails. The legislation directed the USFS and Bureau of Land Management (BLM) in cooperation with the State of Utah Department of Natural Resources and participating county governments to develop strategies and actions for managing the trail. Even though the bill was never approved, the idea of a motorized trail system in northern Utah, modeled after the other ATV trail systems such as the Piute Trail in central Utah, was a unique opportunity for multiple agencies to work together in providing a motorized system of routes.

As a result, a Memorandum of Understanding (MOU) was signed by the WCNF, the BLM, (Salt Lake Field Office), the Utah Division of Parks and Recreation (UDP&R), the Utah Division of Wildlife Resources (UDWR) and the Counties of Rich and Cache for the cooperative development, operation, and maintenance of an ATV trail system known as the Shoshone ATV Trail on February 27, 2004.

The Ogden and Logan Ranger Districts, the BLM, and UDP&R, who all are members of the Northern Utah Working Group for the Natural Resources Coordinating Council (NRCC), discussed the immediate implementation of the Shoshone ATV Trail. Under the suggestion of the MOU, the USFS and the BLM gave permission to the UDP&R to begin marking routes that were historically designated as open based on past environmental reviews beginning in 1988 and associated travel plans as the Shoshone ATV Trail. The UDP&R in cooperation with the USFS and the BLM produced a Shoshone ATV Trail Map that was made available to the public in 2004 (Utah SP&R 2003). Additional informational signs, displaying maps and appropriate regulations, were installed at key locations along the trail system, during the summer of 2004.

Approximately 65 miles of roads in the Curtis Creek area on the Ogden RD are marked and managed as the Shoshone ATV trail. The trail extends north onto the Logan Ranger District and west onto BLM lands in Rich County, Utah. Approximately 218 miles of routes in total are currently managed as the Shoshone ATV trail.

Motorized Trails

Maintenance of system trails is performed when necessary. The Forest Service standard for maintenance is based on a condition inventory done at a minimum every five years. This condition survey determines the priorities to protect the trail. Motorized and non-motorized trails are maintained in similar fashion. The Ogden Ranger District was awarded funding from Utah Parks and Recreation as well as a partnership with Ogden City to purchase a small trail maintenance tractor. This small bulldozer is used on those trails that physically will allow equipment of this size without causing resource damage. Motorized trails tend to meet this requirement more than non-motorized trails.

The motorized trails fall into two categories. The two categories were determined by physical features such as how wide the trails are to allow ATVs and those not wide enough for ATVs but are open to motorcycles. Motorcycles are allowed on all ATV trails as well as system roads. The only motorcycle-only trail on this Ranger District is the Skyline trail (6001) from Pineview Reservoir to Inspiration Point.

Non-motorized Trails

This system of non-motorized trails was not included in this analysis unless a change was proposed to convert the trail to motorized use or convert a motorized route to a non-motorized trail. In the recent past, the Ogden Ranger District has actively increased the miles of trails, especially along the Ogden Front. All of these miles are strictly non-motorized only uses.

3.3 Watersheds and Aquatic Resources

The purpose of this section is to describe the water, wetland, and aquatic resource conditions related to the road and motorized trail systems on the Ogden RD. Most of the motorized routes on the Ogden RD are a long distance from water

and located on dry ground near the tops of mountain ranges. This section highlights those USFS roads that have the highest potential for degradation related to aquatics, riparian zones, and water quality.

3.3.1 Area of Influence

For direct and indirect effects on water, wetland, and aquatic resources, the area of influence is the area that is hydrologically connected from the road and trail system to the first water feature encountered such as a stream, lake, reservoir or pond. This includes riparian habitat conservation areas (RHCA). For cumulative effects, it is the area within the sixth code watershed that drains the road and trail system.

Riparian habitat conservation areas are defined in the 2003 Forest Plan (USDA Forest Service) and include riparian corridors, wetlands, intermittent streams and other areas that help maintain the integrity of aquatic ecosystems. RHCA's are further described in section 4.3.2.

3.3.2 Existing Conditions

3.3.2.1 Hydrology

Several watersheds drain areas where roads or trails are located. Numbers in parentheses are the Fifth Hydrologic Unit Code (HUC) watershed numbers used for watershed identification.

- The Curtis Creek North area drains into Bear River Frontal (1602010101) at the head of Laketown Canyon, Bear River-Big Creek (1601010106), and Blacksmith Fork (1601020302).
- Curtis Creek South area drains into Bear River-Big Creek (1601010106), and Blacksmith Fork (1601020302), and Woodruff Creek (1601010107).
- Monte Cristo area drains into Woodruff Creek (1601010107), Blacksmith Fork (1601020302), and the headwaters of the Ogden River (1602010202).
- South Fork area drains into the headwaters of the Ogden River (1602010202).
- The Lewis Peak area drains into Outlet of the Ogden River (1602010203) and Third Salt Creek (1602010207) of the lower Weber River.
- The Public Grove area drains into the Headwaters of the Little Bear (1601020301).
- The Willard area drains into Box Elder Creek - Bear River (1601020405) and into upper part of Outlet of the Ogden River (1602010203).

3.3.2.2 Water Quality

The State of Utah has designated the streams draining the area above the National Forest boundary as Antidegradation Segments. This indicates that the existing water quality is better than the established standards for the designated beneficial uses. Water quality is required by state regulation to be maintained at this level. The beneficial uses of streams within this area, as designated by the Utah Department of Environmental Quality, Division of Water Quality, are:

- Class 2B – protected for recreation
- Class 3A – protected for cold water species of game fish and other cold water aquatic species
- Class 4 – protected for agricultural uses.

The numeric water quality standards can be found in Section R317-2, Utah Administrative Code, *Standards of Quality of Waters of the State* (Utah, State of. 2000).

In the most recent assessment of water quality, the State of Utah has determined that the waters within the watersheds that drain the study area fully support their beneficial uses with the exception of Pineview Reservoir and the North Fork of the Ogden River (Utah, State of. 2002). Pineview Reservoir has had a total maximum daily load (TMDL) assessment completed for all parameters except temperature. The North Fork of the Ogden River is partially supporting its beneficial uses and is listed as impaired for dissolved oxygen. The Utah Division of Water Quality is requesting that this water body be removed from the impaired list because the recent drought is not representative of conditions since water has been removed from the stream for irrigation (USDA Forest Service, 2004-personal communication with Utah Division of Water Quality).

3.3.2.3 Wetland and Riparian Resources

The roads analysis identified several roads that may potentially affect wetlands. These roads are:

- Perry Reservoir (road #20070),
- Willows Campground (road #20075),
- Lower Meadows Campground (road #20076), #20077),
- Botts Flat Campground (road #20078),
- Magpie Campground (road #20079),
- Upper Meadows Campground (road #20080),
- Jefferson Hunt Campground (road
- South Fork Campground (road #20089),
- Perception Park Campground (road #20095),
- Camp Red Cliff (road #20191).

The road near Perry Reservoir is located next to the reservoir and is currently closed. The other roads are located in campgrounds that are in flat areas next to the South Fork Ogden River.

3.3.2.4 Aquatic Resources

The Ogden Ranger District roads analysis identified three roads that may contribute to fishing, poaching, or direct loss for at-risk species. These roads are Anderson Campground Road (20044), Port Boat Ramp (20098), and Pineview Marina (20190) (USDA 2004). These roads have boat ramps that meet the water where aquatic organisms may be transferred directly from one water body to another.

Aquatic Threatened, Endangered, Sensitive and Management Indicator Species

No threatened or endangered aquatic or semi aquatic species occur on the ORD. The Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) is a Candidate species found in three ponds in Box Elder County. None of the ponds are located on National Forest lands, and the species will not be impacted by activities taking place on the Ogden RD.

Fish

Bonneville cutthroat trout (*Oncorhynchus clarki utah*, BCT) and Colorado River cutthroat trout (*Oncorhynchus clarki pluriticus, CRCT*) are currently listed as a USFS Intermountain Region sensitive species and Management Indicator Species (MIS) on the WCNF. BCT are the only native trout found in the Bonneville Basin, which includes portions of Idaho, Nevada, Utah, and Wyoming. CRCT are not found in the travel plan project area. This project will therefore have no impact nor affect the trend of this sub species. The CRCT will not be discussed further. BCT were distributed in all suitable waters of the Bonneville Basin when Europeans reached the region (Behnke 1992).

Bonneville Cutthroat Trout: Currently, pure strains of Bonneville cutthroat trout are found in Idaho, Nevada, Utah, and Wyoming. They are found in a variety of habitats including mainstream rivers, and small headwater streams. Bonneville cutthroat trout require cool, clear water throughout their lives. Optimum habitat characteristics include areas with a 1:1 pool to riffle ratio and slow, deep water with vegetated stream banks for shade, bank stability, and cover. They prefer summer water temperatures of about 59 degrees F, but can survive in water up to 70 degrees F. They may also inhabit lakes (Sigler 1996; Young et al. 1996).

Declines in Bonneville cutthroat trout populations elsewhere have been attributed to hybridization with introduced trout (rainbow and other sub-species of cutthroat trout), competition with and predation by introduced fish, loss and fragmentation of habitat from man-made causes such as water diversions, overgrazing of riparian areas, poor timber harvest practices, poor road and trail building practices, and water pollution (Behnke 1992, Kershner 1995, Sigler and Sigler 1996, NatureServe 2000). Another historical problem has been overfishing (NatureServe 2000).

Within the Ogden RD, BCT are found in several watersheds. In the Blacksmiths Fork Watershed, BCT are found in Rock Creek and Curtis Creek. BCT are found in the Little Bear Watershed, although no fish occupy National Forest lands.

Within the Woodruff Watershed, BCT occupy Sugar Pine, Wheeler, and Big Spring Creeks. BCT also occur in several streams within the Ogden River watershed. These include the South Fork Ogden River (Wheatgrass, and Left Fork South Fork Ogden River), North Fork Ogden River (South Fork Wolf Creek, Durfee Creek, Sheep Creek, Cold Canyon, and Cutler Creek). Wheeler Creek also contains BCT. Most of these populations were last surveyed in 2000 in a cooperative effort by the Utah Division of Wildlife Resources and the USFS (Thompson and Smith 2001).

MIS TREND: Surveys for BCT (as a MIS species) on the forest are designed to allow for monitoring of population trends This differs from . Information is collected on population numbers, fish conditions and fish biomass as well as species composition. This approach consists of extensively surveying one drainage area (4th level hydrologic unit code or HUC) each year. This provides a snapshot of the entire HUC at one time and builds on what has been done over the past ten years in collecting baseline data. This approach allows for the comparison over time of results for the full HUC or for what is happening in individual stream sections surveyed. Over a ten-year period (about two full generations of fish) all of the HUCs will be surveyed to provide a Forestwide perspective of changes in fish populations and species composition for trends. In 2003, the Forest Service surveyed the Upper Bear, in 2004 the North Cache and South Cache watersheds were sampled and in 2005 the Smiths Fork and Blacks Fork watersheds were sampled. Most of the streams on the Ogden RD are scheduled for monitoring in 2008. A Forest Plan monitoring report (USDA 2004) and Management Indicator Species reports (USDA 2005, USDA 2006) include information on MIS species on Wasatch-Cache National Forest.

There are 37 populations of cutthroat trout within the Wasatch-Cache National Forest (WCNF, 2005). Hydrologic Units within which the Ogden Ranger District is located include nine populations of Bonneville cutthroat trout on National Forest System lands. Table 3.3.1 lists the potentially affected metapopulation/population and its associated MIS trend.

Table 3.3.1 Management Indicator Metapopulations/Populations and Projected Trends of Bonneville Cutthroat Trout potentially affected by this Travel Plan on the Ogden Ranger District of the Wasatch-Cache National Forest, Utah.

Metapopulation/ Population.	**Trend**
Upper Woodruff Creek	Flat
Blacksmith Fork 1	Flat
Blacksmith Fork 2	Flat
Ogden Canyon	Flat
North Fork Ogden	Flat
Causey Reservoir	Flat
South Fork Ogden	Down
Wheeler Creek	Flat
Middle Fork Ogden	Down

SENSITIVE SPECIES CALL: See the biological evaluation for the affects on Bonneville cutthroat trout as a sensitive species in regard to this project.

Amphibians

Two amphibians are identified as species of concern on the WCNF, the Columbian spotted frog (*Rana pretiosa*) and the Boreal toad (*Bufo boreas boreas*).

Columbian Spotted Frog (*Rana pretiosa*) Columbian spotted frogs are not found in Rich, Cache, Weber, Morgan, or Box Elder Counties (Stebbins 1985) and will not be affected by activities taking place on the Ogden RD.

Boreal Toad (*Bufo boreas boreas*). The Boreal toad is currently listed as a State of Utah sensitive species. Boreal toad, also known as the western toad, are found in the southern portions of Alaska and across the boreal forests of Canada south into Washington, Oregon, Idaho, Montana, Nevada, and Utah. Small populations are also found in California, Colorado, Wyoming, and New Mexico (Stebbens 1985).

Amphibian surveys conducted on the WCNF from 2000-2004 primarily focused on determining the distribution of Boreal toad. Over 100 sites have been surveyed for amphibians on the Ogden RD (Thompson and Chase 2001, 2003 and 2005 and Thompson et. al. 2003). Surveys were conducted at springs, stockponds, beaver ponds, and within streams. Boreal toads

have been found in several locations on the District, all of them in the Monte Cristo and Curtis areas. Adult Boreal toads have been pit-tagged at several localities on the ORD by the UDWR to determine population sizes and to track movement.

Boreal toads occupy a wide variety of habitats including mountain meadows, grasslands, forests, and deserts. Within these habitat types, toads are most commonly found in the vicinity of a water source such as streams, springs, ponds, lakes, reservoirs, and stock ponds, but they are capable of traveling several kilometers across dry terrain (Stebbins 1985). Breeding habitat is characterized by shallow reservoir, wet meadows, stock ponds, and stream backwaters. Vegetation associated with breeding habitat includes: sedges (*Carex* spp.), cattails (*Typha* spp.), grasses, willow (*Salix* spp.), reeds (*Phragmites*), and algae. Hibernacula can consist of rodent burrows, beaver lodges, and beaver dams. A continuous flow of groundwater is necessary to prevent freezing (Campbell 1970).

In Utah, emergence from hibernacula generally occurs in April and May, coinciding with snowmelt (Hogrefe et al. 2005). Breeding typically occurs from April to early July, although paired toads have been observed as late as mid-July (Hogrefe 2000, personal communication). Egg strands are often found entwined in vegetation in shallow water. Egg and tadpole development is temperature dependent. Tadpoles have been observed migrating to the warmest area in a breeding pool to expedite growth and development . In Utah, metamorphosis typically occurs from mid-July to mid-August. Reproductive efforts occasionally fail because ponds dry up prior to tadpole metamorphosis (Campbell 1970).

Historic distribution of Boreal toads in northern Utah included many high elevation canyons (7,500 – 12,000 feet) and mountains of Salt Lake, Utah, Juab, Summit, Wasatch, Rich, and Cache counties (Stebbins 1985, Hogrefe et al. 2005). Currently, Boreal toad populations are absent from the majority of these historically occupied habitats (Thompson 1999). The reasons for the decline of the Boreal toad have not been defined with any degree of certainty. Most habitat alterations from timber harvest, grazing, recreation, and water development would likely not be beneficial to long-term enhancement of Boreal toad habitats (Hogrefe et al. 2005). Road construction and development has probably impacted the toad.

3.4 Soils

The purpose of this section is to describe the geomorphology and soils related to the road and motorized trail systems on the Ogden RD. Most of these motorized routes on the Ogden RD are a long distance from water and located on dry ground near the tops of mountain ranges.

3.4.1 Area of Influence

The area of influence is the Ogden Ranger District.

3.4.2 Existing Conditions

Several geomorphological units on the Ogden RD were described during Forest Plan revision (USDA Forest Service, 2003).

Bear River Highlands – These are gently sloping, eastward tilting uplands at elevations ranging from 5,200 to 9,500 feet. The structure is a plateau-like surface of uplifted portions of overthrust fault zone and the lithology is Wasatch limestone, dolomite and quartzite with Cambrian rocks (Tintic quartzite, Maxfield limestone) on the west side. Geomorphic processes are fluvial and glacial; peri-glacial features are widespread.

Monte Cristo-Weber Valley Hinterlands – These are a modified ridge and valley network between the Wasatch Front and the high Wyoming Basins at an elevation range of 5,400 to 9,000 feet. The structure is graben-like and the lithology is Wasatch sandstone, limestone, conglomerates with pockets of Tertiary volcanics and Precambrian crystalline rocks. Alluvium is in the valleys and drainage ways. The geomorphic processes are fluvial and colluvial.

Northern Wasatch – This is a bold, straight mountain front crossed by large east-west canyons at elevations ranging from 5,000 to 9,700 feet. The structure is an uplifted fault block; the lithology is mostly Farmington Canyon crystalline rocks, gneiss, quartzite, and dolomite. The geomorphic processes are fluvial, glacial, and colluvial.

Soils and influence of human use - Soils are deep to moderately deep at elevations from 4,300 to 10,000 feet. Slopes are mostly steep to very steep with some slightly steep slopes on the alluvial fans along the foothills. Soils are moderately well to somewhat excessively drained. Permeability is slow to moderately rapid. Runoff is slow to rapid and sediment production is low to moderate.

The main human influences that affect soil conditions are timber management activities, livestock grazing, recreational activities, and roads. Timber has been harvested in many of the drainages and livestock graze throughout the area. This area was overgrazed in the late 1800s and early 1900s and poor soil productivity is found in some areas. Topsoil losses through erosion have been particularly severe in the tall forb communities, where low ground cover annuals such as tarweed have supplanted the native forbs. In general, the downward trends in topsoil losses have been reversed through a combination of allotment stocking reductions, livestock exclusion from riparian area and tarweed eradication efforts.

Recreationists use the main dirt and gravel surfaced roads through the area as well as many trails. Motorized dispersed recreation use occurs also along these routes. A few roads and trails are located in riparian habitat conservation areas (described in 3.3.1) and contribute sediment to the streams. Where motorized vehicles are using system trails and roads according to intended designs and travel plan direction, soil conditions are stable and within established standards. Recent expansions in off-road and all-terrain vehicle (ATV) use threaten to reverse the positive trend. Erosion has been accelerated in some areas by the illegal uses of cutting of new undesignated routes and other over land use. Overall soil conditions are stable, although problem spots exist in some areas that have been identified in the roads analysis such as the Dry Fork Road (20162) and others described in table 4.3.1.

Table 3.4.1 displays the results of the most recent inventory of motorized trails and open roads on the Ogden District. This includes private, county, city, state, and forest service routes within the District boundary. Equivalent acres are calculated based upon an assumed road width of 12 feet and an assumed trail width of 5 feet. This is approximately 315 equivalent acres.

Table 3.4.1 Acres of Total Soil Resource Commitment (TSRC) on the Ogden RD from Roads and Trails*

Analysis Area	Miles of open Roads	Miles of Motorized Trail	Road Acres	Trail Acres	TSRC Acres
Willard Public Grove	29	13	42	8	50
South Fork	9	0	13	0	13
Monte-Wheatgrass	49	2	71	1	72
Pineview	31	17	45	10	55
Curtis Creek	80	14	116	8	125
Totals	**198**	**46**	**287**	**28**	**315**

*Table values for miles (from GIS) and acres are approximate and have been rounded to the nearest whole number.

3.5 Vegetation

3.5.1 Area of Influence

The area of influence is the Ogden Ranger District.

3.5.2 Existing Conditions

3.5.2.1 Rare Plants

The Endangered Species Act, the Forest Service Manual and Forest Plan require that plants that are recognized by the US Fish and Wildlife Service, Forest Service and the State of Utah have special consideration when projects are planned (USDA Forest Service, 1989). The plants in the following table have been documented on the Ogden RD for such consideration (UNHP 2003; Welsh, et. al, 1993). Additional information on the occurrence and classification regarding protection policies for endangered threatened and sensitive species of the Ashley, Uinta and Wasatch-Cache National Forests is in the project record (USDA Forest Service 1999).

Table 3.5.1 Status and habitat of rare plants known on the Ogden RD

Species	Status	Habitat
Logan buckwheat *Eriogonum brevicaule var. loganum*	FS Sensitive	Shrubland
Burkes Draba *Draba burkei*	FS Sensitive	(Sub)Alpine, Rock crevice, Scree
Maguire's draba *Draba maguirei*	FS Sensitive	(Sub)Alpine, Rock crevice, Mountain forest
Mt.Naomi penstemon *Penstemon compactus*	FS Sensitive	(Sub)Alpine, Rock crevice, Scree
Clustered (Brownie) lady's slipper *Cypripedium fasciculatum*	FS Sensitive	Mountain Forest
Utah Ivesia *Ivesia utahensis*	Recommended Sensitive	(Sub)Alpine, Rock crevice, Scree
Case's corydalis *Corydalis caseana ssp. Brachycarpa*	Recommended Sensitive	Mountain Forest
Broadleaf penstemon *Penstemon platyphyllus*	Recommended sensitive	Shrubland, Open Rock crevice and Scree
Wasatch daisy *Erigeron arenarioides*	Recommended sensitive	Shrubland, Open Rock crevice and Scree
Wasatch rockcress *Arabis lasiocarpa*	FS Watch list	Shrubland
Kings aster *Aster kingii bar. Kingii*	FS Watch list	Shrubland

These plants can be negatively affected by a variety of activities, human and non-human. Human activities include impacts associated with illegal ATV use, hiking, camping, picnicking and other activities that cause people to congregate in unique areas, such as ridge tops, for long durations. Animal activities, both domestic and wild, may impact populations by herbivory and/or trampling.

The Willard area, especially from Inspiration Point south to Ben Lomond, is of concern. The Ogden RD's highest concentration of rare plants is in this area. There are two major concerns regarding the plants in this area, illegal OHV use and an increasing mountain goat population that can potentially affect these plant species. Foot traffic use of the area might also be considered a concern for rare plants, but probably to a lesser extent.

3.5.2.2 Noxious Weeds

Noxious weeds are generally designated as such because they have significant negative effects (or potential for) on agriculture, economics, or ecosystems, and are usually not so abundant that eradication is infeasible. Noxious designation, as described in the Wasatch-Cache National Forest Weed Strategy has legal ramifications for interstate transport, nursery stock inspections, hay and seed certifications (USDA, Forest Service 2004).

Table 3.5.2 Established populations of Noxious Weeds on the Ogden RD

Species	Status	Habitat
Canada thistle *Cirsium arvense*	Noxious	Disturbed areas in open space/ riparian
Musk thistle *Carduus nutans*	Noxious	Disturbed areas in open space/ riparian
Diffuse knapweed *Centaurea diffusa*	Noxious	Disturbed areas in open space/ riparian
Spotted knapweed *Centaurea maculosa*	Noxious	Disturbed areas in open space/ riparian
St. Johns wort *Hypericum perforatum*	Noxious	Disturbed areas in open space/ riparian
Leafy spurge *Euphorbia esula*	Noxious	Disturbed areas in open space/ riparian
Yellow Star thistle *Centaurea solstitialis*	Noxious	Disturbed areas in open space/ riparian
Dyers woad *Isatis tinctora*	Noxious	Disturbed areas in open space/ riparian
Black henbane *Hyoscyamus niger*	Noxious	Disturbed areas in open space/ riparian
Purple loosestrife *Lythrum salicaria*	Noxious	Disturbed areas in open space/ riparian

Transport by wind, vehicles, clothing or animals are all mechanisms for noxious weed dispersal into new habitats. Table 3.5.2 lists weeds with known infestations on the Ogden Ranger District. The Wasatch Front, Curtis Creek, and Monte Cristo have the highest numbers of infestations. The infestations appear higher along roadsides in the Curtis Creek and Monte Cristo areas. Whether this is because of ease of mapping; or due to motorized travel; or a combination is unclear. Motorized travel has been documented to increase the spread of noxious weeds. (Gelbard 2003) While motorized travel

may accelerate the spread of weeds it is important to note that non-motorized travel, in high volume also serves to accelerate the spread of weeds. This would account for the high number of infestations along the Wasatch Front where there is minimal motorized travel.

Emphasis on managing noxious weeds has increased significantly in recent years, as more people recognize invasive species' effect on all other resource areas. The Forest Service National Strategy and Implementation Plan for Invasive Species Management identify invasive species management as one of our top four priorities. This is because of their impacts and their threat to our mission. Thousands of invasive species have infested hundreds of millions of acres of land and water across the nation, causing massive disruptions in ecosystem function , reducing biodiversity, and degrading ecosystem health in our Nation's forests. (USDA Forest Service 2004). In addition to the national emphasis, locally the Forest Plan provides clear direction to increase noxious weed management (USDA Forest Service 2003).

3.6 Wildlife

The purpose of this section is to describe existing and potential habitat for and occurrences of wildlife with an emphasis on big game species, neotropical migratory/song birds, management indicator species, threatened, endangered, and Forest Service sensitive species within the Ogden Ranger District.

3.6.1 Area of Influence

The area of influence for direct and indirect effects to wildlife is the area within the Ogden Ranger District. Information regarding game species such as deer, elk, moose, and mountain goats is displayed by UDWR harvest unit. The Ogden Ranger District lies within the Ogden, Morgan-South Rich, and Cache Harvest Units (Figure 3.6.1). Table 3.6.1 displays the amount of area in which the Ogden Ranger District occurs within each harvest unit.

Also, the Ogden Ranger District is located within a portion of a wildlife corridor, which has regional importance in providing linkage to other larger habitat areas (Figure 3.6.2). This is especially true for forest carnivores, such as the Canada lynx (see section 3.6.2.3 Threatened, Endangered, Proposed, and Candidate Species). Most forest carnivores have some preference for forested conifer patches and maintaining connectivity between these patches throughout the corridor is of importance.

3.6.2 Existing Conditions

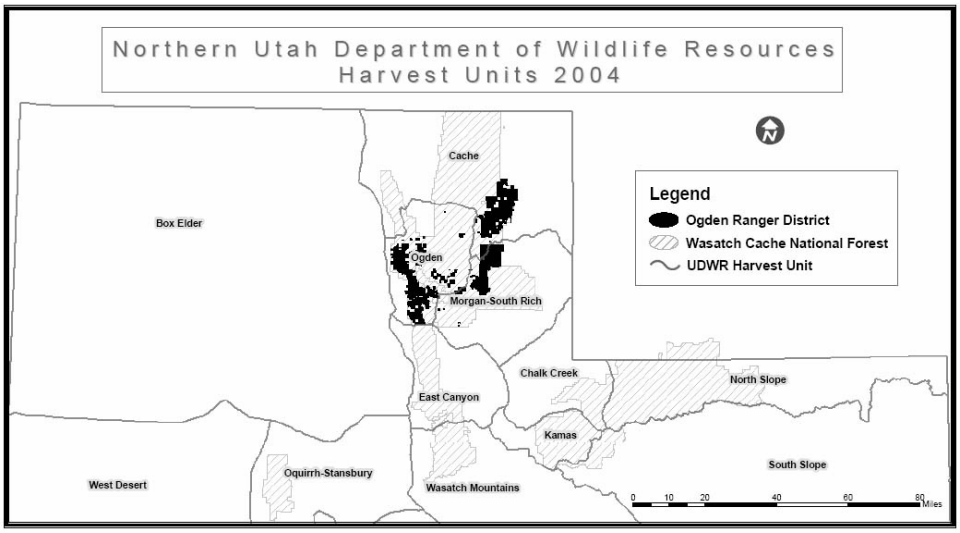


Figure 3.6.1 UDWR Harvest Units in relationship to the Ogden RD

Table 3.6.1. The number of acres and the percentage of the Ogden Ranger District within each UDWR harvest unit.

UDWR Harvest Unit	Acres of USFS Land (Ogden RD)	Percentage of USFS Land (Ogden RD)
Cache	**55,784**	**4.7%**
Ogden	**70,353**	**17.1 %**
Morgan-South Rich	**34,789**	**5.9 %**

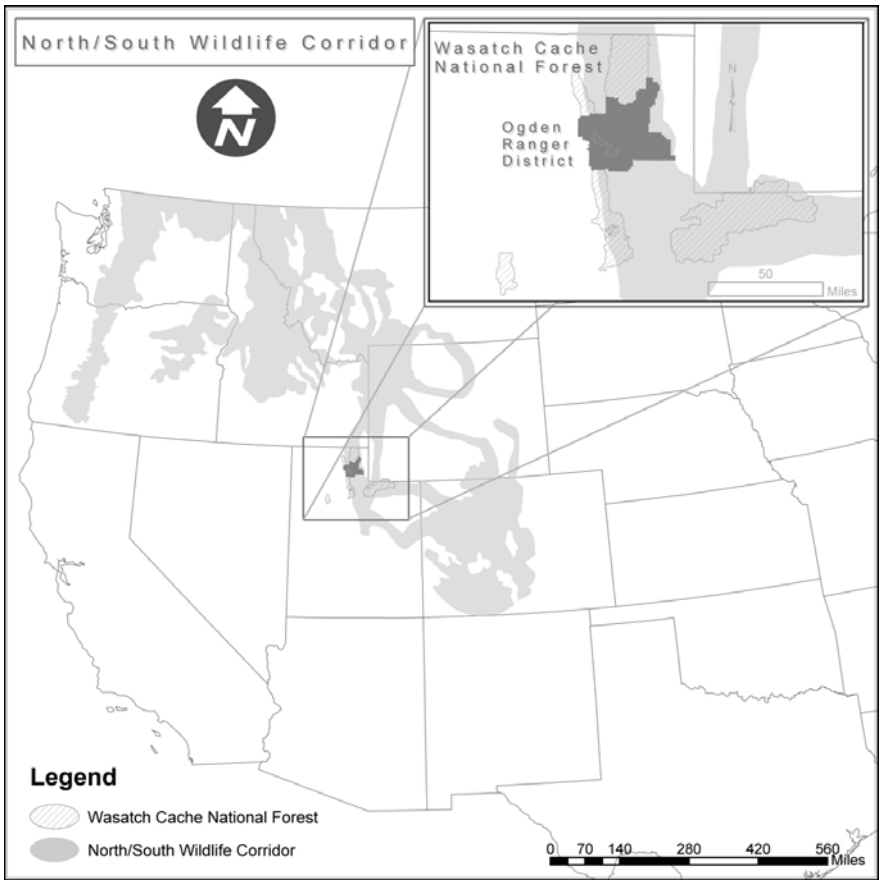


Figure 3.6.2 Map showing relationship of the Ogden RD to the regionally significant north-south wildlife corridor.

Vertebrate wildlife species of the Wasatch-Cache National Forest were listed in the Forest Plan FEIS (USDA Forest Service 2003 Appendix E). For game species, Utah Division of Wildlife Resources GIS habitat maps have been used for this analysis.

USFS GIS vegetation information was utilized to group and summarize the existing condition of specific vegetation/habitat types. These types should be referenced as related to the discussion below for individual species.

Table 3.6.2 Acres of Habitat Type and Miles of Open Road or Motorized Trail within each of the Major Vegetation Types on the Ogden RD

Habitat Type *	Total Habitat Acres	Miles of Open Road or Motorized Trail Existing Condition
Conifer Forest	47,082	50.06
Grass/Shrubland	42,968	60.79

Aspen Forest	25,029	33.25
Oak	29,413	22.70
Juniper	5,666	3.65
Other	10,769	9.88
Total Acres	160,927	

* Conifer Forest consists of mixed conifer, lodgepole pine, limber pine, spruce/fir, Douglas-fir, and conifer/aspen vegetation types; Grass/Shrubland consists of sagebrush/grass and tall shrub vegetation types; and Aspen Forest consists of aspen/conifer and aspen vegetation types. Other vegetation types consist of less than 1,600 acres per type within the Ogden Ranger District, except for the barren/rock type and water which consist of 3,939 and 3,081 acres respectively. Other types include tall forb, mahogany, maple, agricultural, willow, wet meadow, and bottomland hardwood.

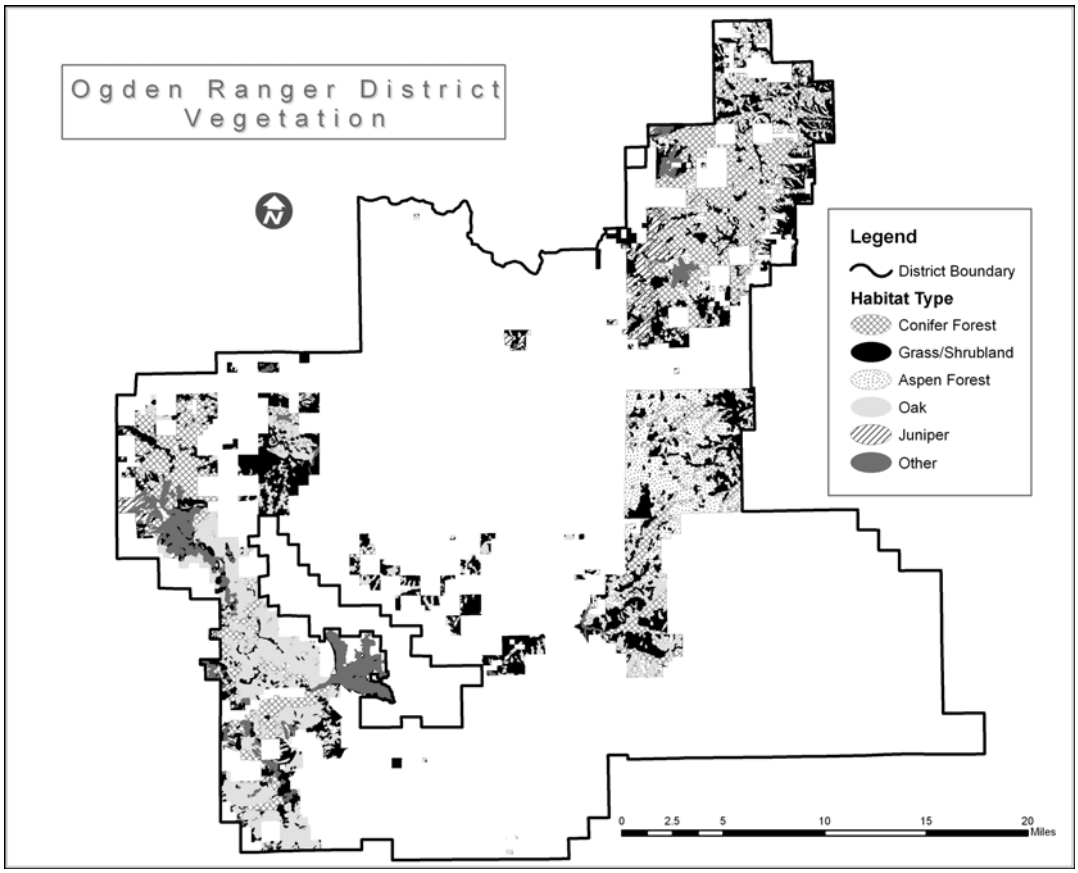


Figure 3.6.3 Vegetation habitat types on the Ogden Ranger District.

3.6.2.1 Big Game Species

Big game species that reside within the boundaries of the Ogden Ranger Districts include mule deer (*Odocoileus hemionus hemionus*), elk (*Cervus elaphus nelsoni*), moose (*Alces americanus shirasi*), and mountain goats (*Oreamnos americanus*). Table 3.6.3 through 3.6.5 display the estimated numbers of animals and population objectives in the Ogden, Morgan-South Rich, and Cache Harvest Units. Table 3.6.1. displays the number of acres and the percentage of the Ogden Ranger District within each harvest unit. Figure 3.6.1 displays the harvest units in relationship to the Ogden Ranger District.

Table 3.6.3 Estimated numbers of animals and population objectives in the Cache Harvest Unit for deer, elk and moose.

Species	Population Objective	2004 Population Estimates
Deer	**25000**	**13700**
Elk	**2300**	**2026**
Moose	**n/a**	**275**

Table 3.6.4 Estimated numbers of animals and population objectives in the Ogden Harvest Unit for deer, elk, moose and mountain goats.

Species	Population Objective	2004 Population Estimates
Deer	**12000**	**5500**
Elk	**1200**	**690**
Moose	**n/a**	**650 (2005)**
Mountain Goat*	**75 by 2005**	**130**

* A recent survey of the mountain goat population has occurred in the summer of 2004;
The population objectives may be revised in the next mountain. goat plan.

Table 3.6.5 Estimated numbers of animals and population objectives in the Morgan-South Rich Harvest Unit for deer, elk and moose.

Species	Population Objective	2004 Population Estimates
Deer	**12500**	**10100**
Elk	**3500**	**4100**
Moose	**n/a**	**1055 (2003)**

Data provided by Justin Dolling, UDWR Wildlife Manager (Personal Communication 2005).

Mule deer habitat within the Ogden RD consists of 17,616 acres of high value and 9,821 acres of critical value *winter* range and 125,354 acres of high value and 4,227 acres of critical value *summer* range (see Figure 3.6.3). The amount of and quality of winter range is often the limiting factor for deer on most harvest units. The Cache and Ogden Harvest Units are far below the population objective for deer, while the Morgan-South Rich Harvest Unit is near population objective.

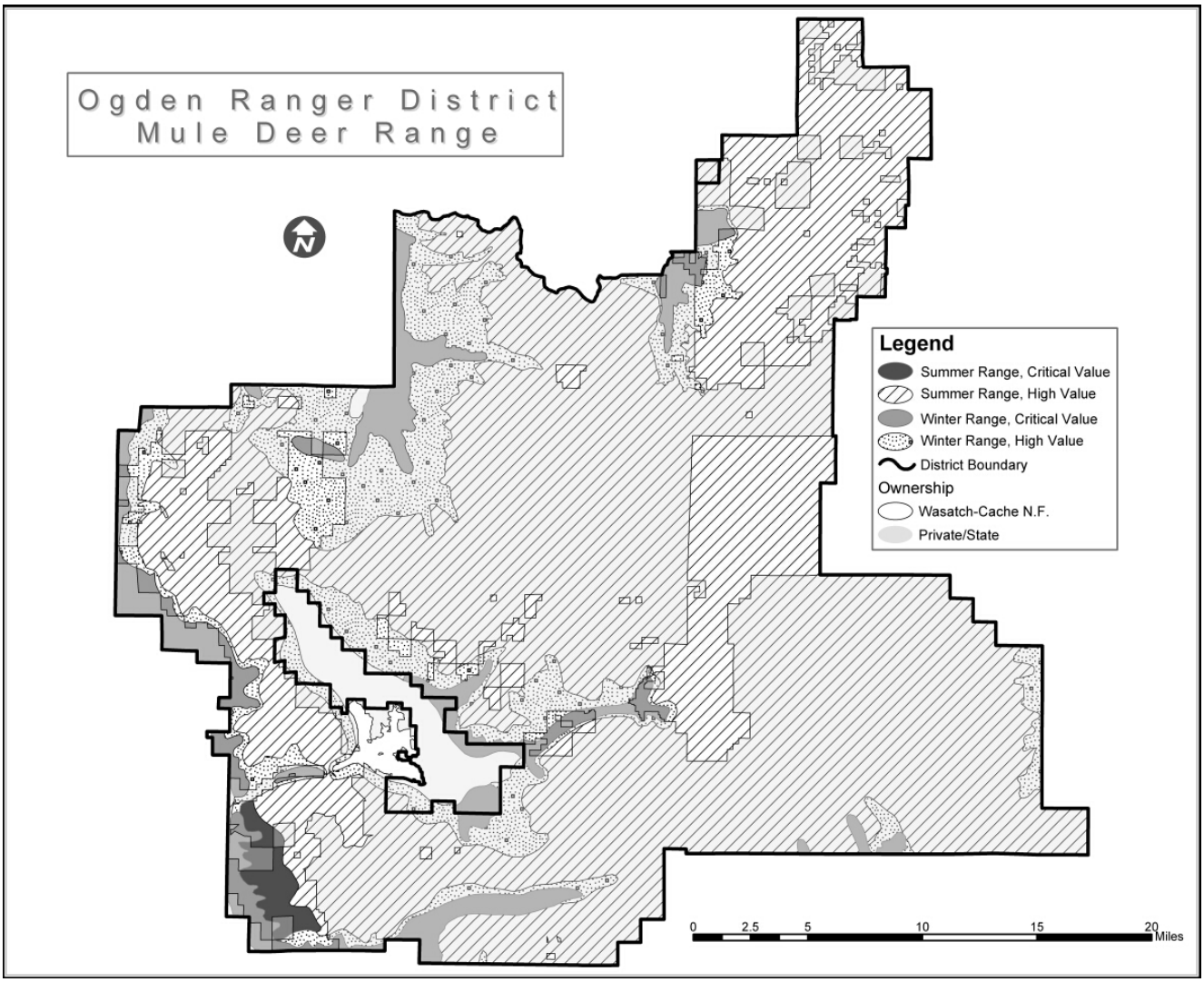


Figure 3.6.4 Mule deer habitat within the Ogden RD (UDWR GIS Habitat Maps)

Elk habitat within the Ogden Ranger District consists of 27,908 acres of high value and 12,941 acres of critical value elk *winter* range and 86,536 acres of high value *summer* range (see Figure 3.6.4). The transition areas between summer and winter range are often important areas for calving. Elk feed primarily on springtime grass and forb species until curing or loss of herbaceous material occurs, at which time diet's shift to a preponderance of deciduous browse species. The Ogden Harvest Unit is below the population objective for elk, the Cache Harvest Unit is near objective, while the Morgan-South Rich Harvest Unit is above the population objective.

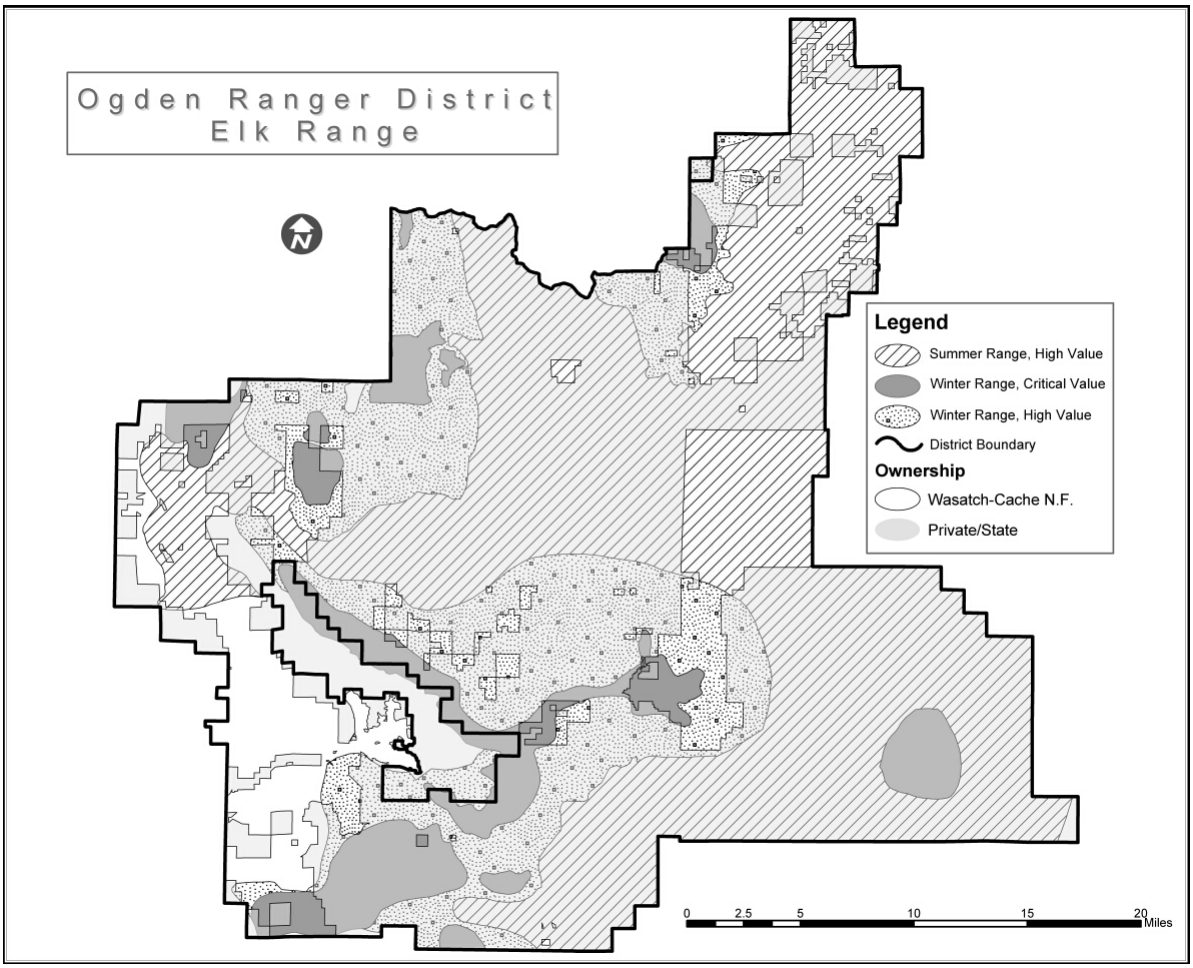


Figure 3.6.5 Elk habitat within the Ogden RD (UDWR GIS Habitat Maps)

Moose are well established in the northern half of the state. Moose are yearlong residents moving little between summer and winter ranges. Their large body mass and long legs allow the need for only minor adjustments between summer and winter ranges. Habitat primarily used by moose includes riparian areas with plentiful willow browse and areas such as ridgelines with abundant mountain mahogany shrubs. Numbers are currently within Utah Division of Wildlife Resources management objectives for each harvest unit.

Mountain goats on the Ogden District only occur primarily within the alpine and subalpine areas associated with the Willard Analysis Area. In summer, goats usually prefer/utilize the upper 1/3 of mountainous habitat, while in winter goat populations move to lower elevations, utilize windswept slopes, or forested cover to avoid deep snow. Goat habitat is closely associated with cliffs, which are essential as escape cover and avoidance of predators. Kids are usually born between the middle of May and the middle of June. Generally one kid is born, but twins are not uncommon.

In 1994, six mountain goats were introduced at Willard Peak by the Utah Division of Wildlife Resources. After introduction, the population has rapidly increased and is currently (2004) estimated at 130 animals. Within this area, most of the mountain goats are currently centralized around Ben Lomond and Willard Peaks (~ 80% and 20% of 2004 locations, respectively), though goat habitat occurs from the ridgeline north of North Ogden Canyon to Grizzly Peak (USFS habitat map located within the planning record). Additional unoccupied habitat occurs within the Ogden Ranger District from Weber Canyon north to North Ogden Canyon (only occasional sightings have been documented in this area).

During the review of the DEIS, questions were been raised whether mountain goats were native to Utah and if so where. Regardless, the USFS is required to manage habitat for native and desirable non-native species. The mountain goat is not a USFS sensitive species nor has status under the endangered species act.

Though the introduction has been successful and the population has increased, there are concerns related to the density of goats within the area and how recreational activities are affecting the distribution of the population. Schenck and Suring (1993) reviewed mountain goat literature (Chadwick 1973, Quaelduling et al 1973, Kuck 1977, Phelps et al. 1983) and found that significant declines of mountain goat populations occurred following modifications of habitat and disturbance from human activities and that mountain goats will abandon suitable habitat following the initiation of human activities. McFetridge (1977) specified that the total area used by goats or the frequency of excursions from a core area of high security might be reduced by disturbance.

In southeast Alaska, Schenck and Suring (1993) modeled goat habitat by using a density of 6.0 goats/square mile for spring, summer, and fall (a native population with predators). This was based on populations with a range of 1.3 to 10.9 goats/square mile with an average of 3.9 goats/square mile. A density of 37.7 goats/square mile on summer range was reported from Mount Dana within Olympic National Park, when extensive vegetation/habitat issues were occurring (an introduced population without predators or hunting). In South Dakota, Richardson (1971) estimated a goat density of 11.9 goats/square mile at a time when forage was being over utilized. Based on the 2004 survey, the density of goats within the Willard/Ben Lomond area is 12-27 goats per square mile based on a moderate sized area (9.4 square miles) or a core area (4.2 square miles), respectively. It seems as if existing recreational activities are restricting goat distribution and habitat use, but it is not certain since the goat population has been recently introduced.

Within the North Ogden Canyon to Grizzly Peak mountain goat habitat area, there are currently 7.31 miles of open road, 10.56 miles of motorcycle trail, and 1.54 miles of ATV trail; all of which have no restrictions on the timing of use. The motorcycle trail which follows closely to the ridgeline, bisects approximately ¾ of the mountain goat habitat. All of the road and ATV trail miles are located in the northern third of the area, primarily associated with Willard Basin. Within this area, only one goat was observed during the 2004 survey though the habitat characteristics seem favorable to goats.

Gray wolf - Up until 2002, the last verified gray wolf taken within the State of Utah was in 1930. During the past several years, sightings of wolf-like animals have occurred in Utah. Many of these have been identified as wolf-dog hybrids (Utah Division of Wildlife Resources, Craig Mclaughlin 2003). In 2002, a wolf from Yellowstone National Park was captured near the town of Morgan in northern Utah, southeast of Ogden. The animal was returned to Grand Teton National Park where it later rejoined its pack. In Utah, the gray wolf is not part of the US Fish and Wildlife Service experimental recovery effort as it is being conducted in Wyoming, Idaho, and Montana. There has not been a breeding pair or a pack identified in Utah to date, only a dispersing animal. If wolves from the federal recovery areas enter Utah, they will receive protection under the Endangered Species Act. Wolves are not included in the list of threatened or endangered species for Rich, Weber, Box Elder, Morgan, or Cache County.

Small mammals that occur or are likely to occur within the Ogden RD include various squirrels, chipmunks, shrews, mice, voles, marmot, rabbit/hares, and gophers (see the list of vertebrate wildlife species for the Wasatch-Cache NF in the Forest Plan, USDA Forest Service, 2003). Monitoring of small mammals on the ORD has been limited; therefore abundance or trends are largely unknown.

3.6.2.2 WCNF Management Indicator Species (MIS)

The WCNF Revised Forest Plan identified the goshawk (*Accipiter gentilis*), the snowshoe hare (*Lepus americanus*), the beaver (*Castor canadensis*), the Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus)* and the Bonneville cutthroat trout (*Oncorhynchus clarki utah*) as management indicator species (Forest Service 2003b:J4-J5). Because its range does not extend into the project area the Colorado River cutthroat trout has been eliminated from further analysis in this document. The most current direction for MIS is contained in 36 CFR 219.14(f) of the 2005 Planning Rule (Federal Register, Vol.70, No.3, pps.1022-1061). National Forests, such as the Wasatch-Cache, that revised under earlier regulations and whose plan requires population monitoring or population surveys are required to comply with the Forest Plan. Site-specific monitoring or surveying of a proposed project is not required.

The following information is found in Management Indicator Species of the Wasatch-Cache National Forest, Version 2005-2. For additional information on Forest MIS refer to that report.

Northern goshawk – aspen, conifer and mixed conifer

The range of the northern goshawk is circumpolar. In the West it is found from Alaska through the Rocky Mountains to New Mexico. The goshawk is a forest habitat generalist that uses a wide variety of forest ages, structural conditions, and successional stages. While all forested landscapes are used to some extent, certain forest cover types appear to be occupied by goshawks more than others (Graham et al. 1999). Cover types most often occupied by goshawks, based on sightings and nest locations, are Engelmann spruce, subalpine fir, lodgepole pine and quaking aspen, in either single or mixed species forests. The population under consideration for MIS is forest-wide.

Three components of a goshawk's home range have been identified including the nest area (approximately 30 acres), post fledging-family area (approximately 420 acres), and foraging area (approximately 5,400 acres). Goshawks nest in a wide variety of forest types including aspen, coniferous, and mixed conifer forests. It typically nests in mature and old forests.

The goshawk preys on large-to-medium-sized birds and mammals, which it captures on the ground, in trees, or in the air. Observations of foraging goshawks show that, in fact, they hunt in many forest conditions. This opportunism suggests that the choice of foraging habitat by goshawks may be as closely tied to prey availability as to habitat structure and composition.

Specific habitat attributes used by these species include snags, downed logs and woody debris, large trees, herbaceous and shrubby under-stories, and a mixture of various forest vegetation structural stages.

It was concluded in the Conservation Strategy and Agreement for the Management of Northern Goshawk Habitat in Utah that goshawk populations in Utah were viable. This conclusion was based on the findings of Graham et al. (1999) that good quality habitat is well distributed and connected throughout the state, the absence of evidence of a population decline on National Forest System lands since 1991, and conclusions of the U.S Fish and Wildlife Service in their decision to not list the northern goshawk under the Endangered Species Act (Federal Register, 1998).

Monitoring results and trend

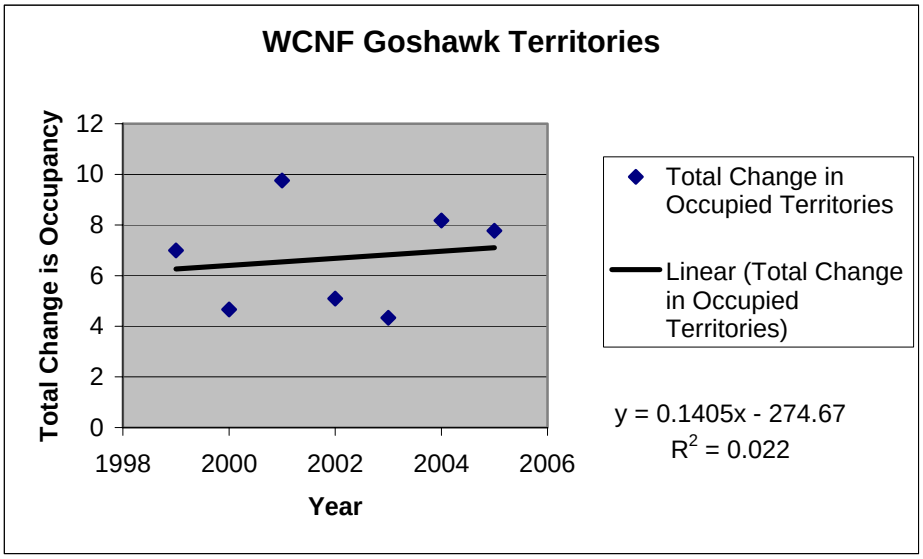
Territory occupancy has been monitored consistently on the Forest since 1999. Table 3.6.6 shows the results of that monitoring (USDA Forest Service 2006)

Table 3.6.6: Goshawk Territories – Forest-wide

Year	1999	2000	2001	2002	2003	2004	2005
Number of Known Territories	29	31	34	35	45	51	50
Territories Monitored	20	31	23	33	41	36	48
Occupied Territories	7	7	11	14	16	22	20
Percent of Monitored Territories Occupied	.35	.23	.48	.42	.35	.61	.49

When monitoring started in 1999, there were a total of 29 known territories on the Forest. In 1999, 20 of the known territories were surveyed of which 7 were observed as occupied. Every year a percentage of territories have been monitored and new territories found. The number of territories monitored in 1999 was divided by the number of territories monitored in the current year. This gave us the percent of territories monitored for occupancy each year compared to the baseline data. The change in occupancy was obtained by dividing the number of territories occupied by the number of territories monitored for the current year then multiplying the percent monitored for the year and the number of territories monitored in 1999. These calculations were completed for each district and a sum was taken to show the total change in occupancy for the Forest. Figure 3.6.6 shows the total change in territory occupancy from 1999 to 2005. The results are similar to the 2005 version 2 monitoring report and show a static trend in occupancy.

Figure 3.6.6. Total change in occupied Goshawk territories on the WCNF (USDA Forest Service 2006).



Year	1999	2000	2001	2002	2003	2004	2005
Total Change in Occupied Territories[1]	7	4.66	9.76	5.09	4.33	8.18	7.775

[1]Sum of each Districts change in territory occupancy.

Snowshoe Hare - pole/sapling aspen, conifer and mixed conifer

Snowshoe hares were selected as management indicators for pole/sapling aspen, conifer and mixed conifer. The snowshoe hare is a valuable prey species to the lynx, goshawk, and to other predators. In the Rocky Mountains and westward, hares mainly use coniferous forests in the higher mountainous areas. They are predominately associated with forests that have a well-developed under-story that provides protection from predation and supplies them with food.

For snowshoe hares, the Wasatch-Cache National Forest has been divided into two separate populations (the Wasatch/Bear River Range and the Uinta Mountain "North Slope Range"). These two populations were identified because of the large habitat gap between mountain ranges essentially blocking interactions between the two populations.
The Wasatch/Bear River Range population consists of the Salt Lake, Ogden, and Logan Ranger Districts. The Uinta Mountain Range consists of the Mountain View, Evanston, and Kamas Ranger Districts.

In Northern Utah, a study was done in the Bear River Range on the Wasatch-Cache National Forest where snowshoe hare use was determined in different vegetation types (Wolfe 1982). Table 3.6.7 displays the associated hare density using information from Wolfe (1982) which was converted to hares/hectare by Hodges (2000).

Table 3.6.7 Snowshoe hare density by vegetation cover type (Wolfe 1982 and Hodges 2000).

Vegetation Type	Hares/Hectare
Subalpine Fir	0.99
Douglas Fir	0.57
Aspen dense understory	0.22
Aspen-conifer edge	0.17
Engelman spruce	0.1
Aspen-sparse understory	0.01

Wasatch/Bear River Range

As part of the forest plan monitoring effort for Management Indicator Species, snowshoe hare plots were established across the forest. In 2003, two, six, and seven grids were established on the Salt Lake RD, Ogden RD, and the Logan RD, respectively. Each grid consists of 50 square meter sample points. The two grids established on the Salt Lake Ranger District contain the following vegetation types: aspen/conifer and mixed conifer. The six grids established on the Ogden Ranger District contain the following vegetation types: Spruce-fir, aspen/conifer, aspen, douglas-fir, mixed conifer and mature lodgepole pine. The seven grids established on the Logan Ranger District contain the following vegetation types: Spruce-fir, aspen/conifer, aspen, douglas-fir, mixed conifer, mature lodgepole pine, and young/mid-age lodgepole pine. At each of the 50 sample points, the number of snowshoe hare pellets is tallied on an annual basis. On some surveys, individual sample points cannot be relocated (e.g. they are lost or stolen) and the sample size is less than 50. Those instances where the sample size is less than 50 are indicated in the table below as n=XX, where n is the number of sample points. Pellet counts have been used in many studies to infer snowshoe hare densities. Table 3.6.8 displays the results of pellet counts for 2004 and 2005 within each district.

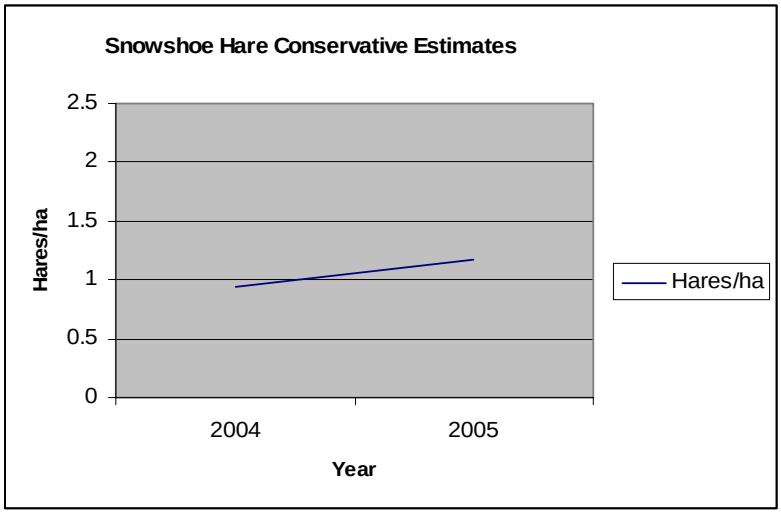
Table 3.6.8 Snowshoe Hare pellet counts for the Wasatch-Bear River population on the Wasatch-Cache National Forest (USDA Forest Service 2006).

District	Vegetation Type	Total Pellet Counts 2004	Total Pellet Counts 2005
Ogden	Douglas fir	409	459
Ogden	Mixed Conifer	354	361
Ogden	Aspen/Conifer or Conifer/Aspen	313	229 (n=49)
Ogden	Lodgepole Pine - Mature	216	184 (n=48)
Ogden	Spruce/Fir	41	17
Ogden	Aspen	1 (n=49)	0
Salt Lake	Mixed Conifer	252 (n=44)	650
Salt Lake	Aspen/Conifer or Conifer/Asp	106	155
Logan	Lodgepole Pine/Aspen – young/mid aged	583	863
Logan	Douglas fir	147	85 (n=47)
Logan	Spruce/Fir	135	84
Logan	Aspen/Conifer or Conifer/Aspen	96	41 (n=49)
Logan	Mixed Conifer	53	111
Logan	Lodgepole Pine - Mature	52	183
Logan	Aspen	7 (n=48)	27 (n=49)

Table 3.6.12. Conservative and Liberal Estimates of Hares per Hectare Based on the Average Pellets per Plot between 2004 and 2005 for the Wasatch/Bear River Range.

	2004	2005
Average Pellets per Plot	3.73	4.65
Conservative and Liberal Estimates (Hares/ha) *	0.94-1.79	1.18-2.24

Figure 3.6.7. Conservative Estimates of Hares per Hectare Based on the Average Pellets per Plot between 2004 and 2005 for the Wasatch/Bear River Range.



The pellet count data between 2004 and 2005 from the Wasatch/Bear River Range suggests an increase of 25 % (3.73 vs 4.65 pellets per plot) in snowshoe hare numbers. Table 3.6.12 displays the conservative and liberal estimates for hares/hectare based on the number of pellets per plot.

North Amazon Basin: Since 1998, Dennis Austin (UDWR-retired) and the USFS have been conducting snowshoe hare pellet surveys (sampling methods are not similar to those described above) in Amazon Basin on the Logan Ranger District. The pellet count data from North Amazon Basin suggests that the snowshoe hare population was stable or displayed very little change from the summer of 1998 thru the summer of 2001. From the summer/fall of 2001 the data suggests an increase in snowshoe hare numbers with the highest numbers so far occurring during August 2004 to July 2005 (the most recent survey). This pellet count data represents an increase of 34% between 2004 and 2005, which is similar to the 25% increase suggested by the USFS data (USDA Forest Service 2006).

Beaver - Riparian

Beaver occur in permanent slow moving streams, ponds, small lakes, and reservoirs. They play an important role in maintaining and enhancing riparian and aquatic ecosystems (Olsen and Hubert 1994) and are important for the creation of habitat for several species of fish, big game, waterfowl, and neo-tropical birds. A beaver colony is typically about 5 to 6 beavers and consists of an adult pair, the present year young, and young of the previous year.

For beaver, the Wasatch-Cache National Forest has been divided into two separate populations (the Wasatch/Bear River Range and the Uinta Mountain “North Slope Range”). The Wasatch/Bear River Range population consists of the Salt Lake, Ogden, and Logan Ranger Districts. The Uinta Mountain Range consists of the Mountain View, Evanston, and Kamas Ranger Districts.

As part of the forest plan monitoring effort for Management Indicator Species, square mile sections were surveyed across the forest. To achieve an unbiased, well-distributed sample, sample units were systematically selected sections (1 section =

1 m^2 = 640 acres). With a 10% sampling intensity, every 10th section was sampled (the first section sampled was selected randomly, and then every 10th section were systematically selected). Only complete sections of National Forest System lands are sampled. By surveying sections and recording the location of active dams, the number of colonies can be determined and converted into the number of beaver by using an average of 5 beaver per colony.

Information regarding the monitoring of the beaver sections for the entire Wasatch/Bear River Range for 2004 and 2005 are contained within the planning record. In the beaver section of the 2006 Report for Management Indicator Species of the Wasatch-Cache National Forest, additional information is provided regarding both populations (Wasatch/Bear River Range and the Uinta Mountain Range).

Tables 3.6.10 and 3.6.11 display the monitoring results and the estimated number of beaver per square mile within the Wasatch/Bear River Range (USDA Forest Service 2006). At the present time the Forest has only established baseline information for beaver populations.

Table 3.6.10: Wasatch/Bear River Range Beaver Monitoring Results (baseline data: 2004-2005)

District	Number of Sections	Completed sections monitored	Sections monitored w/active dams	Sections-w/old activity, no new activity	Sections w/no activity or H_2O present
Wasatch/Bear River Range					
Salt Lake	14	14	1 (1 dam)	3	10
Ogden	17	17	3 (9 dams)	2	5
Logan	32	32	3 (20 dams)	5	15
Total	63	63	7 (30 dams)	10	30

Table 3.6.11 Beaver Population Estimates for the Wasatch/Bear River Range (baseline data: 2004-2005).

Population	Active dams	Number of colonies	Individuals	Estimated # of beavers/mi^2
Wasatch/Bear River Range Population	30	7	35	.55

UDWR DATA

Currently there are not enough years of Forest Service monitoring population data on beaver to indicate a trend. However, there are other source documents provided by the Utah Division of Wildlife Resources (UDWR) that currently indicate a trend. Several UDWR reports provide information regarding the historical beaver trends for the Forest: The 1979-80 and 1998-1999 Furbearer Harvest Reports ((State of Utah, 1980, 1999 respectively) and the 1971-1982 Beaver Distribution, Habitat and Population Survey (published in 1993 Blackwell) provide relevant information on beaver.

The 1993 Blackwell report restates the trend from the 79-80' Report but calculates carrying capacity for each of the 52 beaver units in the state. Blackwell used beaver habitat data collected from 1971-81 to determine the carrying capacity.

There are 11 trapping units that include some National Forest System lands administered by the Wasatch-Cache National Forest. UDWR beaver units include all land ownerships.

Table 3.6.12. UDWR Units occurring, at least partially, on NFS Lands

Unit	Unit Location	Status of beaver population 81'
Wasatch/Bear River Population		
2	North ½ Cache County	Static
3	Rich County	Static
5	South ½ Cache County	Static
6	West Weber County	Static
7	East Weber County	Static
8	Davis County	Static
9	Morgan County	Static
10	Northern 3/4 Summit County	Static
11	Southern 1/4 Summit County	Increasing
14	Southwest Salt Lake County	Static
15	Southeast Salt Lake County	Increasing

Source: UDWR 1971-1982 Beaver Distribution, Habitat and Population Survey (Published 1993)

With the exception of a few specific locations, Forest Service management of suitable beaver habitat within National Forest boundaries has not changed significantly from 1980 to the present. Therefore, until Forest Service monitoring yields data for population trends, it is assumed that the determinations made in the State of Utah Survey Report remain valid for both populations on the Forest.

Additional information regarding Forest Plan monitoring and trend is contained within the project record (USDA Forest Service 2006 Management Indicator Species of the Wasatch-Cache National Forest).

3.6.2.3 Threatened, Endangered, Proposed, and Candidate Species (Wildlife species)

The U.S. Fish and Wildlife Services lists two Threatened, one Endangered Species, and two Candidate species as occurring, or potentially occurring, in Cache, Weber, Box Elder, Morgan, and Rich Counties. These include the bald eagle (T), Canada lynx (T), black-footed ferret (E) in Rich County only, yellow-billed cuckoo (C) in Weber, Box Elder, Morgan, and Cache Counties only, and the Ogden Rocky Mountainsnail (C) in Weber County only.

Canada lynx

The Canada lynx occurs across the boreal forests of Canada and Alaska in association with snowshoe hare habitat or habitat of other suitable prey species. They have also been found in isolated spruce, fir, and lodgepole pine forests of Washington, Idaho, Montana, Wyoming, and Colorado. Early succession stands with high densities of shrubs and seedlings are optimal for hares, and subsequently important for lynx. Mature forest stands are used for denning, cover for kittens, as well as travel corridors. Home ranges of lynx are generally 6-8 square miles, but range from 5-94 square miles. Males have larger ranges than females. Overlapping ranges do occur, mainly among animals of different sex and age classes. Adult lynx of the same sex tend to keep exclusive home ranges. Density of lynx in an area is highly dependent on prey (snowshoe hare) abundance. Most densities range from one lynx per 6-10 square miles.

In 1999-2001, lynx hair snares were established throughout Utah and other western states. No lynx hair samples occurred in northern Utah during this effort.

On July 3, 2003, the U.S. Fish and Wildlife Service (USFWS) issued a Notice of Remanded Determination of Status for the contiguous United States distinct population segment of the Canada Lynx (USDI, 2003). The notice states that there is no evidence of lynx reproduction in Utah and that lynx, which occur in Utah, are dispersers rather than residents.

On 9 November 2005, the USFWS proposed critical habitat for the Canada Lynx within the United States; no critical habitat is proposed within the project area or within Utah (50 CFR Part 17, Volume 70, No. 216). Within the USFWS Recovery Outline for the Canada Lynx (USFWS, September 14, 2005), core areas, provisional core areas, secondary areas, and peripheral areas were identified; none of these areas have been identified to occur within the project area

Reports of lynx in Utah indicate sightings between 1961 and 1982 on the Ashley and WCNF, but no sightings between 1983 and 1993 (USDA Forest Service, 1994). In August/September 2004, a transplanted lynx released in southwestern Colorado traveled to the WCNF and moved northward through the Ogden and Logan Ranger Districts and into Idaho.

In Utah, Engelmann spruce, white fir, subalpine fir, and lodgepole pine forests at the higher elevations, 7,300 to 10,500 feet (2,250 – 3,250 m), are the primary vegetation cover types that may contribute to lynx habitat. Quaking aspen dominates much of the landscape, but snowshoe hares, important to lynx as a food source, may use aspen stands much less than conifer stands in this area (Wolfe et al. 1982), probably because they lack dense overstory cover (Hodges 2000). Where aspen is intermixed with spruce-fir and lodgepole pine stands, aspen stands would constitute secondary vegetation that may contribute to lynx habitat (Ruediger et al. 2000).

Habitat for Canada lynx occurs within the Ogden Ranger District, primarily in the conifer cover types dominated by various combinations of lodgepole pine, Douglas-fir, subalpine fir, and Engelmann spruce interspersed with the aspen cover type. The Ogden Ranger District is a “travel corridor” between two larger habitats areas (in Idaho and within the Uinta Mountains of Utah) and is not considered permanent resident habitat (Figure 3.6.2). In a letter from the USDI Fish and Wildlife Service dated November 6, 2002, lynx habitat within the Ogden Ranger District was reclassified from Lynx Analysis Unit (LAU) to linkage area due to a low percentage of primary habitat.

Maintaining connectivity with Canada and between mountain ranges is an important consideration for the Northern Rocky Mountains Geographic Area (Ruediger et al. 2002). It is likely that the Northern Rocky Mountains Geographic Area and the Southern Rocky Mountains Geographic Area of Colorado and southern Wyoming are poorly connected. Shrub-steppe communities in central and southern Idaho, Wyoming, southeast Montana, and eastern Oregon may provide connectivity between adjacent mountain ranges. Along the Continental Divide, they may also provide an important north-south link between large patches of lynx habitat. Figure 3.6.5 displays lynx primary and secondary habitat for the northwestern portion of the WCNF. Based on the location of primary and secondary habitat and the connectivity of habitat, the most direct connection passes through the eastern portion of the Ogden RD (Curtis Creek and Monte Cristo areas); thus connecting to the Logan Ranger District to the north and the Uinta Mountains to the southeast.

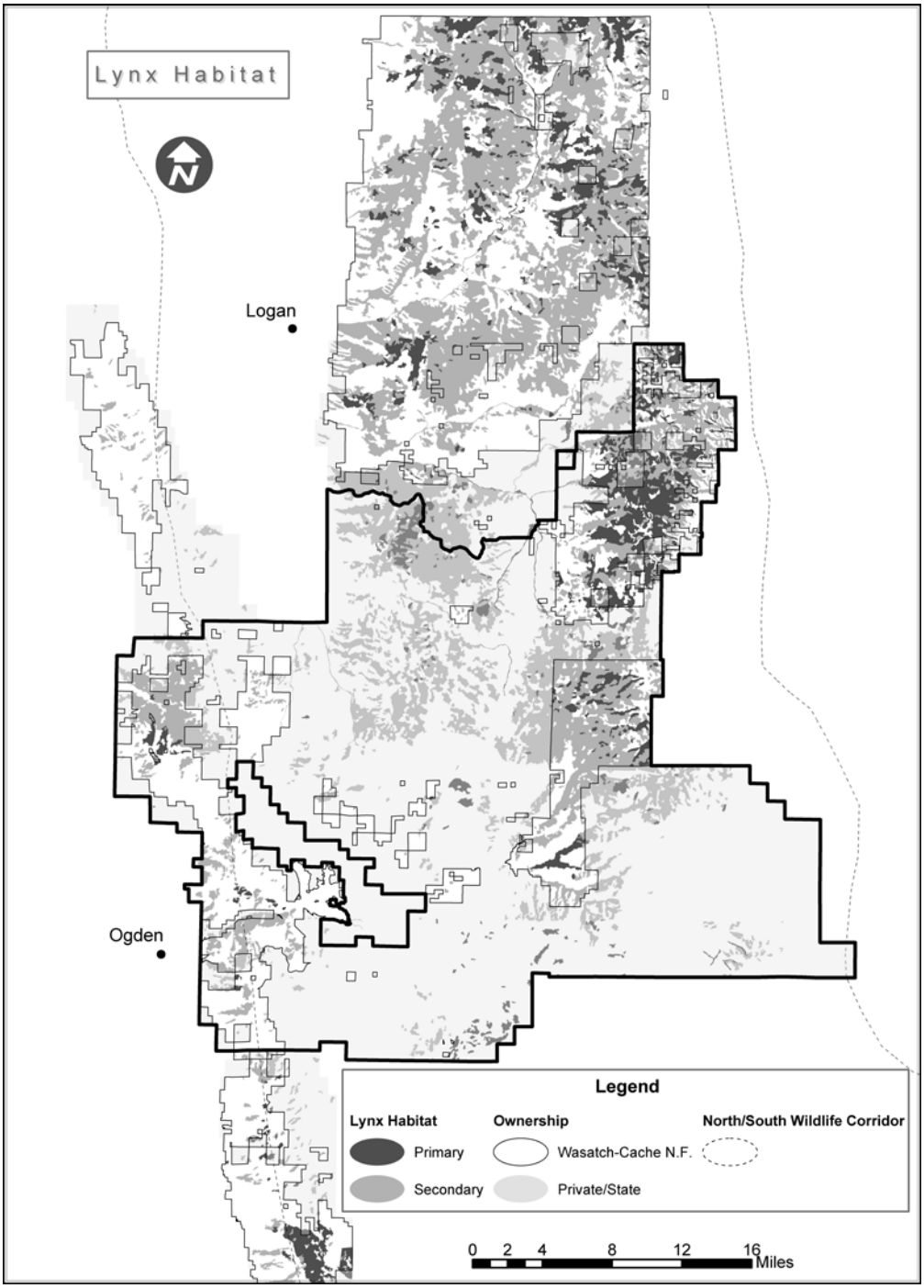


Figure 3.6.7 Lynx primary and secondary habitat for the northwestern portion of the WCNF

Table 3.6.16 displays the percentage and number of acres of primary and secondary habitat that occurs on the Ogden RD (only USFS managed lands). Primary habitat within the Ogden RD consists of 5.6% of the WCNF. Secondary habitat within the Ogden RD consists of 15.9% of the WCNF. Figure 3.6.6 displays lynx primary and secondary habitat within the Ogden RD. Table 3.6.13 gives the miles of open motorized trails and roads with primary and secondary lynx habitat.

Table 3.6.16 Acres and percent of USFS managed lands with suitable lynx habitat on the Ogden Ranger District.

Location	Total Acres	Primary Habitat	Percentage	Secondary Habitat	Percentage
Ogden Ranger District	160,927	20,975	13	51,379	32

Table 3.6.17 Existing miles of motorized trail and open roads within lynx habitat on the Ogden RD (only USFS managed lands).

Miles within Primary Habitat	Miles within Secondary Habitat
30.26 miles	53.72 miles

*for lynx, motorized trail only includes ATV and motorcycles (not snowmobiles).

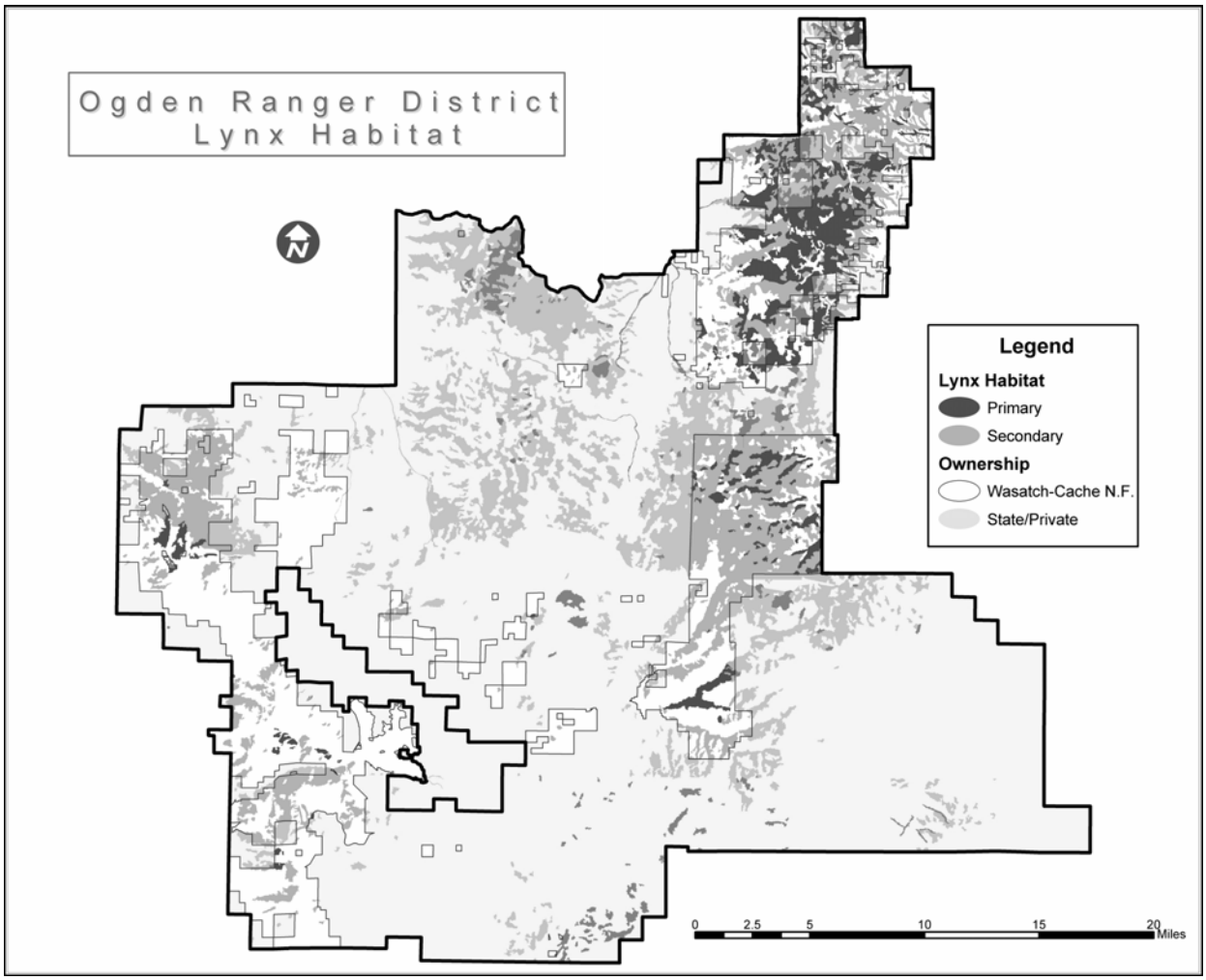


Figure 3.6.7 Lynx primary and secondary habitat on the Ogden RD of the WCNF

Bald eagle
Bald eagles are winter visitors for the most part to Utah and tend to congregate wherever food is available, often near open water where fish and waterfowl can be caught. Within the Ogden RD, bald eagles roost east of Willard Bay approximately 1 mile from the forest boundary and around Pineview and Causey reservoirs. Monitoring of wintering bald eagles at Pineview reservoir has occurred during the past two winters, with several of the sighting locations occurring within the community of Huntsville (USDA Forest Service 2005 Map of Eagle Survey Locations).

Black-footed ferret
These ferrets are a prairie species almost entirely obligate on prairie dog towns for food and shelter. Portions of Rich County are considered to be historic range for black-footed ferrets. The Wasatch Cache National Forest is probably on the very edge of this range, if included at all. None are expected to occur within the Ogden RD.

Yellow-billed cuckoo
The current distribution of yellow-billed cuckoos (*Coccyzus americanus*) in Utah is poorly understood, though they appear to be an extremely rare breeder in lowland riparian habitats statewide. Historically, cuckoos were probably common to uncommon summer residents in Utah and across the Great Basin (Parrish et al. 2002). No records of occurrence of this species exist for the Ogden RD. Nesting habitat is classified as dense lowland riparian characterized by a dense sub-canopy or shrub layer (regenerating canopy trees, willows, or other riparian shrubs) within 100 m (333 ft) of water. Overstory in these habitats may be large, gallery-forming trees, 33 to 90 feet in height or developing trees 10 to 27 feet in height, usually cottonwoods. Nesting habitats are found at elevations below 6,000 ft. Cuckoos may require large tracts of contiguous riparian nesting habitat between 100 and 200 acres. However, cuckoos are not strongly territorial and home ranges may overlap during the breeding season (Parrish et al. 2002). On the Ogden RD, the NFS lands associated with the South Fork of the Ogden River is the only area of potential yellow-billed cuckoo habitat, though recreational development (e.g. numerous campgrounds) likely restricts the use of this area. No observations have occurred for this species on the Ogden RD (see Appendix B).

Ogden Rocky Mountainsnail
The location of this "subspecies" is near the eastern city limits of Ogden, near Rainbow Gardens. The Ogden Rocky Mountainsnail (Oreohelix peripherica wasatchensis) occurs under maple and gambel's oak trees and is restricted in distribution to a very small area (~ 100 acres). Snail surveys in other locations of the Ogden and Logan Ranger Districts have not found it to be present. Recent genetic testing (Perez-Losada et al. 2004) suggests that the separation of this "subspecies" of Oreohelix perpherica is not justified and thus it does not qualify for listing.

3.6.2.4 Forest Service Intermountain Region Sensitive Species

Sensitive species are defined in the Forest Plan as "Plant and animal species, selected by the Regional Forester, for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, and significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution" (USDA Forest Service 2003). Of those species listed as sensitive for the Wasatch-Cache NF, only the following occur within the Ogden Ranger District: sharp-tailed grouse, flammulated owl, northern goshawk, three-toed woodpecker, peregrine falcon, and the Townsend's big-eared bat. Currently, the greater sage grouse and pygmy rabbit are not known to occur on the district, but do occur in areas adjacent to the district boundary. The wolverine, great gray owl, spotted bat, and boreal owl may possibly occur on the district. The peregrine falcon was recently identified as a Forest Service sensitive species after the U.S. Fish and Wildlife Service removed it from endangered status. Detailed habitat requirements and general distribution information for all sensitive species on the Wasatch-Cache National Forest are discussed in the Revised Forest Plan (USDA Forest Service 2003).

Northern goshawk
The range of the northern goshawk is circumpolar. In the West it is found from Alaska through the Rocky Mountains to New Mexico. While all forested landscapes are used to some extent, certain forest cover types appear to be occupied by goshawks more than others (Graham et al. 1999). Cover types most often occupied by goshawks, based on sightings and nest locations are; Engelmann spruce, subalpine fir, lodgepole pine, and quaking aspen, in either single or mixed species forests. The goshawk preys on large to medium sized birds and mammals, which it captures on the ground, in trees or in the air. Although goshawks will use a variety of vegetation age classes and structural stages, they are more commonly found in

forests with mature and old growth characteristics. Three components of a goshawk's home range have been identified including the nest area (approximately 30 acres), post fledging-family area (approximately 420 acres), and foraging area (approximately 5400 acres). In addition to being a MIS, the goshawk is also a USFS Sensitive species.

Within the Ogden Ranger District there are six known territories. Table 3.6.7 displays the monitoring history for each of these territories. Table 3.6.8 displays the distance to the closest open road and/or motorized trail from all nests (those which have been active since 1998) within the territories and the miles of road or motorized trail associated around each nest which includes the nest areas and the PFA for the existing condition.

Table 3.6.18 Goshawk territory history within the Ogden RD

Territory Name	Nests	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
OCB	2		F2	I	I?	I?	I?	I?	F2	E	F2	F2	J	I
RF	2	I	F2	owl	I/N	I/N	I/N	I/N	A?	F1	F2	I	I	I
RW	2									F2	F2	F3	O/I	O/E
SNB	4								F2+	E	E	I	O/I	I
SPB	3		I	I	X	X	A*	I	I	I	I	I	O/I	I
WC	1											F?	O/F2	O/F?

O – Occupied Territory during predawn survey
A - Active Nest unknown number of fledglings
F –The documented number fledged (plus sign means additional may have been observed) **F?-** Uncertain number of fledglings.
I – Inactive **I?-** Uncertain from the records whether this territory was inactive or not visited.
I/N- Inactive for one or more nests/other nest not visited.
X – Not Surveyed
E – Nest active but failed.
A?- Active by some species of hawk
Owl- Nest was occupied by a great horned owl.
* - one dead young at base of tree
J – Juveniles observed within the territory.

Table 3.6.19 Distance to the Closest Open Road and/or Motorized Trail from the Most Recent Active Nest and the Miles of Road or Motorized Trail within each PFA by Goshawk Territory for the Existing Condition.

Territory Name and Nest*	Distance to the Closest Open Road and/or Motorized Trail from the Nest	Miles of Open Road or Motorized Trail within each PFA**
OCB-B	0.20 miles	1.23 miles
RF-A	0.97 miles	0 miles
RW-A	0.06 miles	1.48 miles
RW-B	0.04 miles	1.95 miles
SNB-A	0.33 miles	0.54 miles
SNB-B	0.25 miles	0.66 miles
SNB-C	0.16 miles	0.92 miles
SNB-D***	0.16 miles	2.28 miles
SPB-A	0.44 miles	0.86 miles
SPB-WC	0.14 miles	1.88 miles
WC-A	0.17 miles	1.53 miles****

All open roads (USFS, state, county, and private roads) and motorized trails were used for the analysis within goshawk territories. Roads designated for administrative use only, will have very limited motorized use, thus for this analysis there will be little to no affect on goshawks from these roads. All USFS managed roads within the SNB territory are seasonally closed (between March 1st and September 30th) for the protection of the goshawk; all roads assessed for the SNB territory are private or under state or county jurisdiction. Maps displaying the specific nests and roads are located within the project record.

* All nest locations known to have been active at some time since 1998 have been analyzed. Nest OCB A was not active since 1995 when the nest condition was poor and the nest fell out of the tree. Within the RF territory, Nest PC(A) associated was last active in 1994 and the nest had fallen out of the tree by 2001. SPB territory consisted of two other nests which were active prior to 1998 and have fallen from the trees.

** The effects within Post Fledgling Areas (PFA) and Nest Areas are assessed by utilizing a circle of 600 acres centered on the specific nest location.

*** This nest is located on private property, but adjacent to the forest.

**** Sixty-one percent of the road miles within this PFA are seasonally closed during a portion of the season that goshawks are present.

Peregrine falcon
Peregrine falcons were recently identified as a Forest Service sensitive species after the U.S. Fish and Wildlife Service removed it from endangered status. There are no known nest sites on the Odgen RD. Several peregrine falcon observations have been documented in this area by the Utah Natural Heritage Program prior to 1984 (UDWR 2003 & Peregrine Falcon Database UDWR 2004) The most suitable habitat for the peregrine falcon occurs on the cliffs on the west side of the District, just south of Brigham City to Weber Canyon.

Boreal owl
Boreal owls have a range that is circumboreal. In North America, it breeds from Alaska east across Canada, and south into the mountains of Washington, Idaho, Montana, Wyoming, and Colorado. Boreal owls are closely associated with high elevation spruce-fir forests because of their dependence on this forest type for foraging year round. Nesting habitat structure consists of forests with a relatively high density of large trees (12 inch diameter at breast height or DBH), open understory, and multi-layered canopy. Owls nest in cavities excavated by large woodpeckers in mixed conifer, aspen, Douglas-fir, and spruce-fir stands. In winter, they may move down in elevation and roost in protected forested areas. Boreal owls avoid open areas, such as clearcuts and open meadows, except for occasional use of the edges of openings for foraging.

Boreal owls have responded to taped calls in northern Utah in 2-3 locations on the Ashley, Uinta, and Wasatch-Cache National Forests. The Wasatch-Cache NF observation/responses have been concentrated along the Rich and Cache County line on the Logan Ranger District. Nest locations have not been found. In 2001, on the Uinta National Forest, a nesting boreal owl was located; this being the first documented nesting of a boreal owl in Utah (Mika 2000 personal communication). During the winter/spring of 2001 and 2002 broadcast calling surveys were conducted within the ORD. No responses were heard during these surveys.

Great gray owl
These large owls breed from the boreal forests of Alaska, east to Ontario, and south to northeastern Minnesota, northwestern Wyoming, western Montana, Idaho, and through the Sierra Nevada Mountains of California and Nevada. Great gray owls use mixed coniferous and hardwood forests usually bordering small openings or meadows. They forage along edges of clearings. Semi-open areas, where small rodents are abundant, near dense coniferous forests, for roosting and nesting, are optimum habitat for great gray owls. During winter some birds stay on or near their breeding territories and others make irregular movements in search of prey and favorable snow conditions. In the Intermountain Region, great gray owls occur primarily in lodgepole pine/Douglas-fir/aspen zone and in ponderosa pine. Great gray owl surveys have been conducted on the Ogden RD. Data collected from these surveys yielded no evidence of great gray owls. In general, it is felt that these winter vagrants only occasionally visit Utah.

Wolverine
The wolverine is a circumboreal species. In North America, they occur in Alaska and across the boreal forests of Canada south into Washington, Oregon, Idaho, Montana and Wyoming. They also occur in backcountry areas of California, Colorado, and northern Minnesota. Recent data searches (USDA Forest Service 1994a) indicate that no wolverines were sighted in Utah between 1961 and 1983, but there were sightings between 1983 and 1993, on the Ashley and WCNF. A 1995 survey conducted in Franklin Basin did not produce any tracks or photographic evidence of wolverines (Bissonette et al. 1995). On March 29, 2002 a helicopter survey for wolverine conducted by the Caribou National Forest identified

probable wolverine tracks just south of the Idaho/Utah state line (USDA Forest Service 2002). On March 17, 2004 a vehicle hit and killed a wolverine on U.S. Highway 30 near Fossil Butte National Monument west of Kemmerer. There have been unconfirmed sightings on the WCNF.

Townsend's big-eared bat
Townsend's big-eared bats occur throughout western North America, from British Columbia to southern Mexico, and east to South Dakota and western Texas and Oklahoma. Isolated populations exist in southern Missouri, northwestern Arkansas, northeastern Oklahoma, eastern Kentucky, West Virginia, and western Virginia. They are widely distributed throughout the Intermountain Region. The species have been identified in Bat Cave on the Ogden District and in Logan Cave on the Logan District. They may exist in other areas of the Forest where there is suitable roosting habitat. Western big-eared bats use juniper/pine forests, shrub/steppe grasslands, deciduous forests, and mixed coniferous forests from sea level to 10,000 feet. During winter, they roost singly or in small clusters in caves, or rocky outcroppings, occasionally in old buildings, or mine shafts.

Bat Cave, near Causey Reservoir was visited during 1992 and 1993, with Townsend's big-eared bat numbers varying from 5-245 individuals (Lengus 1994). Bat cave is not easily accessible to the public: the cave is located several miles from any road, the cave is difficult to locate, and the entrance is not easily accessible without climbing gear.

Spotted Bat
Spotted bats (*Euderma maculatum*) have been found from southcentral British Columbia to southern Mexico, in a variety of habitats most often in rough, rocky, semi-arid to arid terrain varying from Ponderosa pine to scrub country to open desert. They roost alone in rock crevices high up on steep cliff faces in cracks and crevices. Their diet consists of moths and they have a regular circuit for foraging, usually searching clearings within pine forests for prey. Although there is habitat on the Forest, no spotted bats have been found.

Flammulated owls
These owls breed from southern British Columbia south to Veracruz, Mexico and from the Rocky Mountains to the Pacific. Their winter range is thought to extend from central Mexico to Guatemala and El Salvador. Flammulated owls are a migratory species that occur in mixed conifer forest with spruce and fir at higher elevations and have also been found in aspen communities. They prefer ponderosa pine-Douglas-fir forests with open canopies. Large diameter (>20 inch dbh) dead trees with cavities at least as large as northern flicker cavities are important site characteristics. Territory size varies from 20 to 59 acres and is determined by age and patchiness of overstory trees.

Flammulated owls are present on the WCNF and appear to be fairly well distributed. On the Ogden RD, flammulated owl habitat primarily consists of mature stands of aspen, aspen/ conifer, and conifer/ aspen. Flammulated owl studies have occurred on the Ogden RD, these studies focused on the effects of disturbance and feeding habits (Mika 2003).

Three-toed woodpeckers
The circumboreal distribution of these woodpeckers coincides with the range of spruce habitat, however they can be found in sub-alpine fire, Douglas-fir, grand fir, ponderosa pine, aspen, and lodgepole pine forests. The three-toed woodpecker is dependent on recent burns and bark beetle infestations for food resources. Coniferous forests generally above 8000 feet (2400m) in elevation are typical of wintering and nesting habitat. In Utah, three-toed woodpeckers also use aspen for nesting where intermixed or adjacent to coniferous forests (Hill 2000). Territory occupancy is year-round however outbreaks or beetle infestations may cause irregular movements.

Sharp-tailed Grouse (*Tympanuchus phasianellus*)
In Utah, the sharp-tailed grouse historically ranged through central Utah to Piute County, but they are now limited to a remnant populations in north central Utah. The sharp-tailed grouse preferred habitat occurs within bunch-grass areas of the foothills and benches interspersed with deciduous shrubs. Summer habitats are characterized as shrub steppe vegetation with a diversity of forbs and bunchgrasses or mountain shrub dominated by serviceberry and Gambel oak. In winter deciduous trees and shrubs in upland and riparian areas as well as in draws are critical habitat. Giesen and Connelly (1993) specified that winter habitat (deciduous trees and shrubs for food and cover) may limit sharp-tailed grouse populations and the loss this habitat has been associated with declines in Utah.

Male sharp-tailed grouse gather on established leks during early spring for courtship. Females visit these areas where mating takes place. Nesting begins in April. Nests are shallow hollows lined with grass and leaves, usually placed near a

bush or clump of grass. Primary food items are grass seeds, green vegetation, fruits and buds of wild shrubs and trees. Insects are readily taken during the summer.

Figure 3.6.8 displays the location of sharp-tailed grouse habitat (UDWR Habitat Map Information) (lek site information is contained within the planning record, due to the sensitive nature of this information). Surveys for the sharp-tailed grouse have been conducted by UDWR for several years, primarily centered on locating leks and conducting population counts at lek sites. The primary sharp-tailed grouse habitat associated with the Ogden Ranger District is located in the northern portion of the Public Grove Analysis area. No lek sites are known to occur on the Ogden Ranger District, but leks do occur within close proximity.

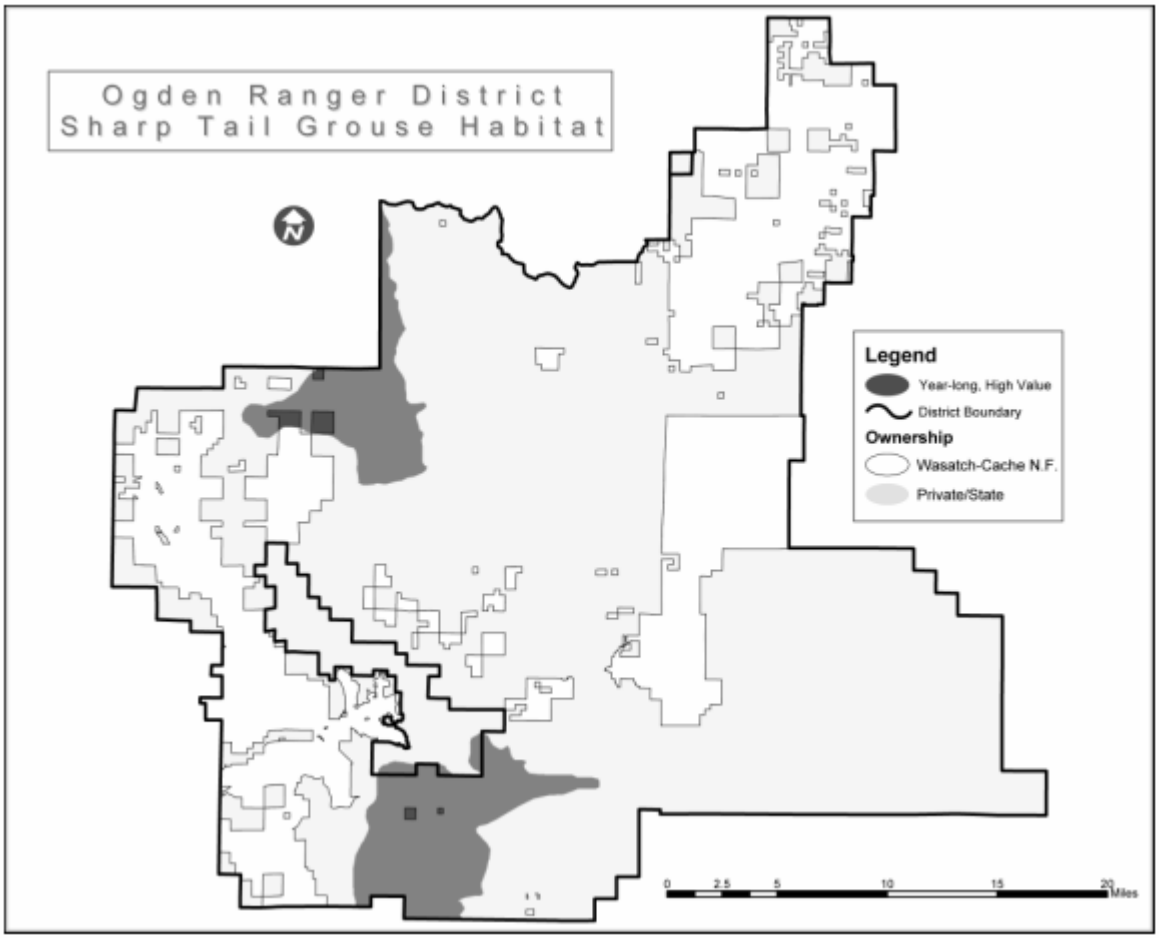


Figure 3.6.8. Sharp-tailed Grouse Habitat within the Ogden Ranger District (UDWR GIS Habitat Maps).

Greater Sage Grouse

Greater sage grouse were added to the Intermountain Region Sensitive Species list on November 17, 2003. Recent research has documented population declines of this species and identified concerns over the amount and quality of its habitats. The largest of the North American grouse, these birds inhabit sagebrush plains, foothills, and mountain valleys. Sagebrush is the predominant plant of quality habitat. Where there is no sagebrush, there are no sage grouse.

Males gather on traditional "strutting grounds" (leks) during March and April and put on a spectacular courtship performance - strutting with tails erect and spread, and air sacs inflated. Females visit the grounds during the first part of April. A few dominant males do most of the mating. Nesting begins in April. Nests are shallow depressions lined with grass or twigs and are usually located under sagebrush. The female lays from five to nine eggs, which hatch after 25 days of incubation.

Figure 3.6.8 displays the location of sage grouse habitat (UDWR Habitat Map Information) (lek site information is contained within the planning record, due to the sensitive nature of this information). Surveys for the sage grouse have been conducted by UDWR for several years, primarily centered on locating leks and conducting population counts at lek sites. The primary sage grouse habitat and active leks sites associated with the Ogden Ranger District are outside of and east of the project area or associated in the area of Hardware Ranch. No active lek sites are known to occur on the Ogden Ranger District. Only one historic lek site has been documented to occur in the area of Public Grove; information on this lek site is limited and no birds have been observed at this location since at least 1965 (personal communication and Table of Lek sites, Ron Greer, UDWR Habitat Biologist 2005). Note: Based on sightings of sage grouse associated with the Ant Flat road and the active leks associated with Hardware Ranch, the Curtis Analysis Area is most likely more valuable for sage grouse than the Willard and Public Grove analysis areas.

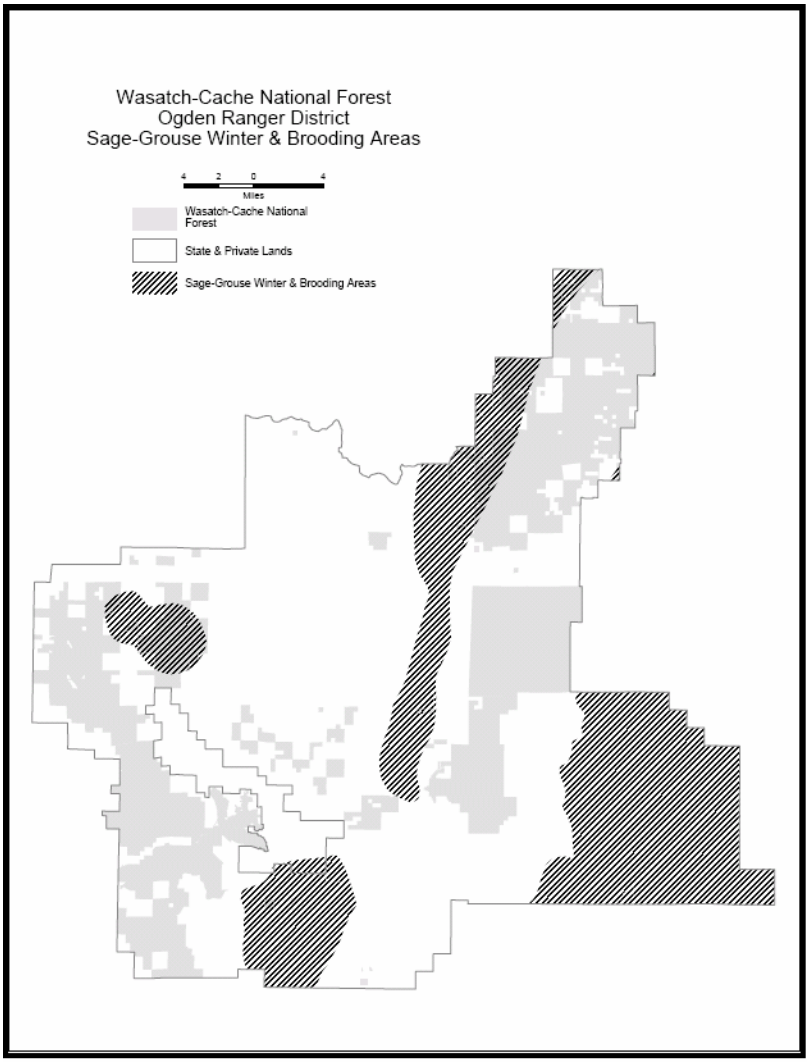


Figure 3.6.9. Sage Grouse Habitat within the Ogden Ranger District (UDWR GIS Habita Maps).

Pygmy rabbits

Pygmy rabbits were also added to the Intermountain Region Sensitive Species list on November 17, 2003, for the same reasons listed under the greater sage grouse. Pygmy rabbits prefer habitats of dense, tall stands of sagebrush associated with deep soils. The pygmy rabbit is not known to occur on the Ogden RD. The pygmy rabbit is known to occur at lower elevations in the tall sagebrush habitats to the east near Bear Lake (Janson 2002).

On June 23, 2003, Adam Kozlowski (UDWR Biologist) conducted surveys for pygmy rabbits near Birch Creek, approximately 1-2 miles north of highway 39 near the eastern boundary of the Ranger District. The survey results were

negative, though suitable habitat appeared to be present, there were concerns regarding the elevation and isolation from known locations of pygmy rabbits (UDWR Survey Results 23 June 2003, Adam Kozlowski).

In 2004 a survey was conducted as part of the North Rich Allotment EIS; the results of this survey would reflect very similar conditions as in the Ogden RD. A winter survey (January 15, 2004) was conducted to determine the presence or absence of pygmy rabbits within the sagebrush habitats in South Sinks, Peter Sinks, Middle Sinks, and the area southwest of South Sinks. Neither pygmy rabbits nor their sign were observed during the survey. Coyote, fox, snowshoe hare, squirrel, and weasel tracks and den entrances were observed. Within the area surveyed, the amount of sagebrush exposed above the snow was very limited. Snow depths were about three feet except for windswept slopes. Snow depths in the area likely preclude use by pygmy rabbits. During the end of March 2004, snow depths in the Sinks area and Tincup Springs area were deep enough that the amount of sagebrush exposed above the snow was still very limited.

On July 7, 2005 a survey for pygmy rabbits was conducted in the vicinity of Big Crawford Spring (~ one mile north and south) along the eastern boundary of the Ranger District. Numerous mounds with tall sagebrush were investigated but no pygmy rabbits were found. Numerous animal burrows occurred at these sites, but most were occupied by ground squirrels.

According to Dennis Austin (UDWR Biologist, retired), pygmy rabbits do not occur within Strawberry Valley, an area of private land in the northeastern portion of the Ogden RD with similar sagebrush habitats (personal communication, December 2003).

3.6.2.5 Neotropical Migratory/Song Birds

Nineteen USFS neotropical migratory bird survey point counts routes have been established within the Ogden RD of which 9 routes have survey information for more than one year. These nine are located at Snow Basin, Dairy Ridge, Arbs Basin, Port Ramp, Taylor Canyon, Rock Creek, New Canyon, South Fork, and Davenport; while the other locations include Wasatch Ridge, Baldy Ridge, Lightning Ridge, Running Water, Grizzly Peak, Public Grove, Black Mountain, Sugar Pine, Baldy South, and Pineview. The results of these surveys are located in Appendix B.

Priority migratory bird species that occur within the WCNF identified in the Utah Bird Conservation Plan (Parrish et al. 2002) and/or those identified by USFWS as birds of conservation concern have been identified as species at risk in the Revised Forest Plan (see Forest Plan FEIS, Appendix B-2). The Species at Risk List was revised on February 23, 2004 (USDA 2004). Of those species, the Brewer's sparrow, broad-tailed hummingbird, gray catbird, Williamson's sapsucker and Virginia's warbler occur within the Ogden RD.

Brewer's Sparrow: Snow Basin, Dairy Ridge, **Arbs Basin**, **Rock Creek**, New Canyon, South Fork, Davenport, **Baldy Ridge**, Running Water, **Grizzly Peak**, **Baldy South** (highlighted are locations with the most observations).

Broad-tailed Hummingbird: **Snow Basin**, Dairy Ridge, **Port Ramp, Taylor Canyon**, Rock Creek, **New Canyon**, **South Fork**, Davenport, Baldy Ridge, Lightning Ridge, Grizzly Peak, Public Grove, Black Mountain, Sugar Pine, Baldy South, and **Pineview** (highlighted are locations with the most observations).

Virginia's Warbler: Observed at Snow Basin, Dairy Ridge, and Port Ramp.
Gray Catbird: Only observed at South Fork
Williamson's Sapsucker: Only observed at Dairy Ridge.
Black-Throated Gray Warbler: Only observed at Taylor Canyon.

Black Rosy Finch: None observed.
Black Swift: None observed.
Sage Sparrow: None observed.

Additional data summarized within the project file include observations conducted by Dennis Austin, UDWR wildlife biologist 2004.

Brewer's Sparrow (*Spizella breweri*)
This sparrow occurs in shrub steppe habitats in the western U.S., particularly in the Great Basin area (UDWR 2000). Brewer's sparrows breed primarily in shrub steppe habitats in Utah and are considered to be shrub steppe obligates. In Utah,

Brewer's sparrows are common to very common summer residents. The species winters in the southwest U.S. and into Mexico. It nests in the mid-upper canopy of dense sagebrush and are usually located in patches of sagebrush that are taller and denser, with more bare ground and less herbaceous cover, than the surrounding habitat. Clutch size is usually 3-4 eggs. Brewer's sparrows will re-nest in a few days if the initial clutch is lost. Brewer's sparrows are primarily insectivorous during the breeding season. Loss of sagebrush steppe habitat is considered the main threat to the species.

Broad-tailed Hummingbird (*Selasphorus platycercus*)
The broadtail is a common breeder in the eastern and central parts of the Great Basin. It winters primarily in Mexico. It nests primarily in riparian habitat though also occurring within aspen, ponderosa pine, Engelmann spruce, subalpine fir, and Douglas fir dominant habitats. The broad-tailed hummingbird typically requires streamside areas adjacent to open patches of meadows or grasses with good quantities of wild flowers available throughout the breeding season. This hummingbird feeds on nectar of wildflowers.
Nests are as low as 3 feet and can be up to 30 feet above the ground, and are often found overhanging a stream. Threats to this species would include loss of riparian habitat and lack of wildflowers.

Virginia's Warbler (*Vermivora virginiae*)
The breeding range of the Virginia's warbler lies almost entirely within the southwestern United States and it winters primarily in Mexico (UDWR 2001). It is an uncommon to common breeder in montane areas of the Great Basin region. Habitat includes oak canyons, brushy slopes, and pinyon-juniper on dry mountainsides. Virginia warbler requires rather dense undergrowth for both foraging and nesting. Breeding may also occur in aspen or Douglas-fir forests where a good understory of shrubs is present. It is primarily insectivorous. Virginia's warbler is a ground nesting species.

Gray Catbird (*Dumetella carolinensis*)
The gray catbird breeds over most of the United States and winters in Central America and southeastern United States. The species may have once been common in Utah, but it is now rare in the state, breeding only in a few locations in north-central Utah. The gray catbird prefers dense shrublands and forested areas with thick undergrowth. Nests are built in brush or low in trees, usually less than ten feet above the ground. This species is often produces two clutches typically contains four eggs each. This species is known to occur at the North Arm of Pineview Reservoir and along the South Fork of the Ogden River.

Williamson's Sapsucker (*Sphyrapicus thyroideus*)
This is an uncommon summer resident in Utah, but occurs throughout most mountainous areas (UDWR 2001). This sapsucker is known to the Rocky Mountain States and to the interior coastal ranges of the western U.S. These are found in Utah mainly in the mountainous areas of the eastern two-thirds of the state, where it is an uncommon breeder. Breeding habitats used by this species is middle - to high - elevation coniferous forests and mixed deciduous-coniferous forests containing aspens. They drill holes in trees to extract sap along with the insects it attracts. This woodpecker excavates a cavity in a tree for nesting, typically an aspen or a conifer. Threats are from the loss of snags for cavities.

Black-throated Gray Warbler (*Dendroica nigrescens*)
The breeding range of the black-throated gray warbler lies within the western United States and southern British Columbia. Preferred breeding habitat includes dry oak slopes, pinyon and juniper woodlands, open mixed woodlands, chaparral, and dry coniferous and mixed woodlands with a brushy understory. The black-throated gray warbler winters primarily in Mexico. The black-throated gray warbler occurs statewide in Utah as a common summer resident. This species prefers densely wooded areas over areas where trees are more widely spaced; open areas are extensively used for foraging.

3.6.2.6 Species at Risk

Species at risk have been identified in the Revised Forest Plan as "federally listed endangered, threatened, candidate, and proposed and other species for which loss of viability, including reduction in distribution or abundance, is a concern within the plan area. Other species at risk may include sensitive species and state listed species."

As the Plan explains, legal mandates and regulations (i.e. Endangered Species Act) and policy (such as sensitive species management) will continue as separate processes for threatened, endangered, and sensitive (TES) species listed under species at risk. These species require analysis for any project implemented under the Revised Forest Plan to ensure that negative effects are avoided and viability is provided for these species. MIS species are also considered in project specific analyses. Species with federal status (such as endangered, threatened, candidate, proposed, and USFS sensitive species) are

addressed elsewhere in this document under their respective categories. Species not specifically addressed through implementation and monitoring for TES or MIS will be managed opportunistically. By managing within the range of historic variation and properly functioning conditions it is expected that these species will be sustained in the long term. For additional information see the WCNF Final Environmental Impact Statement (USDA Forest Service 2003) Appendix B-2: Terrestrial Wildlife Diversity and Viability. The Species at Risk List was revised on February 23, 2004. The following species are species at risk which have not been discussed anywhere else within this document (e.g. TES species and neotropical migratory/song birds). For the Deseret Mountainsnail (*Oreohelix peripherica*), please refer to the section pertaining to the Ogden Mountain Snail (*O.p.wasatchensis*). Recent sampling and genetic testing includes samples of *Oreohelix perpherica*.

Fringed Myotis (*Myotis thysanodes*)
The fringed myotis is a small bat that occurs in most of the western United States, as well as in much of Mexico and part of southwestern Canada (UDWR 2001). It is uncertain whether this species occurs within the Ogden RD, since only specimens from southern and east-central Utah have been reported in the literature (Hasenyager 1980). The fringed myotis inhabits caves, mines, and buildings, most often in desert and woodland areas. The species commonly occurs in colonies of several hundred individuals. The fringed myotis has been found in Utah in a moderately wide range of habitats: lowland riparian, desert shrub, juniper–sagebrush, sagebrush–rabbitbrush, pinyon–juniper–sagebrush, pinyon–juniper, mountain meadow, ponderosa pine forest, and montane forest and woodland (Douglas fir–aspen) (Oliver 2000). Females generally give birth to a single offspring during the summer. The major prey items are beetles which are plucked from vegetation or the ground.

American Pine Marten (*Martes Americana)*
The marten is a fur-bearing mammal that is about two feet in length from head to tail and yellowish-brown in color. It occurs in much of Alaska and Canada, and its range extends into several areas of the contiguous United States (UDWR 2001). In Utah, the species has been found in many of the high remote mountainous areas of the state. Pine martens prefer forest habitat, where their dens can be found in logs, hollow trees, stumps, and rock crevices. The species mates during the summer, and females give birth to a litter of one to five young during the following spring; litters are often smaller when food is scarce. Martens are typically solitary animals that may cover great distances each day looking for food. The diet of the species consists primarily of small mammals, although birds, insects, and fruits are occasionally consumed.

3.7 Recreation

The growing population of the Ogden-Salt Lake City area creates heavy demand for recreational opportunities. The Ogden RD of the WCNF supports a variety of those recreational activities.

3.7.1 Area of Influence

The area of influence is the Ogden Ranger District.

3.7.2 Existing Conditions

Existing conditions for general recreation, motorized recreation, non-motorized recreation, and recreation opportunities spectrum (ROS) are provided in this section.

3.7.3 General Recreation

Water related sports -The water-based recreation activities at Pineview Reservoir have consistently been one of the most popular forms of summer recreation on the Ogden RD. Causey Reservoir is also a popular water-based recreation site.

Camping in developed campgrounds is another popular of form of summer recreation on the Ogden RD. The twelve developed campgrounds operate at near capacity on Friday and Saturday nights during the summer months. Dispersed camping is also occurs in portions of the Ranger District. This type of camping often has additional activities associated with it such as hunting, fishing, hiking and ATV use.

Table 3.7.1 Recreation Facilities Managed by the Ranger District

Recreation Infrastructure	Amount
Summer Motorized Motorcycle Trails (miles)	23.9
Summer Motorized ATV Trails (miles)*	22.0
Summer Non-Motorized Trails (miles)	110.4
Winter Snowmobile Trails (miles)	34.6
Boating Sites	3
Campgrounds	12
Picnicgrounds	2
Fishing Parking	5
Group Picnicgrounds	3
Overlooks	3
Beaches	3
Trailheads	12

* Includes roads that are currently managed for ATV use only.

The existing condition of the recreation infrastructure identified above is generally in good working condition. As a part of the District's annual recreation program, approximately 20% of the items are carefully surveyed and the current condition documented.

The ever-increasing demand for recreation opportunities and escalating levels of use has been a common occurrence on the WCNF. Determining the demand for motorized recreation had been especially challenging because of the lack of use data. In the WCNF Roads Analysis for the Forest Plan revision, the lack of quantifiable use data was identified as a limiting factor (WCNF Road Analysis, October 2002).

Complete data to assess intensity of road use is not yet available. Currently, the Ogden RD is implementing a traffic count program, and as this data becomes available, it can be utilized to refine effects analysis on a number of resources (WCNF Road Analysis, October 2002).

NVUM Project - The WCNF participated in the National Visitor Use Monitoring (NVUM) project from October 2002 through September 2003. The results of this study estimated recreation use on the WCNF at 4,946,915 visits per year. The definition of a national forest visit is one person entering a national forest for purposes of recreation. The WCNF is the most heavily visited national forest in the Intermountain Region and ranked fifth as the most heavily visited national forest nationally.

The results of the NVUM study showed that popular recreation activities on the WCNF that visitors participated in include (USDA, Forest Service, Chapter 4 table 13, June 2004):

- Viewing natural features at 73.97% of the total or 3.7 million visits.
- Viewing wildlife at 49% of the total or 2.4 million visits.
- General (relaxing, hanging out, escaping noise and heat, etc.) at 65.6% or 3.2 million visits.
- Hiking or walking at 50.1% or 2.5 million visits.
- Downhill skiing and snowboarding at 28.5% or 1.4 million visits.
- Driving for pleasure at 16.76% or .83 million visits.
- ATV at 3.58% or 0.18 million visits.

Of the total forest visits, it is assumed that only a proportional share occurs on the Ogden RD. The study was not designed to be accurate at the district or site level. However, the basic information including participation in various recreation activities generally applies to the district.

3.7.4 Motorized Recreation

The types of motorized recreation vehicles used on the Ogden RD consist of passenger cars, light trucks, SUV's, ATV's and motorcycles. As indicated above, driving for pleasure, either on a paved road through the National Forest or on a

backcountry road, was one of the top ten (16.72% of users participating) activities identified in the recent National Visitor Use Monitoring (NVUM) report.

As described in the Forest Plan, recreation-related travel on the Wasatch-Cache National Forest has increased in volume and will continue to do so. The increase in travel is directly affected by population increases, technological advances, economic conditions including gasoline prices, changing demands for recreational experiences, and other social influences. Growth has increased the most in sections of the Forest located near urban populations. (USDA Forest Service 2003, p. 3-213)

The trends in demand for off-highway motorized recreation can only be estimated based on field observations and analysis of the existing local information. No actual use data exists for these activities.

Utah Department of Motor Vehicles data on the number of ATV registrations from 1998 to 2004 shows a statewide increase of 153 percent. Similarly, registrations for Weber, Box Elder, Davis, Cache and Rich Counties increased 231%. The same data also shows that the number of registered ATV's for the same five counties makes up approximately 28.5% of the total number of ATV's for the entire state. In other words, over a quarter of all the vehicles registered in the State of Utah are owned by citizens who live within a 15 to 30 minute drive from the Ogden RD (Utah Department of Motor Vehicles 2004).

Table 3.7.2 displays the results of the most recent inventory of trails and open roads on the Ogden District. This includes private, county, city, state, and Forest Service routes within the District boundary.

Table 3.7.2 Miles of Roads and Trails within the Boundary of the Ogden Ranger District (from GIS)

Analysis Area	Miles of Road	Miles of Non-motorized Trails	Miles of Motorized Trail
Willard - Public Grove	29	8	13
South Fork – Middle Fork	9	3	0
Monte-Wheatgrass	49	41	2
Pineview - Ogden Front	31	33	17
Curtis Creek	80	25	14
Totals	**198**	**110**	**46**

3.7.5 Non-Motorized Recreation

Non-motorized trails on the Ogden RD are an important component of the recreation program. In the past, the construction and improvements to non-motorized trails has been the primary focus of planning, analysis, and budgets of the trail program. The UDP&R Fiscal Non-Motorized Trail Grant program has funded one or more projects every year on the district. This funding coupled with appropriated dollars has provided for a steady expansion in the District's non-motorized trail system.

Over the past decade, the most noteworthy projects have been the implementation of portions of the Bonneville Shoreline trail along the Ogden Front and the extensive system of trails located on both private and NFS lands in the vicinity of the Snowbasin Ski Area.

With the exception of the South Fork Recommended Wilderness, mountain biking is permitted on all Ogden RD system roads and trails.

The recent trend on the Ogden RD when trails are maintained or reconstructed has been to increase the dimensions of the path. A wider path works better for higher levels of use and accommodates a broader range of types of use. For example, mixing hikers, horses, and mountain bikes on a traditional narrow trail can cause more user conflicts than on a wider path.

Mountain bike use of the trails, in particular those along the Wasatch Front, is dramatically increasing based on our field impressions. Snowbasin Ski Area began lift-served mountain biking summer of 2005 on the trails in and around the ski area, and the public response has been substantial.

Horse use on Ogden RD trails also appears to be on the rise. The surrounding communities in Davis, Morgan, Cache and Weber Counties have a large population of horse ownership. This amount of use is likely to continue or increase for the near future.

There are 110.4 miles of non-motorized trails on the Ogden RD (from GIS data). See also table 3.7.2 above for the relationship of motorized and non-motorized routes by analysis area.

3.7.6 Recreation Opportunity Spectrum (ROS)

General types of recreation or recreation activities are inventoried, categorized, and mapped by a system called the Recreation Opportunity Spectrum (ROS). The Forest Plan provides maps allocating the forest among the various ROS classes. The ROS setting classifications for the ORD are divided into 5 of the 7 classes defined in the revised Forest Plan. The ROS classes range along a scale from "Wilderness/Primitive", which is the most remote, least developed, with the least evidence of human impact to "Urban", which is the least remote, most highly developed and has the most evidence of human use. The six ROS classes in the Revised Forest Plan that are managed on the ORD are: Urban (76 acres), Rural 2056 acres), Roaded Natural (32445 acres), Semi-Primitive Motorized (55339 acres), and Semi-Primitive Non-Motorized (67976 acres). See the Revised Forest Plan for further descriptions of the ROS class settings and maps (USDA Forest Service 2003 pp. 4-79-88).

Table 3.7.3 displays the results of the Revised Forest Plan ROS settings for all of the analysis areas considered in this analysis.

Table 3.7.3 Revised Forest Plan Acres of ROS Settings on the Ogden Ranger District

W/P	W/SPNM	SPNM	SPM	RN	R	U
0	0	67,976	55,339	32,445	2,056	76

Legend: W/P = Wilderness/Primitive, W/SPNM = Wilderness/Semi-Primitive Non-Motorized, SPNM = Semi-Primitive Non-Motorized, SPM = Semi Primitive Motorized, RN = Roaded Natural, R = Rural, U = Urban (See the 2003 Forest Plan (p4-81 to 4-88) for detailed description of ROS).

3.8 Scenery Resources

3.8.1 Area of Influence

The analysis area for scenic resources is the visible landscape seen from travelways and use areas that are within 3 miles extending out from lands within the WCNF boundaries of the Ogden RD. The landscape character and scenic integrity analysis are limited to the lands stated above. These areas cover all scenic resources with regard to direct, indirect, and cumulative scenic effects.

3.8.2 Existing Conditions

The WCNF Plan provides guidelines and maps of desirable scenery types for managing the five Landscape Character Themes (LCT) within the Ogden RD. See the 2003 Revised Forest Plan Wasatch-Cache National Forest (Forest Plan) Chapter 4, Scenery Management System. The five LCTs are: Natural Evolving, Natural Appearing, Developed Natural Appearing, Resort Natural Setting, and Water Recreation Rural Appearing.

Landscape Visibility - The Wasatch-Cache analyzes landscape visibility from context of the viewer. Considerations include duration of view, degree of discernable detail, seasonal variations, and numbers of viewers. It was assumed that most users would be able to view proposed construction of travel alignments from adjacent travelways of roads and trails. Concern level 1 represents primary travelways that have a high degree of importance with the public; concern level 2 shows a moderate interest in scenery from travelways; and concern level 3 indicates low interest in scenery from travelways. The concern levels for the travelways were inventoried and mapped from comments from Ogden RD personnel and the public. See project record for travel way concern levels.

Existing Landscape Character - Landscape Character is an overall visual and cultural impression of landscape attributes – the physical appearance and the cultural context of a landscape that gives it an identity and "sense of place". The Ogden RD is divided between Cache-Box Elder, Bear and North Wasatch-Ogden Valley management areas; within the boundaries of the district, there are two Ecological Sections M331D-Overthrust Mountains and M342E-Bear Lake (USDA Forest Service 1994) and four Subsections M331 D-7 Bear Lake Highlands, Cache Valley Front, Northern Wasatch and Monte Cristo Hinterlands (Neilson 1994). The revised WCNF Plan provides Desired Future Condition Management Area Setting Descriptions for the general description of the physical appearance and cultural context of the viewed landscape.

Scenic Integrity - Scenic Integrity Objectives (SIO) established in the Forest Plan define the acceptable degrees of deviation from a Landscape Character Theme (LCT). Often scenic integrity has to do with the size, scale, and location of past human activities such as road building, timber harvests, vegetation management and how these past activities relate to the inherent landscape character. The Ogden RD has a variety of Scenery Integrity Objectives (SIO) ranging from areas of Very High to Low scenic integrity within five LCTs on the District see RFP Cache – Box Elder and North Wasatch / Ogden Valley SMS maps for specific SIO managed areas.

3.9 Private Lands, Permitted Uses and Fire Management

The purpose of this section is to describe current motorized road and trail access to private lands, permitted uses, rangeland resources by cattle and sheep permittees, and for fire management operations on the Ogden RD.

3.9.1 Area of Influence

The area of influence is the Ogden Ranger District.

3.9.2 Existing Conditions

Private Lands – The Ogden RD is composed of several discontinuous parcels that are shown on the maps of the alternatives presented in this FEIS (Curtis Ridge, Monte Cristo and Upper South Fork, South Fork of the Ogden River, Public Grove, Willard and Ben Lomond area, Ogden Front and Pineview). Within and adjacent to these parcels are lands owned by private landowners, counties, the State of Utah, and other federal agencies. These landowners have the right of access to their private property (36CFR212.6 and 36CFR251.10(c)). These rights do not necessarily provide the most direct, economic, or convenient access to the landowner. The District works with landowners on a case-by-case basis to achieve solutions for access that are appropriate based on Forest Plan management prescriptions and a demonstration of individual needs.

Box Elder Access Management Team

The East Box Elder County Access Management Team was commissioned by the Box Elder County Commission in January 1999 (1/12/99 memo). The Commission appointed a Team, which included representatives from federal and state land management agencies, agricultural and sport interests and wildlife conservation organizations, was assembled for the purpose of reviewing and recommending motorized access routes for inclusion in the county road system. One of their principal objectives was to a system of motorized routes to access public lands located within Box Elder County.

The Team presented recommendations to the County Commission in 2000 and again in 2004. Resolution No. 04-13 which is titled “A Resolution of the Box Elder County Commission Amending the Access Management Plan” and its accompanying Box Elder County/Interagency Travel and Recreation Map (May 24, 2004) identify the routes that have been designated as County roads and that are open for motorized travel by the public within Box Elder County.

Of particular interest in this analysis are several routes the Commission reviewed and approved that access National Forest System lands near the town of Mantua. These routes include the:

- Rocky Dugway to Sink Hole Loop to Three Mile Road
- Devils Gate to Public Grove 4x4 Road
- Pete’s Hollow Trail

Both the Rocky Dugway-Three Mile Road and the Devils Gate-Public Grove 4x4 Road traverse sections of private land. The owners of these private lands have asked the Box Elder County Commission to vacate the decision in which these roads were added to the County road system. The County Commission has taken no action on the requests to vacate their decision.

The Pete’s Hollow road traverses land managed by the Utah Division of Wildlife Resources and the Forest Service. There has been no request made of the County to vacate the Pete’s Hollow decision.

The Forest Service assumes no liability for personal injury or damages to private property that might occur along or adjacent to county routes.

Cache County Attorney provided a letter on February 27, 2006 stating that the section of the Rocky Dugway-Three Mile Road within Cache County is considered to be a county road.

Permitted Uses – The USFS issues permits to use or occupy the NFS lands. Forest Plan Guideline 48 provides guidance on how motorized access to permitted uses should be planned (Forest Plan page 4-47). There are permits to occupy lands on the Ogden RD for recreation residences; water developments, irrigation and water transmission lines; power lines; military uses; microwave and communication sites; an apiary; weather stations; Forest Land Plan Management Act (FLPMA) permits for road use; social clubs; Snowbasin ski area; and for range allotment use. Not counting range allotment permits (see below), the District has 87 permits for other than temporary uses. Similarly, the District allows temporary uses of its roads, trails and facilities for special events and races. Each of these uses is the subject of a separate NEPA analysis and accompanying decision documents and public involvement processes as appropriate. Usually access to sites of these uses and use of roads or motorized trails is considered for each of these decisions.

Range Allotments – Permits to use cattle and sheep allotments are provided for all areas of the Ogden RD except along the Wasatch Front where cattle and sheep grazing are not allowed. There are 23 total allotments, 14 for sheep and 9 for cattle; use of these allotments is authorized to over 30 cattle and sheep permittees most of whose incomes depend largely on livestock grazing.

Livestock permittees use open system roads and motorized trails to access their allotments. There are about 183 miles of system roads and 7 miles of motorized trails on livestock allotments where decisions are being made in this analysis. There is currently some use of unclassified or unauthorized routes for this purpose (33 miles of unclassified routes on allotments). Several range improvement structures (fences, water developments, pipelines, cattle guards) occur on each of the allotments. As a result, grazing permittees also use roads within and near their allotments to transport maintenance materials and equipment to these structures. A few permittees also use roads to haul water for livestock. Herder camps are established at various locations each year on the sheep allotments and are frequently moved as the sheep trail across the grazing units. Sheep camp trailers are sometimes used for the herders and roads within the area are used for transporting the camps around the allotments.

Fire and Emergency Management Access – The Forest Service provides administrative access for fire suppression and other emergencies, prescribed burning, and mechanical fuels treatments. Some access needs occur during emergency situations, while others are planned projects. For emergency access the General Travel Plan Order printed in the current Logan and Ogden District Travel map states that the agency has the authority to use roads, trails or cross country access as needed for rescue or firefighting needs (26CFR251and 36CFR261.50(d).

3.10 Roadless Areas

3.10.1 Area of Influence

The area of influence is the Ogden Ranger District.

3.10.2 Background

The Wasatch-Cache Forest Plan revision process included a roadless area inventory which identified roadless areas and evaluated their attributes both for Wilderness recommendation and for the importance they hold for many people as undeveloped places. This roadless area inventory was a required part of the forest planning effort. Decisions regarding the programmatic management of these areas were made in the Revised WCNF Plan (USDA Forest Service, 2003).

Appropriate planning for and administration of roadless areas has been the subject of national regulatory efforts for several years. The Roadless Area Management Rule of 2005 did not affect the roadless situation at this time on the Ogden Ranger District.

The Forest Service Manual was updated in July 2004 to give National Forests direction on authority for building roads or harvesting timber in roadless areas (FSM 1925.04 Interim Directives for Timber Harvest and Road Construction in

Inventoried Roadless Areas -7/16/04). As a result of the FSM clarification, the WCNF, having completed a forest-wide roads analysis as part of the forest plan revision process, is authorized to make decisions to build roads or harvest timber in roadless areas given the appropriate NEPA process is followed and other forest plan direction is met.

The USFS Intermountain Region office has provided a template on how to consider effects to roadless areas in NEPA processes when doing project planning (Welsh, 2004). Essentially, the template suggests disclosing effects to values as potential Wilderness or inherent roadless area values. Analysis of effects to roadless areas in Chapter 4 of this document implements this template.

3.10.3 Existing Condition

3.10.3.1 Values of Roadless Areas as Wilderness or as Roadless

There are seven inventoried roadless areas on the Ogden RD. Each of these was given consideration as potential Wilderness or other during the Forest Plan revision process. Table 3.10.1 provides a summary and interpretation of those values that are from Appendices C-1 and C-2 of the Forest Plan FEIS.

Wilderness evaluation was based on consideration of capability, availability and need for the inventoried roadless area as wilderness and sub-categorical considerations within each of these three characteristics. Roadless area evaluation looked at values for undeveloped character for soils and water, public drinking water sources, plant and animal diversity, semi-primitive non-motorized (SPNM) and semi-primitive motorized (SPM) recreation opportunities, landscape and scenic integrity, heritage sites, locally defined unique characteristics, and size and context.

These roadless areas are quite variable in their size, although no very large roadless areas are present on the Ogden RD. They also possess different values that were considered in the context of the whole WCNF and in broader regional contexts when Wilderness recommendations and other forest management decisions were made during forest plan revision.

Table 3.10.1 Summary of Values for Roadless Areas on the Ogden RD*

Roadless Area Name	Location	Values for Wilderness	Values as Roadless	Acres
Mollens Hollow	Curtis Ridge (west)	Intact ecology, but generally moderate to low value	Managed as Research Natural Area for ecosystem values; area is lynx linkage and Bonneville cutthroat habitat; ATV trails present but no roads gives good value for SPM experience	17,700
Rock Creek – Green Fork	Curtis Ridge (east)	Low value due to small size, impacted environmental conditions, and current uses	Mostly low values except for high values for fish species at risk and moderate SPM experience.	5,600
Sugar Pine	Monte Cristo (north)	Low value due to small size, impacted environmental conditions, and current uses	Mostly low values except for higher values for fish species at risk and SPM and SPNM experiences.	5,600
Upper South Fork	Monte Cristo (south)	Recommended as Wilderness for: Higher wilderness values than other potential uses. No significant effect on current uses. Added new ecosystem to National	Values so high that recommendation as Wilderness was considered higher than as roadless area managed under another	

Roadless Area Name	Location	Values for Wilderness	Values as Roadless	Acres
		Wilderness System.	management prescription.	17,300
Willard	Ogden Front (north)	Moderate values for solitude, experiences, and wildlife habitat. Some conflicts with existing motorized use and difficult to manage as Wilderness. Areas like this already in the National Wilderness System. Possible conflicts with private land ownership inholdings. Values generally diminished by proximity of urban area.	Mostly high to medium values. High value for ecosystem functioning – some of which has been impacted by OHV use; high values for vegetation species at risk and bald eagles, portion of wild and scenic eligible stream. Both good SPM and SPNM opportunities.	19,100
Lewis Peak	Ogden Front (middle)	Moderate values for solitude, experiences, and wildlife habitat. Some conflicts with existing motorized use and difficult to manage as Wilderness. Areas like this already in the National Wilderness System. Possible conflicts with private mineral ownership. Values generally diminished by proximity of urban area.	Mostly low values except for ecosystem function, relatively high SPNM and SPM opportunities, and as a source for drinking water supplies.	12,100
Burch Creek	Ogden Front (south)	Low value for solitude; moderate for experiences, and wildlife habitat. Difficult to manage as Wilderness. Areas like this already in the National Wilderness System. Possible conflicts with private mineral ownership. Nearby Snowbasin ski area. Values generally diminished by proximity of urban area.	Mostly low values except for ecosystem function, vegetation species at risk and high SPNM experience opportunity, and as a source for drinking water supplies.	6,900
			Total Acres	**84,300**

*During an early stage of the forest plan roadless inventory the Public Grove Hollow and Lamb Canyon areas were identified as roadless areas. Subsequent review in that planning process determined that these areas were too small to meet roadless areas criteria and they are not included in the final inventory of roadless areas about which Forest Plan decisions were made.

From a recreation value perspective, the areas are held by users to have high values for both semi-primitive motorized and non-motorized opportunity. The degree to which motorized recreation opportunities are emphasized is negatively correlated with non-motorized opportunities, and vice-versa – although neither relationship is probably linear. Table 3.10.2 below shows the presence (or absence) of both non-motorized and motorized system trails in roadless areas. It also shows the miles of unclassified routes that are sometimes used illegally by motorized users, and which will be closed to public motorized use in the future. It is clear that some recreation or administrative access is currently available in all areas, and that generally these routes sum to less than 1 mile of trail per square mile of roadless area.

Table 3.10.2 Current Roads and Trails as they relate to Roadless Areas on the Ogden RD

Roadless Area Name	Degree to which Road Cherry Stems negatively affect area integrity	Miles of Motorized Trails	Miles of Non-Motorized Trails	Miles of Unauthorized Routes	Miles of Trails and Routes per square mile	Total Miles of Trails and Routes
Mollens Hollow	Area is moderately affected by cherry stems	5.03	11.92	3.04	.75	19.99
Rock Creek – Green Fork	Small area is heavily affected by 2 long cherry stems	0.0	1.04	.36	.16	1.40
Sugar Pine	Small area is moderately to heavily affected by 3 cherry stems	0.0	4.69	1.35	.69	6.04
Upper South Fork	Area has very minor effects from 2 short cherry stems	0.0	23.14	4.07	1.01	27.21
Willard	Heavy affects by long cherry stem on north side	12.60	7.64	3.49	.80	23.73
Lewis Peak	Area has only very minor intrusion from 1 cherry stem	12.05	3.52	1.60	.91	17.17
Burch Creek	Area not affected by any cherry stems	0.0	9.32	.82	.94	10.14
Totals		**29.68**	**61.27**	**14.73**		**105.68**

* Cherry stems are defined in the Glossary.

3.11 Off Road Vehicle (ORV) Business Environment and Social Setting

3.11.1 Existing Conditions

ORV Business Environment

The general economic impact of National Forest management was analyzed in the Forest Plan (USDA Forest Service, 2003). The information provided in this section is limited to a description of particular selected segments of the economy related to ATV's. Refer to the FEIS for the Revised Forest Plan for a broader economic analysis of how decisions on the Wasatch-Cache National Forest relate to the local economy.

The Wasatch-Cache has done a survey questionnaire of the ATV sales and service industry along the Wasatch Front to determine its extent and how it related to its customers (USDA Forest Service 2004). The dealerships and service centers range from large businesses with several million dollars in sales volume to smaller shops owned by individuals. Similarly, these businesses vary considerably in the amount and quality of user awareness information they provide.

The Ogden RD occupies parts of five counties in northern Utah (Weber, Cache, Box Elder, Morgan, and Rich). The ATV sales and service industry in these five counties is a relatively small but an important contributor to the regional economy. There are at least 20 ATV dealers in this area and more than that number again if the full Wasatch Front, southeast Idaho and Uinta County, Wyoming are considered.

Motorcycles for backcountry trail use have existed since the late 1960s and early 1970s. Additional growth of sales and service through the improvement of ATV technology in the 1980s and 1990s has made the motorcycle, ATV, and snowmobile business increasingly important in the overall economy and to those individuals that are directly employed by it. The viability of this industry is not an issue in this analysis.

Social Setting

There has been a substantial population increase in Utah and on the Wasatch Front over the past three decades. This population increase is generally expected to continue (adding about ¾ million people by 2030 on the Wasatch Front to the 1.5 million present today). This is a product of high birth rates and low death rates as well as migration from other states and countries (Economic Report to the Governor (Utah), 2004, p. 23). The FEIS for the Wasatch-Cache Forest Plan revision assumed that there would also be growth in demand for outdoor recreation associated with this general population growth (USDA Forest Service, FEIS 2003 – p3-233-234). If past trends in sales for ATVs and overall interest in outdoor recreation is any predictor, continued strong and growing demand for non-motorized and motorized trail and road recreation on the Wasatch-Cache can be expected.

Informal observations indicates that the Off Road Vehicle (ORV) industry and its advocates and publications as well as environmental groups have education and public information efforts that either promote or discourage ORV use respectively. Those who favor ORV use and non-motorized advocates are at odds regarding how much motorized use is enough, where or when it should be allowed, and how much motorized use impacts wildlife and other forest resources. Since motorized recreation is an allowed activity on National Forests if practiced within the constraints of travel plans, local forest managers have attempted to provide some balance of motorized and non-motorized uses that looks out for the users as well as resources that can be impacted.

3.12 Air Quality

3.12.1 Existing Conditions

The 1990 Clean Air Act provides legal direction for air quality. States were given a key role in monitoring air quality so that it meets acceptable standards. National Forest lands in the State of Utah are classified as Class II attainment areas by the Clean Air Act. Activities allowed by the Forest Service associated with burning or vehicular use must comply with applicable federal, state and local standards for air quality, especially the standards of State of Utah, Division of Air Quality's Utah Smoke Management Plan. The Forest Service must coordinate its activities with the state and burn when atmospheric conditions reduce potential risks of air quality degradation.

Forest Service considerations for air quality usually relate to effects created by burning vegetative materials. Short-term negative effects to air quality can sometimes occur from prescribed burning projects, wildland fire use, or wildfires.

In the summer motorized vehicles use roads and trails for many activities including recreation, timber harvest, and range management. These vehicles produce exhaust emissions and dust along roads and trails; these emissions are normally dispersed within minutes after the vehicles pass.

The Ogden RD meets National Ambient Air Quality Standards (NAAQS).

The main regional sources of air pollution on the Ogden RD are from urban areas along the Wasatch Front that are caused by industrial manufacturing, vehicle traffic and burning (USDA Forest Service 2003, 3-59).

3.13 Heritage Resources

3.13.1 Background

Heritage resources include buildings, sites, areas, architecture, memorials, and objects having scientific, historic, or social values. These comprise an irreplaceable resource relating to past human life.

The purposes of the USFS program for these resources are:

1. Preventing their loss or damage until they can be evaluated for scientific study, interpretative services, or other appropriate uses.
2. Integrating this program into multiple use management of the National Forest System.
3. Scientific study to gain knowledge about past human behavior.
4. Interpretation so that the public may gain a better understanding and perspective of our heritage. (FS Manual 2361).

3.13.2 Area of Influence

The area of influence is the Ogden RD.

3.13.3 Existing Conditions

The land areas, now managed as the Ogden RD, were used seasonally by prehistoric and historic American Indians, beginning about 10,000 years ago. These people also spent a significant part of their year in the relatively resource-rich adjacent valleys. However, the mountains did contain additional plants, animals, and settings that the valley locations could not necessarily provide. Because much of this upland use was relatively short-term, the archaeological sites that record this use are not common, and tend to occur on relatively level areas near water and stone tool sources. The exceptions to this are some rock art sites, where locations are affected by the availability of sheltering rock outcrops. Historic period Ute, Goshutes and Shoshones also used the mountains. Common site types found across the forest include open campsites, quarry sites, hunting and game processing sites, burials and rock art sites.

Historic European American use of the project area includes water diversion, gravel, clay, and rock quarrying, logging, livestock grazing, hunting, recreation, and prospecting as well as many historic projects built by the Civilian Conservation Corp (CCC). The kinds of historic period sites which occur generally across the Ogden District include bridges, campgrounds, temporary campsites (marked by scatters of trash), trails and roads, mining adits, gravel pits, quarries, and small sawmill sites (marked by trash and some sawdust, slabs or cabins), kilns, cabins and homesteading sites.

Road and trail construction or the reclamation and naturalization of areas formerly used as roads or trails can have negative effects on heritage resources by disturbing, displacing and destroying their contents. As such, the effects on known heritage resources of the alternatives analyzed in this document are dependent on the intersection of the alternative proposals for construction or reclamation of roads or trails and the presence of sites.

Usually the values inherent in these sites can be captured through mitigation of adverse impacts from projects by recordation, preservation, excavation, analysis, and interpretation. Heritage sites are protected by federal laws and regulations in coordination with the Utah State Historic Preservation Office (SHPO) that reviews survey, evaluation and mitigation reports prepared by professional Forest Service preservation staffs.

Intentionally left blank

Chapter 4
The Environmental Effects

4.1 Introduction

This chapter provides a summary of the environmental effects on the physical, biological, and recreational aspects of the environment related to the Ogden Travel Plan analysis. The effects are described as they relate to each resource and are organized in same order as in Chapter 1 and Chapter 3.

4.1.2 Introduction to Alternative

The total miles of the transportation system do not vary by alternative, but the mix of the types of routes does as shown below in figure 4.1.

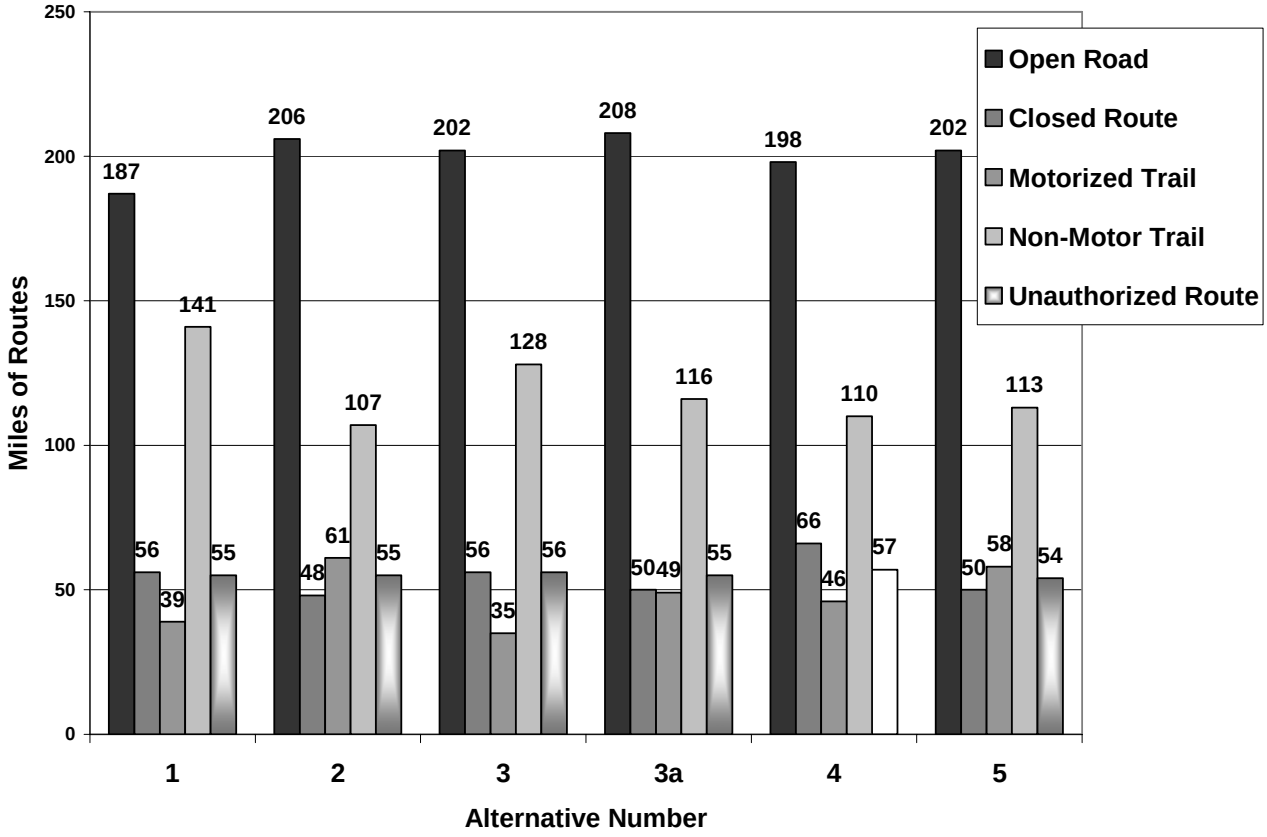


Figure 4.1 Miles of Routes by Alternative (From GIS).

All alternatives are based on a system of 477 miles system of routes on the Ogden Ranger District. This system was calculated from the GIS inventory that described the existing condition and proposed new routes. Not all of these routes are motorized.

Alternative 1 has an emphasis of protecting inventoried roadless areas. This is accomplished by increasing the amount of system trails that are closed to any motorized use and placing emphasis on motorized routes outside of roadless areas. The Skyline Trail from Pineview Reservoir to North Ogden Divide to Willard Peak is converted from motorized single-track trail to non-motorized hiking trail in the Ogden Front and Willard analysis areas. Eli Ridge road would be closed to vehicles to protect the Sugar Pine roadless area and Bluebell Flat road would close the last half-mile in the Upper South Fork roadless area in the Monte Cristo analysis area. The Tilda Springs ATV trail in the Curtis Creek analysis area would be closed to ATV use and managed as a non-motorized hiking trail. It also closes the west end of the Dry Gulch dispersed road that has an effect on an inventoried roadless area. Alternative 1 also concentrates motorized activities in and around areas that already have open motorized uses, such as the Curtis Ridge area. It increases motorized activity in the Public Grove area that is not an inventoried roadless area.

Alternative 2 has an emphasis for motorized recreation. This alternative will increase the miles of open roads and motorized trails. New motorized trails are open in the Dock Flat to Perry Reservoir area in the Willard analysis area. The low standard road from the Avon-Liberty County road going west to private land will be open as a road in the Public Grove analysis area. A currently closed road in Spencer Basin will be opened to ATV use and a connector trail built linking it with the nearby open road. Also, a new connector trail, to create a motorized loop trail, will be built from the Tilda Springs ATV trail to the Davenport Hollow road all in the Curtis Creek analysis area. In the Monte Cristo area, Eli Ridge Road will be open for the first half mile, to access existing dispersed campsites. The existing road under the power line will be open to motorized ATV use, creating a system of open roads and trails in the Monte Cristo analysis area. The Inspiration Point trail near Willard Mountain will be merged with the Skyline trail and be open to motorcycle use.

Alternative 3 emphasizes protecting wildlife populations and habitat. This is accomplished by restricting motorized use in key wildlife habitat areas. No additional motorized trails will be created in the Curtis Ridge area and the Tilda Springs ATV trails will be managed as non-motorized routes in the Curtis Creek analysis area. The east end of the Public Grove 4x4 road will be managed for ATVs only, rather than full size vehicles. The Skyline Trail from North Ogden Divide to Willard will be managed as a non-motorized trail, closing it to motorcycles in the Willard analysis area. The Lewis Peak and Coldwater trails in the Ogden Front analysis area will also be managed as a non-motorized trail restricting motorcycle use on these routes.

Alternative 3a is a combination of limiting the impacts to wildlife populations and habitat while attempting to accommodate administrative need or to emphasize another resource in specific areas. More routes will be managed as open roads in this alternative, but the number of miles of seasonal use only roads is higher in this alternative than others, as a means of allowing use on a road but protecting early season resource values. In the Curtis Creek analysis area, a new loop trail will be built in the Tilda Springs ATV trail to Davenport Hollow area, but Davenport Hollow will not be open to Mollens Hollow overlook. The Buck Springs road would be rerouted away from Buck Spring pond and Boundary Springs ATV trail away from Boundary Spring pond, to protect the aquatic species population in this pond. In the Dock Flat area within the Willard analysis area, two new trails would be added to reduce the ATV traffic on the main Willard Mountain road. The Public Grove 4x4 road would be closed seasonally to reduce the damage caused by trucks in the wet spring and fall in the Public Grove analysis area. New motorized trails will be added in the Dry Bread area to improve recreation opportunities concentrated to that existing high use camping area in the Monte Cristo analysis area.

Alternative 4 is the no action alternative. This alternative assumes that routes identified as unauthorized will be closed and rehabilitated as part of continued implementation of the current travel plan. Therefore, this alternative would result in reduced access of 10% more miles of closed roads than any other alternative. Closing unauthorized roads has presented law enforcement challenges. The main network of roads would remain managed as open.

Alternative 5 was developed by the Forest Service after public comments on the five alternatives described in the draft Environmental Impact Statement had been reviewed. The purpose was to improve resolution of issues raised in public comments. Most of the actions to roads and trails of the DEIS Preferred Alternative 3a were retained. The Eli See Section 2.4.6 for details of this alternative.

The ways in which these mixes of route mileages affect specific resources and uses are discussed in the sections that follow.

4.2 Effects on Transportation Systems

4.2.1 Introduction

Alternatives developed in Chapter 2 will change the overall transportation system on the Ranger District. These changes are measured in the differing miles of routes managed for different functions.

4.2.2 Issues Addressed

Public and agency scoping, followed by Forest Service interdisciplinary team review identified a number of issues to be addressed in this impact analysis:

Alternative transportation systems presented in Chapter 2, (mileages of which are shown below) were developed to address the full range of significant and non-significant issues.

In this effects analysis, the separate sections that follow on effects to each resource or use type can be tied back closely to individual issues characterized in Table 1.6.1. Effects to the transportation system are stated below as miles of different types of routes. These route mileage changes directly affect all other resource and use types, but do not tie directly to any particular issue, but to all issues.

4.2.3 Effects Analysis Methods and Assumptions

Miles of different types of routes are compared across alternatives to show the range of the alternatives. These changing miles of routes translate into different effects for the variety of resources and uses which the transportation system serves.

Route management falls into the following classes.

Open Road: This is a managed system road on National Forest that is open to motorized travel. It might be an administrative road, a County-maintained road, a Utah Department of Transportation road, or a seasonally opened road.

Closed Route: This is a road or route that is closed to motorized travel. It could be a new decision to close a road or one that is already managed as closed.

Unauthorized Route: User created route that is not a part of the official system of roads or trails.

Motorized Trail: This is a trail, designated for vehicles less than 50 inches in width, which is open to motorized travel. This could be either a motorcycle or an ATV trail. It could be a trail already managed as a motorized trail, a route that exists on the ground that will be managed as a motorized trail or a motorized trail yet to be constructed.

Non-Motorized Trail: This is similar to a motorized trail in definition but motorized equipment is not allowed on the route.

4.3 Effects on Watersheds and Aquatic Resources

4.3.1 Introduction

This section describes the effects on aquatic species. Estimating the effects to aquatic habitat and aquatic species by alternative is based upon an understanding of current and past aquatic conditions and an estimate of when and to what degree watershed restoration is expected, based upon actions taken for each alterative.

Aquatic resources on the Ogden RD can be placed into several watersheds that drain areas where roads or trails are located. These include:

- The Curtis Creek North area drains into Bear River Frontal (1602010101) at the head of Laketown Canyon, Bear River-Big Creek (1601010106), and Blacksmith Fork (1601020302).
- Curtis Creek South area drains into Bear River-Big Creek (1601010106), and Blacksmith Fork (1601020302), and Woodruff Creek (1601010107).
- Monte Cristo area drains into Woodruff Creek (1601010107), Blacksmith Fork (1601020302), and the headwaters of the Ogden River (1602010202).
- South Fork area drains into the headwaters of the Ogden River (1602010202).
- The Lewis Peak area drains into Outlet of the Ogden River (1602010203) and Third Salt Creek (1602010207) of the lower Weber River.
- The Public Grove area drains into Headwaters of the Little Bear (1601020301).
- The Willard area drains into Box Elder Creek - Bear River (1601020405) and into upper part of Outlet of the Ogden River (1602010203).

Bonneville cutthroat trout are found in several of these watersheds, while boreal toads have been found only in the Monte Cristo area (See Chapter 3, Aquatics Section).

4.3.2 Issues Addressed

Public and agency scoping, followed by Forest Service interdisciplinary team review identified the following issue to be addressed in this impact analysis:

- Roads that are located close to streams and road crossings can cause sediment delivery and impacts to water quality and aquatic species.

Measurement indicator used to compare alternatives:

Occurrence of roads and trails within Riparian Habitat Conservation Areas (See Table 4.3.2)

Riparian habitat conservation areas (RHCA) were established for the 2003 Forest Plan based on water features. Provisions for RHCAs have been shown to protect streams from sediment inputs and provide for other riparian functions, including delivery of organic matter and woody debris, stream shading, and bank stability (USDA Forest Service 2003). These RHCAs are:

Category 1. Fish-Bearing Stream: RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

Category 2 –Permanently Flowing Non-Fish-Bearing Streams: RHCAs consist of the stream and the area on either side of the stream extending from the edge of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year flood plain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.

Category 3 – Ponds, Lakes, Reservoirs, and Wetlands Greater than 1 Acre: RHCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.

Category 4 – Seasonally Flowing or Intermittent Streams, Wetlands Less than 1 Acre, Landslides, and Landslide-Prone Areas: This category includes features with high variability in size and site-specific characteristics. At a minimum, the RHCAs must include:

a. The extent of landslides and landslide-prone areas.
b. The intermittent stream channel and the area to the top of the inner gorge.
c. The intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation.
d. The area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greatest.

4.3.3 Area of Influence

For direct and indirect effects on water, wetland, and aquatic resources, the area of influence is the area that is hydrologically connected from the road and trail system to the first water feature encountered such as a stream, lake, reservoir or pond. For cumulative effects, it is the area within the sixth code sub-watershed that drains the road and trail system. The reason the sixth-code sub-watershed area is used for the cumulative effects analysis is because the sub-watershed is a logical watershed unit that drains to a single point.

4.3.4 Effects Analysis Methods and Assumptions

Baseline conditions were determined through a review of the literature, review of aerial photography and topography maps, and field observations. This baseline information was used in the Road Analysis Process (RAP) to document potential effects of all Ogden District service level 1 and 2 roads on wetlands, riparian areas, and aquatic resources (USDA Forest Service 2002). The review of literature provides a brief description of general effects of roads on water and aquatic resources. Aerial photographs and topography maps provide an indication of the proximity of roads to water features and the steepness and vegetative condition of the land between the road and the water feature. Inventory of wetland and riparian resources condition within the Snowbasin land exchange parcels in Devils Gate Valley is documented in an internal memo to the Ogden District Ranger entitled "Snowbasin Possible Land Exchange Parcels, Devils Gate Valley, Field Reconnaisance of Soils and Watershed Condition and Resources ", dated 10/16/1998. Field observations were conducted to identify and quantify fish and amphibian populations and to characterize habitat conditions on the Ogden RD. These characteristics were taken into consideration when determining potential ratings for aquatic resources in the roads analysis.

For the effects analysis, roads that had a potential “high” rating in the roads analysis for any of the Aquatic, Riparian, and Water Quality factors were carried forward in the analysis. The main indicator of the potential for adverse effects to occur

to water quality and aquatic resources is whether or not a road is within a RHCA. RHCAs are used because they have been shown to protect water and aquatic resources.

To compare the environmental effects by alternative it was necessary to make the following assumptions.

- Any unauthorized road or motorized trail not identified within a specific alternative or within the existing Travel Plan will be closed and rehabilitated. Therefore, unauthorized routes will be considered closed for the effects analysis.
- Authorized trails and roads will be maintained to Forest Service standards.
- Enforcement of road and trail closures is a District priority.

4.3.5 Direct and Indirect Effects

Roads can affect streams by accelerating erosion and sediment loadings, by altering channel morphology, and by changing runoff characteristics of watersheds (Furniss et al 1991). In addition, loss of connectivity and accessible habitat can result from the improper installation of road culverts. Roads also act as an instrument, potentially allowing pollutants to enter a stream through hazardous material transport, or allowing access to areas which can impact aquatic species through fishing and collecting.

4.3.5.1 Effects Common to all Alternatives

Water Quality –The closure and rehabilitation of unauthorized roads will reduce erosion and sedimentation across the District. Since most of these unauthorized roads are in uplands, are a long distance from stream channels, and have a very small amount of bare soil in comparison to the land area of the District, no measurable change in water quality is expected. Very little sedimentation is expected to occur to streams on the District because annual maintenance of the main authorized roads (such as adding gravel and cleaning drainage ditches and culverts) will minimize the amount of sediment that will erode from the road. Also, most of the authorized roads are a long distance from water features.

Wetlands – Effects of roads on wetland resources will continue for all roads described under the wetlands section in the affected environment with the exception of Perry Reservoir. A description of effects for Perry Reservoir is in the individual sections for alternatives 1-5. The potential to impact wetlands will be reduced near Camp Red Cliff (#20191) because only administrative use will be allowed.

Floodplains – The effects of the transportation system on floodplains was analyzed in the Roads Analysis for this project. It was addressed in question AQ (9): How does the road system alter the physical channel dynamics including isolation of floodplains, constraints on channel migration and the movement of wood, fine organic matter and sediment? The results of the analysis show that there are no additional effects to floodplains from the proposal or any of the alternatives. The Roads Analysis is available in the project file.

Aquatic Resources – Several effects to aquatic resources are common to all alternatives

- **Threatened, Endangered, and Candidate Species** - No threatened or endangered aquatic or semi aquatic species occur on the Ogden Ranger District. The fat-whorled pondsnail (*Stagnicola bonnevillensis*) is a Candidate species found in three ponds in Box Elder County. None of the ponds are located on National Forest System lands, and therefore, the species will not be impacted by activities taking place on the Ogden RD.
- **Forest Service Sensitive Species –** The Columbian spotted frog *(Rana luteiventris)* is not found on the Ogden RD and will not be impacted from any activities that occur there.
- **Roads and trails outside RHCAs** - Most of the proposed motorized routes on the Ogden RD are a long distance from water and are located on dry ground near the tops of ridgelines. These routes will not likely impact aquatic resources regardless of the Alternative chosen. A list of these roads can be found in Appendix B. Since boreal toads have been known to travel up to three miles from water, there could be some mortalities related to collisions with vehicles. The number of toads that might be crushed is likely small, and varies little between alternatives.

- **Gravel Sources and Concentrated Use areas –** Projects in these sites will not likely impact aquatic resources regardless of the action alternative chosen.

4.3.5.2 Effects by Alternative

Alternative 1

Water Quality - Although the amount of sedimentation directly along Dry Fork road (#20162) has not been quantified, 0.8 miles of this road will be closed and rehabilitated and will improve sedimentation conditions along this reach of the intermittent stream. The existing roads, Campground Spring road (#20082), Otter Creek Private road (#XX36) and Public Grove 4X4 road (#20220) will be open and some sedimentation from these roads will continue into ephemeral streams. This effect can be mitigated by adding gravel to the road and improving drainage at key locations. Dock Flat road (#26010) and Box Elder Creek trail (#XX34) will be the same as in Alternative 4.

Wetlands - Impacts to wetlands at Perry Reservoir have been corrected by the emergency closure of Perry Reservoir road (#20070), thus, the potential to adversely effect wetlands will be minimized by only administrative use of this road.

Aquatic Resources

- **Boreal toad.** Roads can degrade adjacent amphibian habitat by altering water flow or vegetative communities (Hogrefe, et al 2004). Roads can also fragment habitats or lead to direct mortality due to vehicle impacts. The probability of such impacts is directly related to road densities and proximity to occupied habitat. On the Ogden RD, boreal toads are likely restricted to the Monte Cristo and Curtis analysis areas.

  Under Alternative 1, the Zion Springs road would be kept open for the first mile and closed 1.2 miles beyond that. This would benefit boreal toad using a pond along the upper road. In summer of 2004, ATVs were driven through this pond and likely impacted boreal toad tadpoles.

  Currently, the Tilda Springs ATV trail and the Buck Springs road run adjacent to boreal toad breeding sites. Both motorized routes are currently adding sediment to these ponds, and due to their proximity, are likely impacting boreal toad. Under Alternative 1, both these routes would remain in their current locations.

- **Bonneville cutthroat trout.** Bonneville cutthroat trout are a Region 4 sensitive species. Bonneville cutthroat trout have also been selected as a Wasatch-Cache National Forest management indicator species (MIS) for aquatic habitats.

  Under Alternative 1, a motorized trail would be constructed along Silvia Hollow. This would potentially impact BCT which were found in low densities (193 ± 0/stream mile) throughout this stream (Thompson 2000). Silvia Hollow appears to be utilized as a spawning and rearing tributary for Wheeler Creek. The proposed trail would be within 300 feet of Silvia Hollow for approximately 2,700 feet. Under Alternative 1 430 feet of motorized road and trail would be removed from within RHCA's.

Alternative 2

Water Quality - As in Alternative 1, 0.8 miles along Dry Fork road (#20162) will be closed and after rehabilitation of the road, no sedimentation would occur from the road along this reach of the intermittent stream. Some sedimentation would continue to occur along open existing roads, Campground Spring road (#20082) and Otter Creek Private road (#XX36), Public Grove 4X4 road (#20220), and along existing trails, Box Elder Creek trail (#XX34) and Dock Flat trail (#26010). This effect could be mitigated by adding gravel to the road and/or improving drainage at key locations.

Wetlands - Impacts to wetlands would continue at Perry Reservoir since it will be open to public use.

Aquatic Resources

- **Boreal toad.** Impacts to boreal toad would be the same under Alternative 2 as under Alternative 1.

- **Bonneville cutthroat trout**. The impacts to BCT would be the same as Alternative 1. However, Alternative 2 would add 3,410 feet of motorized road and trail within RHCA's.

Alternative 3

Water Quality - Effects to water quality would be the same as Alternative 1.

Wetlands – Effects to wetlands would be the same as Alternative 1.

Aquatic Resources

- **Boreal toad**. Impacts to boreal toad along the Zion Springs road would be the same as Alternative 1.

  Under Alternative 3, a small portion (0.04 miles) of the Tilda Springs ATV trail and 0.3 miles of the Buck Springs road would be rerouted around the boreal toad breeding sites. There would be no net change in the amount of road/trail at these sites. This would benefit the toads through reduced sedimentation and by reducing the likelihood of toads being crushed or collected.

  The Buck Springs road is the boundary between two management prescriptions (3.2u and 3.1w). Neither prescription allows new road construction. However, page 4-61 of the revised Forest Plan states – "where road construction is not allowed by a Management Prescription the responsible official may authorize road construction or reconstruction when realignment is needed to prevent irreparable resource damage by a classified road". Realignment of the road would be consistent with Forest Plan direction.

- **Bonneville cutthroat trout**. Under Alternative 3, no motorized routes would be constructed near streams with fish. In addition, 3,890 feet of motorized road and trail would be removed from within RHCA's.

Alternative 3a

Water Quality - The effects to water quality would be the same as Alternative 2, with reduced sedimentation along Public Grove 4X4 road as a result of seasonal closures along this road.

Wetlands – The effects would be the same as Alternative 1.

Aquatic Resources

- **Boreal toad**. The effects would be the same as Alternative 3.

- **Bonneville cutthroat trout**. The effects would be the same as Alternative 3, although, less motorized road and trail would be removed from within RHCA's (1,050 feet) compared to Alternative 3.

Alternative 4

Water Quality - Under this alternative, there would be a small reduction in sedimentation into the ephemeral channel when existing roads, including Campground Springs road (#20082), Otter Creek Private and Public Grove 4X4 road (#20220), Dock Flat Complex trail (#26010), Dock Flat Complex road (#26010), and Box Elder Creek trail (#XX34) were closed and rehabilitated. Dry Fork road (#20062) would continue to cause some sedimentation along the northern 1.8 miles of open road. This effect would be mitigated by adding gravel and/or improving drainage at key locations.

Wetlands - Perry Reservoir road (#20070) would be opened and have a high potential for sediment to reach the reservoir. Since the road was closed for resource protection in 2003 as a result of erosion problems, it is likely that erosion problems would continue if the road is opened again.

Aquatic Resources

- **Boreal toad**. Under this alternative, roads and trails near boreal toad breeding sites would remain in place. These routes include the Buck Springs Road, the Tilda Springs ATV trail, and the Zion Springs Road.

- **Bonneville cutthroat trout**. Under this alternative no roads or motorized trails would be constructed along streams with BCT. Existing roads along streams with BCT would remain in place. No changes to motorized roads and trails within RHCA's would occur.

Alternative 5

Water Quality - The effects to water quality would be the same as Alternative 3a.

Wetlands – The effects would be the same as Alternative 3a.

Aquatic Resources

- **Boreal toad**. The effects would be the same as Alternative 3.

- **Bonneville cutthroat trout**. The effects would be the same as Alternative 3, although, less motorized road and trail would be removed from within RHCA's (1,050 feet) compared to Alternative 3.

4.3.5.3 Mitigation

Mitigation measures common to all alternatives include:

- Annual road maintenance, such as adding gravel and cleaning drainage ditches and culverts
- Closure of unauthorized roads and trails
- Implementation of soil and water conservation practices to minimize soil and water effects (including the use of best management practices to control erosion, as required by the revised Forest Plan).

4.3.5.4 Unavoidable Adverse Effects

With the implementation of best management practices and the continuing closure of illegal routes, no unavoidable impacts to aquatic and semi aquatic species are expected.

4.3.5.5 Short-term Uses vs. Long-term Productivity

With the implementation of standards and guidelines from the revised Forest Plan, no long-term effects to the aquatic and semi aquatic species are expected.

4.3.5.6 Irreversible and Irretrievable Commitments

No irreversible/irretrievable commitments of aquatic or semi-aquatic resources are expected from any of the alternatives.

Table 4.3.1 summarizes the effects to water quality and aquatic species for roads within riparian habitat conservation areas, based on the miles of roads and trails added under each of the alternatives. Table 4.3.2 summarizes the Roads Analysis and the effects on water quality and aquatic species. The Roads Analysis is available in the project record.

Table 4.3.1 Miles of Roads and Trails Added and the Effects on Water Quality and Aquatic Species

Road Name Roads/trails with RHCA's	**Alternative 1** Feet (Miles) Road/Trail Added	**Alternative 2** Feet (Miles) Road/Trail Added	**Alternative 3** Feet (Miles) Road/Trail Added	**Alternative 3a** Feet (Miles) Road/Trail Added	**Alternative 4** Feet (Miles) Road/Trail Added	**Alternative 5** Feet (Miles) of Road/Trail Added
Dry Fork	Beneficial Effect to water quality -4,600' (-0.9)	Beneficial Effect to water quality -4,600' (-0.9)	Beneficial Effect to water quality -4,600' (-0.9)	Beneficial Effect to water quality -4,600' (-0.9)	Sediment Concerns 0' (0)	Beneficial Effect to water quality -4,600' (-0.9)
Campground Spings	Sediment Concerns 820' (0.2)	Sediment Concerns 820' (0.2)	Sediment Concerns 820' (0.2)	Sediment Concerns 820' (0.2)	No Effect 0 (0)	Sediment Concerns 820' (0.2)
Otter Creek Private	Sediment Concerns 2,640' (0.5)	Sediment Concerns 2,640' (0.5)	Sediment Concerns 2,640' (0.5)	Sediment Concerns 2,640' (0.5)	No Effect 0 (0)	Sediment Concerns 2,640' (0.5)
Zion Springs	Benefits Boreal Toad -2,230' (-0.4)	Benefits Boreal Toad -2,230' (-0.4)	Benefits Boreal Toad -2,230' (-0.42)	Benefits Boreal Toad -2,230' (-0.4)	Impacts Boreal Toad 0 (0)	Benefits Boreal Toad -2,230' (-0.4)
Boundary Springs ATV	Impacts Boreal Toad 0 (0)	Impacts Boreal Toad 0 (0)	Benefits Boreal Toad -220' (-0.1)	Benefits Boreal Toad -220' (-0.1)	Impacts Boreal Toad 0 (0)	Benefits Boreal Toad -220' (-0.1)
Silvia Hollow	Impacts BCT 2,640' (0.5)	Impacts BCT 2,640' (0.5)	No Effect 0 (0)	No Effect 0 (0)	No Effect 0 (0)	No Effect 0 (0)
Public Grove 20220	Sediment Concerns 300'	Sediment Concerns 300' (0.1)	Sediment Concerns 300'	Sediment Concerns 300' (0.1)	No Effect 0 (0)	Sediment Concerns 300' (0.1)
Box Elder Creek	No Effects 0 (0)	Sediment Concerns 2,640' (0.5)	No Effects 0 (0)	Sediment Concerns 2,640' (0.5)	No Effects 0 (0)	Sediment Concerns 2,640' (0.5)
Dock Flat Complex 26010	No Effects 0 (0)	Sediment Concerns 200' (0.1)	No Effects 0 (0)	Sediment Concerns 200' (0.1)	No Effects 0 (0)	Sediment Concerns 200' (0.1)
Perry Reservoir	No Effect (Admin Use) 0 (0)	Sediment Concerns 1,000' (0.2)	No Effect (Admin Use) 0 (0)	No Effect (Admin Use) 0 (0)	No Effect (Admin Use) 0 (0)	No Effect (Admin Use) 0 (0)
Buck Springs	Impacts Boreal Toad 0 (0)	Impacts Boreal Toad 0 (0)	Benefits Boreal Toad -600 (-0.1)	Benefits Boreal Toad -600 (-0.1)	Impacts Boreal Toad 0 (0)	Benefits Boreal Toad -600 (-0.1)
Total feet (miles) motorized trail/road added or removed by alternative as compared to the current Travel Plan	Alternative 1 will remove 430' (0.1 miles) of motorized road and trail within RHCA's.	Alternative 2 will add 3,410' (0.6 miles) of motorized road and trail within RHCA's	Alternative 3 will remove 3,890' (0.7 miles) of motorized road and trail within RHCA's	Alternative 3a will remove 1,050' (0.2 miles) of motorized road and trail within RHCA's.	No new motorized routes within RHCA's	Alternative 5 will remove 1,050' (0.2 miles) of motorized road and trail within RHCA's.

Table 4.3.2 Summary of the Roads Analysis Related to Water Quality and Aquatic Species

Road Name	Alternative 1	Alternative 2	Alternative 3	Alternative 3a	Alternative 4	Alternative 5
Roads that have a high potential for generating surface erosion and within RHCA.						
Dry Fork 20162	Close and rehab 0.8 miles.	Same as Alt 1	Same as Alt 1	Same as Alt 1	Open on previous travel plan. Northern 1.8 miles in poor condition. Follows intermittent stream with several crossings.	Same as Alt 1
Campground Springs 20082	Open existing road to dispersed camping area (0.2 miles)	Same as Alt 1	Same as Alt 1	Same as Alt 1	Not open on previous plan. Existing road to dispersed camping area 0.16 miles along ephemeral channel.	Same as Alt 1
Otter Creek Private	Open existing road.	Same as Alt 1	Same as Alt 1	Same as Alt 1	Not open on previous plan. Existing road along approximately 0.5 miles of ephemeral channel.	Same as Alt 1
Public Grove 4X4 20220	New motorized ATV trail on existing route.	New open road on existing route.	Same as Alt 1	Seasonal closure on new open road on existing route.	Western 2.6 miles is closed on current plan. Existing road runs along several stockponds and springs.	Same as Alt 1
Box Elder Creek XX34	Same as Alt 4	New motorized trail on existing route for first 0.5 miles.	Same as Alt 4	Same as Alt 2.	No trail exists.	Same as Alt 2
Dock Flat Complex 26010	Same as Alt 4	New motorized trail on existing route.	Same as Alt 4	Same as Alt 2.	Existing trail not on previous travel plan.	Same as Alt 2
Roads that have a high potential to affect wetlands.						
Perry Reservoir 20070	Admin Use	Same as Alt 1	Same as Alt 1	Same as Alt 1	Road open on previous travel plan. Closed since 2003 because of erosion problems.	Same as Alt 1
Roads that have a high potential to contribute to fishing, poaching, or direct loss of at risk species.						
Zion Springs 20221	Admin use on last 1.2 miles.	Same as Alt 1	Same as Alt 1	Same as Alt 1	Road open on previous travel plan.	Same as Alt 1
Silvia Hollow 6315, 6316	Open trail to motorized use.	Same as Alt 1	Same as Alt 4	Same as Alt 4	Trail closed on previous travel plan. Motorized trail existed but was closed and rehabbed. Hiking/livestock trail prism currently in place.	Same as Alt 4
Boundary Springs	Same as Alt 4	Same as Alt 4.	Reroute trail away	Same as Alt 3.	Trail open on previous travel plan.	Same as Alt 3

ATV 26102			from Boundary Springs.			
Buck Springs 20197	Same as Alt 4.	Same as Alt 4.	Reroute road away from Buck Springs.	Same as Alt 3.	Road open on previous travel plan.	Same as Alt 3

4.4 Effects on Soils

4.4.1 Introduction

The Ogden RD is proposing to revise its current travel plan. Primary objectives of the revision, as related to the soil resource, consist of:

1. Dealing with existing non-system/user developed trails and roads.
2. Responding to situations of existing system roads and trails where watershed related resource damage is occurring from the use of these facilities.
3. Reconfiguration of the existing network of system trails and roads, through some combination of closure/ reconstruction/ or relocation so that they better respond to present and future recreation uses.

4.4.2 Issues Addressed and Measurement Indicator

Public scoping followed by Forest Service interdisciplinary team review identified the following issue to be addressed in this impact analysis:

- Roads and motorized trails may impact soil resources.

Measurement indicator used to compare alternatives:

Total Soil Resource Commitment (TSRC)

4.4.3 Effects Analysis Methods and Assumptions

Baseline conditions were determined through review of literature and field observations. To compare the environmental effects by alternative it was necessary to make the following assumptions.

- All unauthorized road or motorized trails, except for those specifically identified by a specific alternative for incorporation within the Travel Plan as newly designated route, will continue to be closed and rehabilitated to restore soil productivity. Unauthorized routes will be considered closed for the analysis of long term effects on the soil resource.

- Authorized trails and roads will be maintained to Forest Service standards.

- Law enforcement and trail patrols are a District priority.

- Roads were assumed to be an average of 12 feet in width. Motorized trails were assumed to be an average of 5 feet in width, for disturbance calculations.

- When calculating Total Soil Resource Commitment (TSRC), all roads and motorized trails (including private, state, and county) were included. This was done because these motorized routes often connect to National Forest System lands and the effects are similar, regardless of land ownership.

4.4.4 Direct and Indirect Effects

Any particular road or trail will have the effect of displacing, rutting, and/or compacting the native topsoil to the point where it no longer will support native vegetation. This effect will be more severe on roads than on trails, and will also be of greater spatial extent for similar lengths of roads versus trails. This bare soil surface will be subject to increased amounts of erosion that could result in damage to the trail surface, requiring extensive maintenance. The indirect effect of soil

displacement (erosion) and rutting on road or trail surface damage and maintenance needs can be mitigated by implementation of guidance found in sections 3.12 and 3.16 of the Forest Service Trails Management Handbook, FSH 2309.18 (USDA Forest Service 1991). There is no practical way to mitigate the indirect effect of long term loss of native vegetation for the designated system of motorized roads and trails on a ranger district. On unauthorized non-system roads and trails, this effect can be reversed only by reducing or eliminating motorized use. Closure of these non-system roads and trails by proclamation within a revised Travel Plan does not, by itself, assure that the effect will be reversed. Realistically, some level of unauthorized use of these roads and trails will continue to occur until an effective physical closure has taken place.

The degree to which these effects on the soil resource could be reversed is based upon the potential for restoration of the road/trail surface to a condition that will support native vegetation. This potential varies widely according to soil site relationships, and is subject to considerable temporal variation depending upon the effort put into closing and restoring a particular road or trail.

In general, the more effort taken in closing a road or trail, reducing existing compaction, and replacing lost fertility, the quicker will be the restoration of soil protecting native vegetation. For example, a gate closure is likely to be much more effective in preventing follow up damage to restoration efforts from illegal motorized use than rock barriers or signage. The same will be true for importing topsoil or use of fertilizer in the replacement of lost topsoil/fertility. Similarly, scarification or ripping of compacted road surfaces will allow for quicker restoration than waiting for natural attenuation by climatic forces.

4.4.4.1 Effects Common to all Alternatives

Soil quality standards (SQS) for the Intermountain Region consider the system roads and trails that occur on a Ranger District to be part of the travel infrastructure for that district, and as such result in an acceptable amount of disturbance to the soil resource (USDA Forest Service 2003 Soil Management Handbook). Guideline G4 in the revised Forest Plan for the Wasatch Cache National Forest recommends that detrimental disturbance from management activities be limited within an activity area, but specifically excludes the designated network of trails and roads from that limit. Roads and trails generally result in a Total Soil Resource Commitment (TSRC). The revised Forest Plan for the Wasatch Cache National Forest does not give any guidance or limits on the allowable amount of TSRC for given management units.

This analysis of effects assumes that all unauthorized routes, except for those specifically identified by a specific alternative for incorporation within the Travel Plan as a new classified route, will continue to be closed and rehabbed. Until this occurs, unauthorized routes will continue to be a detrimental disturbance to the ability of the soil to support native vegetation communities. This effect will be reduced over the long term as unauthorized routes are closed and rehabilitated.

The proposed gravel sources and improvements to the Concentrated Use areas will contribute less than one acre to the Total Soil Resource Commitment in all action alternatives.

4.4.4.2 Effects by Alternative

Alternative 1

Under Alternative 1, there would be about 187 miles of open road and about 39 miles of open motorized trail. This alternative would have a TSRC of approximately 295 acres. This is a reduction of approximately 7% from current conditions. Over time, about 55 miles of unauthorized routes (approx. 33 acres) will be closed by this alternative.

Alternative 2

Under Alternative 2, there will be 206 miles of open road and 61 miles of open motorized trail. This alternative would have a TSRC of 336. This is an increase of approximately 7% from current conditions. Over time, 55 miles of unauthorized routes (approx. 33 acres) would be closed by this alternative.

Alternative 3

Under Alternative 3, there would be about 202 miles of open road and about 35 miles of open motorized trail. This alternative would have a TSRC of approximately 315 acres. This is the same amount as is found with current conditions. Over time, about 56 miles of unauthorized routes (approx. 34 acres) would be closed by this alternative.

Alternative 3a

Under Alternative 3a, there would be about 208 miles of open road and about 49 miles of open motorized trail. This alternative would have a TSRC of approximately 331 acres. This is an increase of approximately 5% from current conditions. Over time about 55 miles of unauthorized routes (approx. 33 acres) would be closed by this alternative.

Alternative 4

Under Alternative 4, there are about 198 miles of open road and about 46 miles of open motorized trail. This alternative has a TSRC of approximately 315 acres.

Alternative 5

Under Alternative 5, there would be about 202 miles of open road and about 58 miles of open motorized trail. This alternative would have a TSRC of approximately 329 acres. This is an increase of approximately 6% from current conditions. Over time, about 54 miles of unauthorized routes (approx. 33 acres) would be closed by this alternative.

Table 4.4.2 displays the differences between alternatives in miles of open roads, open motorized trails, and TSRC for National Forest System lands on the Ogden Ranger District.

Table 4.4.2 Miles of Authorized Roads and Trails and TSRC on the Ogden RD

Alternative	1	2	3	3a	4	5
Miles of Open Road *	187	206	202	208	198	202
Miles of motorized Trail*	39	61	35	49	46	58
TSRC (acres)	295	336	315	331	315	329

*Does not include miles of unauthorized roads and trails which will be closed and rehabilitated. Table values for miles and acres are approximate, and have been rounded to the nearest whole number.

4.4.4.3 Unavoidable Adverse Effects

On classified system roads and trails, the adverse soil effects from erosion and rutting will be avoided by implementing best management practices that provide proper water drainage and control wet season use. The adverse effects of soil compaction associated with the use of classified system roads and trails cannot be avoided. With the continuing closure and rehabilitation of illegal routes, adverse effects of soil compaction and erosion on these routes will be avoided.

4.4.4.4 Short-term Uses vs. Long-term Productivity

The effects on long term soil productivity associated with committing the soil resource to road or trail use can be reversed by road or trail decommissioning and rehabilitation work.

4.4.4.5 Irreversible and Irretrievable Commitments

Although commitment of soils to a classified system of roads and trails will result in unavoidable adverse soil compaction, these effects can be reversed by road or trail decommissioning and rehabilitation work. There will be no irreversible/irretrievable commitments of soils with implementation of any of action alternatives.

4.4.4.6 Mitigation

With implementation of best management practices (BMPs) described in Chapter 2, detrimental soil disturbances such as erosion and rutting will be mitigated on the system of classified roads and trails for the district. There is no practical way to mitigate detrimental soil compaction on roads and trails that are part of the classified system for the ranger district. Where existing non-system roads and trails are closed under the action alternatives, soil will be returned to productive status by the use of restoration practices that mitigate detrimental soil rutting, erosion, and compaction.

4.5 Effects on Vegetation

4.5.1 Introduction

Motorized travel is becoming more of an issue due to the abundance of motorized vehicles (ATVs, Motorcycles, 4X4 vehicles) and an increase in population. Ground compaction and the removal of vegetation due to authorized road building, or unauthorized user created roads, has the ability to impact the vegetation and plant communities. The following discussion addresses the direct and indirect effects for noxious weeds and rare plants. The effects on Management Indicator Communities are discussed for each alternative.

4.5.2 Issues Addressed and Measurement Indicator

Public scoping followed by Forest Service interdisciplinary team review identified the following issue to be addressed in this impact analysis:

- Rare plants in the Willard Peak area may be impacted by existing motorized use and proposals for additional motorized trails. Measurement indicator would be the miles of new construction and substantial improvement of roads or trails added to or subtracted from rare plant habitat.

- Building new motorized trails provides additional vectors by which noxious weeds can spread into previously unoccupied areas. Measurement indicator would be the miles of road and trail added to existing conditions. This would indicate whether or not the roads or trails will continue to be susceptible to weed infestations or not.

A narrative description of differences between alternatives is provided.

4.5.3 Effects Analysis Methods and Assumptions

Baseline conditions were determined through review of literature and field observations. To compare the environmental effects by alternative it was necessary to make the following assumptions.

- All unauthorized road or motorized trails, except for those specifically identified by a specific alternative for incorporation within the Travel Plan as new designated route, will continue to be closed and rehabilitated.

- Authorized trails and roads will be maintained to Forest Service standards.

- Law enforcement and trail patrols are a District priority.

4.5.4 Direct and Indirect Effects

The direct effects of motorized travel include the physical damage to plants along new roads/trails, as well as displacement and compaction of soils. In addition, motorized vehicles and their occupants can transport noxious weed seeds and establish new populations.

4.5.4.1 Effects Common to all Alternatives

Rare Plants – Where new construction is proposed the Forest Botanist will assist in locations of the trails to avoid any impacts to rare plant species. If a route cannot be identified that will avoid rare plants, then the trail will not be constructed. In general plants growing in crevices in rock outcrops or in rock scree are protected from authorized OHV use by virtue of their location. These plants may be exposed to impacts from occasional foot traffic and mountain goats. The location of the proposed gravel pits and Concentrated use areas will not likely have effects to rare plant populations.

Noxious Weeds – Roads and trails are vectors for transport of noxious weed seeds in any alternative. Disturbed areas and areas where unauthorized routes are intended for closure are susceptible to noxious weed infestation. Appropriate mitigation is described for all action alternatives, given current knowledge and direction. An environmental analysis at the forest level is underway, to improve noxious weed management on the Forest, as this has been identified as a priority for management. The effects from noxious weeds at the location of the proposed gravel pits and Concentrated use areas will have mitigation.

4.5.4.2 Effects by Alternative

Rare Plants

Table 4.5.1 Miles of new construction and substantial improvement of trails in rare plant habitat. Substantial improvement is considered to be roads or trails that would require considerable improvement to meet Forest Service standards.

Habitat	Alt 1	Alt 2	Alt 3	Alt3a	Alt 4	Alt 5
Shrubland	2.25	2.97	1.3	1.72	0	1.72
(Sub)Alpine, Rock crevice, Scree	0	0.1	0	0.1	0	0.1
Mountain Forest (Conifer: Mixed Conifer)	11.43	12.51	3.96	5.05	0	7.25
Riparian	0	0	0	0	0	0
Total	**13.68**	**15.48**	**5.26**	**6.77**	**0**	**9.07**

* Conifer Forest consists of mixed conifer, lodgepole pine, limber pine, spruce/fir, Douglas-fir, and conifer/aspen vegetation types; Grass/Shrubland consists of sagebrush/grass and tall shrub vegetation types; and Aspen Forest consists of aspen/conifer and aspen vegetation types. Other vegetation types consist of less than 1,600 acres per type within the Ogden Ranger District, except for the barren/rock type and water which consist of 3,939 and 3,081 acres respectively. Other types include tall forb, mahogany, maple, agricultural, willow, wet meadow, and bottomland hardwood.

Alternative 4 would have the least potential effect on rare plants, because no new construction would occur. Alternatives 3, 3a, and 5 respectively, would have the least potential impacts to rare plants, while Alternatives 2 and 1 respectively would have the greatest potential impacts to rare plants that occur within all habitats.

Noxious Weeds

Primarily the roads that are being proposed to be managed as Open already exist on the ground. These roads have been analyzed and where no resource conflicts have been identified, they have been included in the various action alternatives. Where resource conflicts were identifies, they will be managed as closed. These roads, while still potential pathways for weed spread will need to be monitored, are not considered to be new vectors. There will be no new non-motorized trail created through these efforts. Non-motorized trails, while still vectors for noxious weed transport, are likely to do so at a slower rate than motorized routes. The proposed motorized trails consist of a combination of trails that are either non-motorized trails that will be converted to motorized or new construction.

Table 4.5.2. Differences between open, motorized, and non-motorized routes compared to current condition (Alternative 4). Differences illustrate changes in lengths of routes (noxious weed vectors) susceptible to noxious weed infestation by alternative.

Differences in miles between Alternatives						
Route Status	**Alt1**	**Alt 2**	**Alt 3**	**Alt 3a**	**Alt 4**	**Alt 5**
Open Road	-11	+18	+4	+10	0	+4
Motorized Trail	-7	+15	-11	+3	0	+12
Non-Motorized Trails	+31	-3	+18	+6	0	+3
Totals	**+13**	**+30**	**+11**	**+19**	**0**	**+19**

Alternative 2 would have the greatest potential threat of spread of weed infestations with 30 miles of open road and trail. Alternative 4 (current condition) would have the least potential threat of spread of weed infestations. This is due to the lack of new construction, it is important to note that the majority of trails proposed already exist on the ground. Alternatives 3, 1, 3a and 5(in that order) would have the next greatest threat of spread of noxious weeds infestations.

Currently the Wasatch-Cache National Forest is building an integrated Noxious Weed Management Program. Efforts include creation and implementation of a forest wide weed strategy, which includes: increased training in weed identification and mapping for field going personnel, protocols for early detection and eradication, participation in Cooperative Weed Management Areas (CWMA), prioritization of treatment of infestations, and working on an Environmental Impact statement that would allow the Ogden Ranger District to aggressively treat known and new infestations. (Gelbard, J.L. and Jayne Belnap. 2003).

4.5.4.3 Unavoidable Adverse Effects

With the implementation of best management practices and the continuing closure of illegal routes, no unavoidable adverse effects to vegetation are expected.

4.5.4.4 Short-term Uses vs. Long-term Productivity

With the implementation of Forest Plan standards and guidelines, no long-term effects to vegetation are expected.

4.5.4.5 Irreversible and Irretrievable Commitments

There will be no irreversible/irretrievable commitments to vegetative resources with implementation of the proposed action.

4.5.4.6 Mitigation

- All roads and trails on the Ogden RD will be monitored for new weed infestations. Roads and trails that are scheduled to be closed should be surveyed for new weed infestations prior to closure. Implementation of road closures should follow best management practices (BMPs) and the current Wasatch Cache National Forest Noxious Weed Strategy, to include ripping and seeding with native species. An on-going Forest-wide EIS for noxious weed treatment will provide mitigation for all noxious weed treatment methods.

- In areas where new motorized trails, gravel sources, and concentrated use areas would be constructed, appropriate survey would be conducted and mitigation preformed to protect rare plants prior to any new ground disturbing construction.

4.6 Effects on Wildlife

4.6.1 Introduction, Issues Addressed and Measurement Indicators

This section describes the effects of roads on wildlife species that will result under the different alternatives described in Chapter 2. There are numerous species that occur on the Ogden RD (USDA Forest Service 2003). The species selected for this analysis are management indicator species designated by the Forest Plan, sensitive species designated by the Regional Forester, species which are listed (threatened, endangered, proposed, and candidates) under the Endangered Species Act, neotropical migratory birds which have been identified as priority species within the Utah Partners in Flight Avian Conservation Strategy and/or those identified by US Fish and Wildlife Service as birds of conservation concern, species at risk which have been identified by the Wasatch-Cache NF (Species at Risk List revised February 23, 2004), and those species of public interest (e.g. elk) and those identified by the public during scoping.

Public scoping followed by Forest Service interdisciplinary team review identified the following issues to be addressed in this analysis:

- Motorized activities and routes may negatively affect wildlife habitat for selected species.

Measurement indicators used to compare alternatives related to wildlife habitat are:

Acres of disturbed land within select species quality habitat
Road density, including motorized trail density
Changes to patch size for select species habitat

- Motorized activities and routes disrupt the connectivity of the regional wildlife corridor described in the Forest Plan.

Measurement indicators used to compare alternatives related to the regional wildlife (lynx, wolverine, grey wolf) corridor are:

Miles of roads and motorized trails within Curtis Creek, Monte Cristo and Causey areas.
Road density, including motorized trail density in the same areas.

4.6.2 Effects Analysis Assumptions

To compare the environmental effects by alternative it was necessary to make these key assumptions:

- Any unauthorized road or motorized trail not identified within the specific alternative or within the travel plan will be closed, thus unauthorized routes will be considered as closed for the effects analysis.
- Unauthorized routes will be closed in a timely manner to reduce impacts to wildlife. Priority will be given to closing these routes prior to the construction of new routes.
- Roads designated for administrative use only will have very limited motorized use, thus for this analysis there will be little to no effect on wildlife species.
- Currently the Ogden RD does not have a firewood harvest program, thus for this analysis the effects to species which are dependent on snags and down logs will be minimal.
- Law enforcement, trail patrols, and decommissioning of unauthorized routes will be district priorities.
- Forest roads and motorized trails can cause direct mortality (e.g. collisions) to wildlife species. This effect is not likely to substantially reduce any wildlife populations, thus this effect will not be significantly different between alternatives.
- New construction will have the added effect of the removal of vegetation in the understory and sometimes the overstory canopy. The conversion of existing illegal trails to new trails in most instances will not cause additional effects to the vegetation but will increase use of these trails and the effects of disturbance on wildlife species.
- Some species of wildlife can become habituated to some level of disturbance activities.
- The effects to wildlife for the proposed gravel pits and Concentrated Use area improvements was considered in all action alternatives.

4.6.3 Direct and Indirect Effects

The following effects analysis for wildlife describes the direct, indirect, and cumulative effects within USFS managed lands of roads and motorized trails on a variety of wildlife species. The cumulative effects section discusses other activities and those which occur off forest which in addition to the proposed action may cumulatively affect wildlife.

Throughout the wildlife analysis, most tables display the totals of open roads and motorized trails (i.e. includes existing routes, those routes to be closed, and those for new construction). Chapter 2 provides the details of which roads and trails are being proposed as new construction, which are proposed to be closed, which currently exist under the current travel plan (Alternative 4) and those that currently exist but have been user created by illegal activity. Also, refer to Chapter 2, Wildlife.

Some of the species described below occur across the Ranger District, while others occur only within specific habitat types or are in greater abundance within a specific area. As described in Chapter 2, the Ogden RD has been grouped into specific areas (e.g. Public Grove, Willard, Wheatgrass, etc.). These areas will be referred to on occasion within the wildlife effects section. For example, the discussion of effects related to mountain goats will be emphasized within the Willard analysis area and the discussion of effects related to lynx will primarily be emphasized within the Curtis Creek, Monte Cristo, and Causey analysis areas.

A comprehensive document that provides information on the effects of roads and motorized activity and provides guidance in dealing with motorized issues is “The Effects of Recreation on Rocky Mountain Wildlife” (Joslin, et al 199). Roads and motorized trails and the associated human use can cause disturbance (noise and activity) to wildlife species, reduce habitat effectiveness, reduce security habitat, cause habitat fragmentation, cause direct mortality, change or remove vegetation used by wildlife for forage or cover, increase access for both legal and illegal shooting/trapping, and aid in the importation of weeds. Noise can affect the health, survivorship, reproduction, abundance, distribution of certain wildlife species. The primary focus of this analysis will be associated with the effects of disturbance and the effects within specific habitat types of roads and motorized trails on wildlife.

4.6.3.1 Effects on General Wildlife

The discussions below include general wildlife species including game species, small mammals, and the gray wolf.

Mule deer
Factors which have been identified as key factors in the decline of mule deer on the Cache harvest unit (these are likely to be similar on the other harvest units) are as follows: decreased carrying capacity on winter ranges, increased human population impacts, changes in livestock grazing practices on winter range, increased effects of predators, competition from elk on winter range, and changes in public values regarding management tools (UDWR 1999). Wisdom, et al (2004) found that recreational activities have little difference in the measurable response during ATV, mountain biking, horse riding, and hiking activities. They determined that 6% to 11% of deer responded in a flight response within 100 meters of ATV, mountain bike, horse, or hiking activity. They note that deer may respond differently to disturbance than elk, by seeking dense vegetative cover rather than actually running from the disturbance activity. If mule deer spend more time in dense cover in reaction to a disturbance activity, it could reduce foraging activity, thus affecting the ability of the animal to put on fat reserves needed for winter survival.

The potential effects of forest roads and motorized trails to the deer are examined by the miles of road or motorized trail within summer range, critical winter range, and high value winter range. The effect of roads and motorized trails within key winter range habitat is limited, since weather conditions usually preclude use by motorized vehicles. Roads and trails located within winter range can have an effect in areas open to snowmobiling.

Deer populations within the area are mostly limited by the availability of suitable winter range. None of the alternatives have roads or motorized trails located within critical deer summer range habitat.

Table 4.6.1 Miles of motorized trail* and open roads within critical and high value winter deer habitat on the Ogden RD (only USFS managed lands) by alternative.

Deer Winter Range Habitat Type	Alternative 1 Miles within Deer Habitat	Alternative 2 Miles within Deer Habitat	Alternative 3 Miles within Deer Habitat	Alternative 3A Miles within Deer Habitat	Alternative 4 Miles within Deer Habitat	Alternative 5 Miles within Deer Habitat
Critical	11.03	11.03	11.03	11.03	11.48	11.03
High Value	12.16	16.28	10.16	12.15	10.69	10.91**

* Motorized trail only includes ATV and motorcycles (not snowmobiles)
** In Alternative 5, 3.96 miles of this total would be seasonally closed (November 15 through June 15) in the Public Grove analysis area

Table 4.6.2 Miles of motorized trail and open roads within high value summer deer habitat on the Ogden RD (only USFS managed lands) by alternative and area.

Analysis Area*	Alternative 1 Miles within Deer Habitat	Alternative 2 Miles within Deer Habitat	Alternative 3 Miles within Deer Habitat	Alternative 3A Miles within Deer Habitat	Alternative 4 Miles within Deer Habitat	Alternative 5 Miles within Deer Habitat
CURTIS CREEK	65.31	79.41	64.86	67.42	65.23	66.73
MIDDLE FORK	0.71	0.71	0.71	0.71	0.71	.071
MONTE	44.04	47.16	41.11	43.38	36.64	44.29
OGDEN FRONT	4.45	20.04	17.59	20.04	20.04	20.04
PUBLIC GROVE	2.30	4.66	2.30	3.91	1.42	3.91
WILLARD	13.27	25.05	13.27	23.66	22.57	25.43
TOTAL	**130.08**	**177.03**	**139.84**	**159.12**	**146.61**	**161.11**

* Roads within the, Pineview, South Fork, and Wheatgrass areas do not occur within *high value summer deer* habitat for any of the alternatives.

Alternative 1

This alternative will have approximately 130 miles of road and motorized trail within high value summer habitat for deer of which most of the change is related to the closure of the motorcycle trail within the Ogden Front and Willard analysis areas. This alternative is comparable to Alternative 3A relative to the total miles within deer winter range (it is moderate compared to all alternatives). This alternative has the least effect compared to all alternatives and is comparable to Alternative 3.

Alternative 2

This alternative will have approximately 177 miles of road and motorized trail within within high value summer habitat for deer with the largest increase within the Monte, Curtis, and Willard analysis areas. This alternative will have the highest miles of road and motorized trail within deer winter range habitat and the largest effect on deer and their habitat, relative to other alternatives.

Alternative 3

This alternative will have approximately 140 miles of road and motorized trail within high value summer habitat for deer, much of which is spread out across the district. This alternative will have the least miles of road and motorized trail within deer winter range habitat. This alternative has the least effect compared to all alternatives and is comparable to Alternative 1.

Alternative 3A

This alternative will have approximately 159 miles of road and motorized trail within high value summer habitat for deer (moderate, as compared to all alternatives). This alternative is comparable to Alternative 1 with respect to the total miles within deer winter range (it is moderate compared to all alternatives). This alternative will have moderate effects on deer and their habitat as compared to all alternatives.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails. This alternative has a total of 147 miles of road and motorized trail within high value summer habitat for deer (moderate, as compared to all alternatives). This alternative is comparable to Alternative 3 in that it will have the least miles of road and motorized trail within deer winter range habitat. This alternative will have moderate effect on deer and their habitat as compared to all alternatives.

Alternative 5

This alternative would have a total of 161miles of road and motorized trail within high value summer habitat for deer (moderate to high as compared to all alternatives). This alternative would have less effect on high value deer winter range compared to other alternatives since 3.96 miles of the total would be seasonally closed between November 15 and June 15 in the Public Grove analysis area. This alternative is comparable to alternatives 1 and 3, with less effect than other alternatives, especially regarding winter range.

Elk

Numerous studies demonstrate that elk avoid areas near open roads and this effect can cause a reduction in the carrying capacity of the elk population in some areas (Rowland, et al. 2004). They note that entire ranges can be abandoned if disturbance from traffic on roads and the associated habitat loss and fragmentation exceed some threshold level. Wisdom, et al. (2004) found that recreational activities have a substantial effect on elk behavior and that the reactions of elk were more pronounced during ATV and mountain biking activities, than those of horse-riding and hiking. They determined that 62% of elk responded (flight response) within 100 meters of ATV activity; 43% of elk responded within 500 meters; and 25% of elk responded within 1000 meters. Increases in movements and the displacement from foraging habitat can affect the elk's energy budget and reserves. If an elk's body fat is below 9% as animals enter the winter period, their probability of survival is extremely low (Cook, et al. 2004).

The potential effects of forest roads and motorized trails on elk are examined in two ways: 1) the miles of road or motorized trail within summer range, critical winter range, and high value winter range; and, 2) the effects of habitat fragmentation on patch size (as related to security cover for elk) which is displayed by buffering open roads and motorized trails. Key elk

summering areas within the Ogden District are located within the Curtis and Monte analysis areas. These areas correspond with the Morgan-South Rich harvest unit with the highest elk numbers and the highest population objective. The effect of roads and motorized trails in key winter range habitat is limited, since weather conditions usually preclude use by motorized vehicles. Roads and trails located within winter range can have an affect in areas open to snowmobile activities.

Table 4.6.3 and Table 4.6.4 display the effects of each of the alternatives on winter elk range and summer range habitat, respectively. Table 4.6.5 displays the changes by alternative on patch size for elk. Map 4.6.1 and Map 4.6.2 display patch size and the effects of fragmentation after buffering open roads and motorized trails within elk habitat for the Alternative 4 (the existing condition) and Alternative 5. Maps for the other alternatives are similar and are available in the project record.

The analysis of patch size for elk consists of buffering USFS open roads and motorized trails and other primary routes (e.g. county roads). Roads designated for "administrative use only" are not included in the analysis. As described above under the assumptions, these roads have only limited motorized use, and therefore, for this analysis, will have little to no effect on elk. Use of routes located adjacent to USFS (e.g. private lands) can be difficult to assess or determine their status. Routes which may be visible on aerial photos, in fact may be closed, gated, receive very limited use by the public, or be used on an irregular basis by a private land owner. On the other hand, some of these routes likely receive moderate to heavy use by ATVs and other motorized vehicles, or may in the future. Routes which receive this type of use would influence the size of the patch on adjacent USFS lands. Thus, some patch sizes displayed would be reduced in the number of total acres by activities occurring off forest. Considering this, the influence of moderate to heavy use by ATVs and other motorized vehicles would likely be consistent between all alternatives (i.e. patch size would be reduced the same amount between alternatives). Table 4.6.5 displays the differences between alternatives, knowing that total patch size could be influenced by off-forest use, especially for patches which have a large amount of adjacent lands. Additional information regarding the analysis of patch size is available in the project record.

Elk populations are likely limited by the availability of suitable winter range. Populations are largely managed by hunter harvest at or near population management objectives.

Table 4.6.3 Miles of motorized trail* and open roads within critical and high value winter elk habitat on the Ogden RD (only USFS managed lands) by alternative.

Elk Winter Range Habitat Type	Alternative 1 Miles within Elk Habitat	Alternative 2 Miles within Elk Habitat	Alternative 3 Miles within Elk Habitat	Alternative 3A Miles within Elk Habitat	Alternative 4 Miles within Elk Habitat	Alternative 5 Miles within Elk Habitat
Critical	15.56	17.96	13.04	15.43	11.80	16.34**
High Value	12.68	15.45	13.70	15.08	13.11	13.35***

* Motorized trail only includes ATV and motorcycles (not snowmobiles)
** In Alternative 5, 1.98 miles of this total would be seasonally closed (November 15 through June 15) in the Public Grove analysis area
*** In Alternative 5, 2.91 miles of this total would be seasonally closed (November 15 through June 15) in the Public Grove and Curtis analysis areas

Table 4.6.4 Miles of motorized trail and open roads within high value summer elk habitat on the Ogden RD (only USFS managed lands) by alternative and area.

Analysis Area*	Alternative 1 Miles within Elk Habitat	Alternative 2 Miles within Elk Habitat	Alternative 3 Miles within Elk Habitat	Alternative 3A Miles within Elk Habitat	Alternative 4 Miles within Elk Habitat	Alternative 5 Miles within Elk Habitat
CURTIS CREEK	65.25	79.31	64.76	66.38	65.22	65.71
MONTE	44.04	47.16	41.11	43.38	36.64	44.29
PUBLIC GROVE	1.34	3.63	1.34	3.80	1.34	3.8
WILLARD	9.75	17.08	9.75	15.69	18.14	15.69
TOTAL	**120.38**	**147.18**	**116.96**	**129.25**	**121.34**	**129.49**

* Roads within the Middle Fork, Ogden Front, Pineview, South Fork, and Wheatgrass areas do not occur within *high value summer elk habitat* for any of the alternatives.

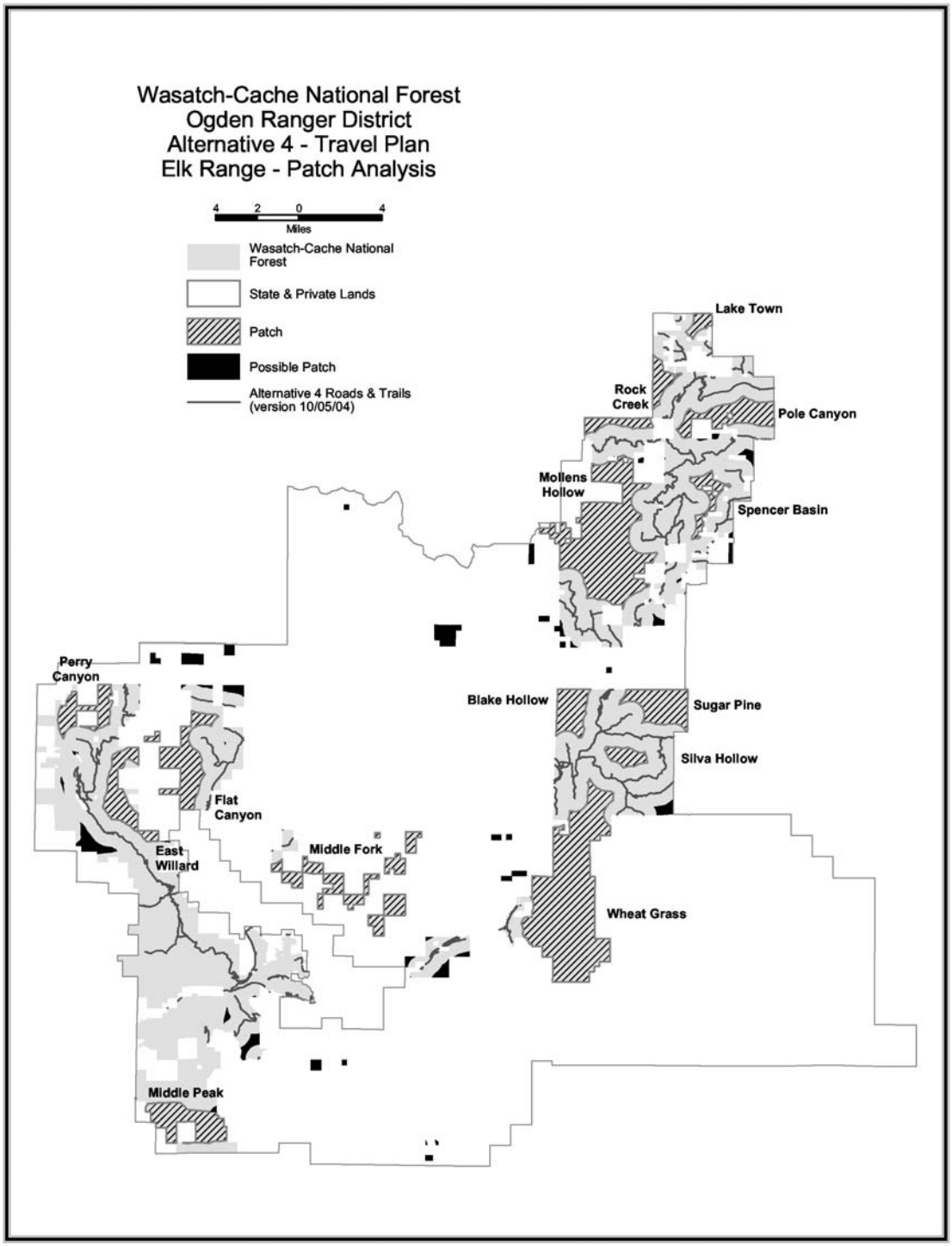


Figure 4.6.1 Patch Size and the Effects of Fragmentation within Elk Habitat for the Existing Condition (Alternative 4)

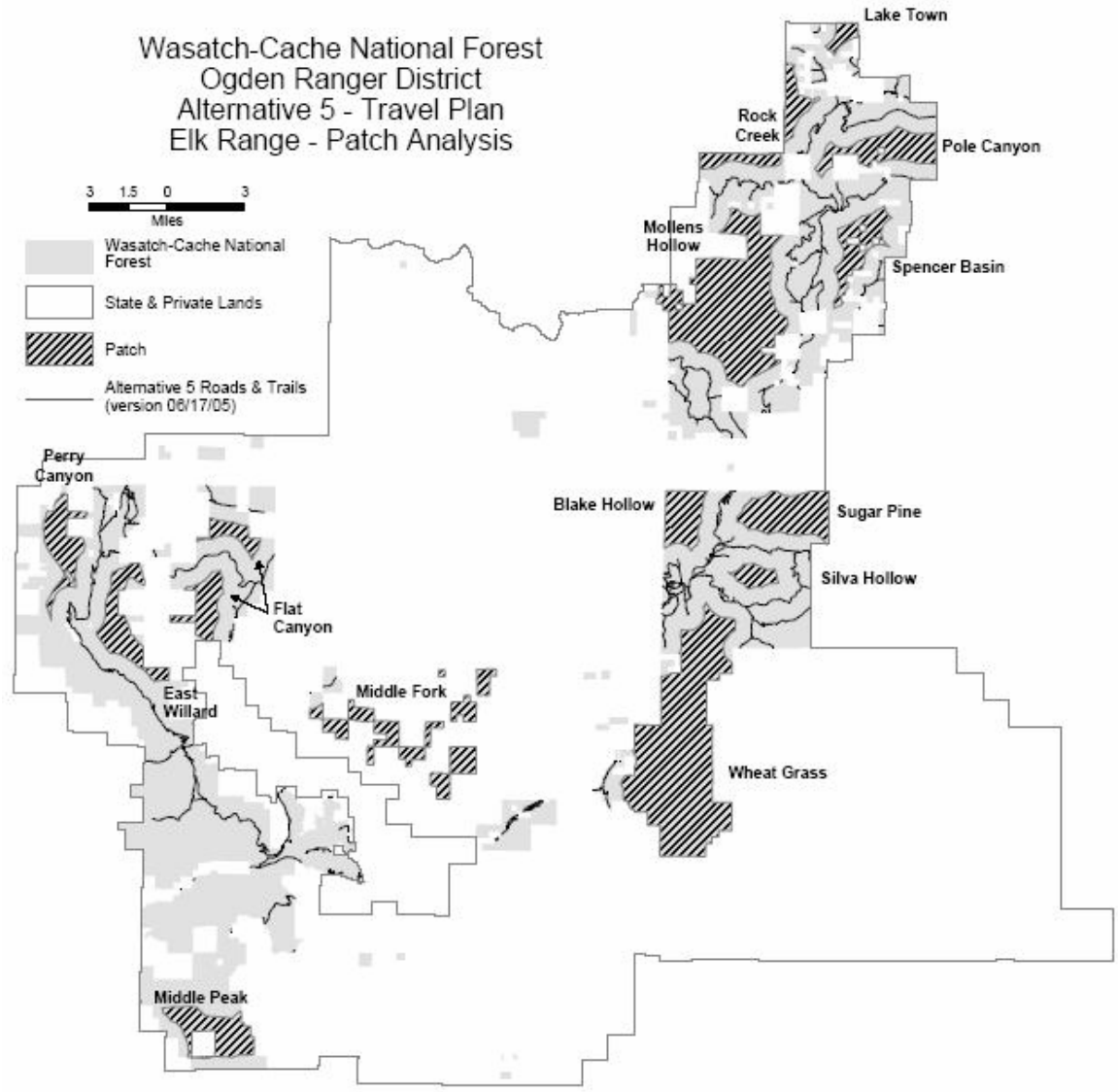


Figure 4.6.2 Patch Size and the Effects of Fragmentation within Elk Habitat for Alternative 5

Table 4.6.5 Changes* in Elk Habitat Patch Size by Alternative**

Analysis Area ***Patch Name***	**Alt.1**	**Alt.2**	**Alt.3**	**Alt.3A**	**Alt.4**	**Alt.5**
CURTIS CREEK						
Mollens Hollow	+ **13,426**	- 9,677	s+ 11,262	s- 11,008	11,124	s- 11,008
Pole Canyon	s- 2,545	- 1,536	s- 2,545	s- 2,545	**2,621**	s- 2,545
Rock Creek	s+ **1,941**	s+ **1,941**	s+ **1,941**	s+ **1,941**	1,810	s+ **1,941**
Spencer Basin	s+ 791	s+ 791	+ 1,452	+ 1,452	978	+ **1,889**
Lake Town	nc **509**	nc **509**	nc **509**	E 128	nc **509**	nc **509**
MONTE						
Sugar Pine	+ **3,264**	+ 3,181	+ **3,264**	+ 3,181	2,491	+ 3,181
Silvia Hollow	e 82	e 83	s- 841	s- 727	**881**	s- 727
WHEATGRASS						
*Wheatgrass****	s+ **14,404**	s+ **14,404**	s+ **14,404**	s+ **14,404**	14,129	s+ **14,404**
PUBLIC GROVE						
Flat Canyon	s- 3,147	-/e 1,622(south) 375 (north)	nc **3,221**	-/e 1,532(south) 450 (north)	**3,222**	- 1,531(south) 815 (north)
WILLARD						
Perry Canyon	+ **2,725**	- 1,665	+ **2,725**	+ 2,071	1,635	+ 2,065
East Willard	+ **5,049**	s- 2,408	+ **5,049**	s- 2,408	2,418	s- 2,408

Note: Blake Hollow (1,890 acres), Middle Fork (4,072 acres), and Middle Peak (2,354 acres) patches do not change by alternative.

* Effects symbols: (s) minor or slight increase or decrease in size, (Bold) largest size of patch, (-) decrease in patch size, (+) increase in patch size, (nc) no change in size or extremely small change, (e) changes have eliminated the occurrence of a patch.
** Associated values are in comparison to Alternative 4 (existing conditions under the current travel plan).
*** The Wheatgrass patch occurs within both the Wheatgrass and Monte Analysis Areas.

Alternative 1

This alternative will have approximately 120 miles of road and motorized trail within high value summer habitat for elk, which is comparable to alternatives 3 and 4 and lower than alternatives 2, 3a, and 5. This alternative is comparable to Alternative 3 in the total miles within elk winter range (moderate as compared to all other alternatives). This alternative would have the least effect on elk habitat and is comparable to alternatives 3 and 4. This alternative is comparable to Alternative 3 related to patch size. It has the greatest positive effect on the size of the Mollens Hollow patch, but will eliminate the Silvia Hollow Patch.

Alternative 2

This alternative will have approximately 147 miles of road and motorized trail within high value summer habitat for elk (the largest amount as compared to other alternatives) with the largest increase within the Monte and Curtis analysis areas. It will also have the most miles of road and motorized trail within elk winter range habitat. This alternative will have the largest negative effect on patch size for elk, eliminating the Silvia Hollow patch and fragmenting the Flat Canyon patch. This alternative will have the greatest effect on elk and their habitat as compared to the other alternatives.

Alternative 3

This alternative will have approximately 117 miles of road and motorized trail within high value summer habitat for elk (the lowest amount as compared to other alternatives). Much of the change is concentrated within areas of existing disturbance and concentrated human use. This alternative avoids new trails and construction in areas which are more isolated. This alternative is comparable to Alternative 1 in the total miles within elk winter range (a moderate level, as compared to other alternatives). This alternative is comparable to alternatives 1 and 4 in that they would all have the least effect on elk and elk habitat as compared to the other alternatives. This alternative is the best in maintaining or increasing patch size for elk. In most instances, this alternative has the largest patch sizes.

Alternative 3a

This alternative will have approximately 129 miles of road and motorized trail within high value summer habitat for elk (moderate, as compared to other alternatives). It is also moderate in comparison to other alternatives in the total miles within elk winter range. This alternative will have a moderate effect on elk and elk habitat as compared to other alternatives. It will have a moderate effect on patch size for elk compared to other alternatives, eliminating the Lake Town patch and fragmenting the Flat Canyon patch.

Alternative 4

This alternative is the existing travel plan, thus, there will be no changes in the location or miles of roads or motorized trails. This alternative has approximately 121 miles of road and motorized trail within high value summer habitat for elk (moderate, as compared to all other alternatives). This alternative is comparable to alternatives 1 and 3, with the least effect on elk and elk habitat as compared to other alternatives.

Alternative 5

This alternative will have approximately 129 miles of road and motorized trail within high value summer habitat for elk (moderate, as compared to other alternatives). This alternative is high compared to other alternatives in the total miles of open road and motorized trail within elk winter range, although it is lower than Alternative 2. This alternative will implement seasonal closures which would reduce the effects on winter habitat. Approximately 2 miles of road within critical winter range would be seasonally closed (November 15 thru June 15) in the Public Grove analysis area and approximately 3 miles of road within high value winter range would be seasonally closed in the Public Grove and Curtis analysis areas. This alternative would have a moderate effect on elk and elk habitat as compared to other alternatives. Regarding effects to patch sizes, this alternative is comparable to Alternative 3A and would have moderate effects compared to other alternatives. This alternative would fragment the Flat Canyon patch.

Mountain Goats

Within Haynes (1992), Joslin states, “Motorized access in or near mountain goat habitat is probably the single biggest threat to goat herds throughout North America.” Disturbance studies involving mountain goats indicate that goats are less affected by predictable, continuous noises, but were disturbed by sudden, unpredictable stimuli and that nannies were more affected by disturbance activities during the kidding and post-kidding season (Penner 1988). Varley (1998) identified

numerous studies that found that sudden, loud noise from traffic, blasting, drills, and helicopters elicited extreme alarm responses from goats habituated to human presence. Varley also noted that "Goats approached on foot were mildly evasive, tolerant, or curious". McFetridge (1977) noted that the total area used by goats or the frequency of excursions from a core area of high security might be reduced by disturbance. Schenck and Suring (1993) reviewed mountain goat literature and found that significant declines of mountain goat populations occurred following modifications of habitat and disturbance from human activities. They also found that mountain goats will abandon suitable habitat following the initiation of human activities. They recommended that use of roads should be seasonally restricted within essential habitat areas to avoid disturbance. Activities within kidding areas should be restricted from May 1 through August 1 for southeast Alaska. They recommended locating facilities and concentrated human activities as far (one mile or more) from important wintering and kidding habitat as feasible. If the distances could not be achieved, they recommended mitigating possible adverse impacts by seasonally restricting or regulating human use and implementing other site specific mitigation measures.

If the goat population density remains constant (or increases) and there are no changes to regulate growth (such as increased hunter harvest) and/or if the distribution of goats does not expand or no actions are taken to improve the distribution, then likely the population will experience a decline in the near future. In other words, the goat population would exceed habitat capability to support the population.

Based on the scientific literature, reducing motorized recreational activities within goat habitat would likely improve goat distribution and lessen potential effects on vegetation within goat habitat. Also, reducing recreational impacts during the kidding period would likely improve survivorship of young.

Alternatives 1 and 3 would make the most changes to reduce the effect of motorized recreation on goat habitat, thus likely improving the overall distribution of goats in both northern and southern areas. Alternatives 2, 3A, and 5 would make minor changes to reduce the effect of motorized recreation on goat habitat, only in the northern portion. Alternative 4 would have the most negative effect on mountain goats and their habitat as compared to the other alternatives.

Alternative 1

The Willard ATV trail would be closed and obliterated (1.3 miles); the Grizzly Peak Road would be closed (1.5 miles) and converted to non-motorized trail; and the Skyline trail (10.56 miles of motorcycle trail within goat habitat) would be converted to non-motorized trail. Within the area of mountain goat habitat, this alternative would have 5.5 miles of open road in the northeastern portion of goat habitat. This 5.5 miles of road is located approximately mid-slope at the base of several cliff areas. No seasonal restrictions would be implemented on motorized use of the road. Effects of motorized activities on goat use within the area would be reduced from the existing condition. This would likely improve mountain goat use within the northern and southern habitat areas. Survivorship of kids would likely improve under this alternative. This alternative would have the least negative effect (similar to Alternative 3) on mountain goats and their habitat as compared to the other alternatives.

Alternative 2

The Willard ATV trail would be closed and converted to non-motorized trail (1.3 miles) and a portion of the Grizzly Peak Road would be closed (0.6 miles). Within the area of mountain goat habitat, this alternative would have 6.1 miles of open road and 10.56 miles of motorcycle trail. This 6.1 miles of road is located approximately mid-slope at the base of several cliff areas. No seasonal restrictions would be implemented on motorized use. Motorized activities within mountain goat habitat will likely affect goat use within the area and may restrict mountain goat use to those areas associated with Ben Lomond and Willard Peaks. Survivorship of kids may be negatively affected by this alternative. This alternative would have greater effects on mountain goats and their habitat than alternatives 1 and 3, but slightly less than Alternative 4.

Alternative 3

The only difference between Alternative 1 and this alternative is that under this alternative the Willard ATV trail (1.3 miles) would be converted to a non-motorized trail. Under Alternative 1, it would be obliterated. Similar to Alternative 1, effects of motorized activities on goat use within the area would be reduced from the existing condition. This would likely improve mountain goat use within the northern and southern habitat areas. Survivorship of kids would likely improve under this alternative. This alternative would have the least negative effect (similar to Alternative 1) on mountain goats and their habitat as compared to the other alternatives.

Alternative 3A

The Willard ATV trail would be converted to non-motorized trail (1.3 miles) and the Grizzly Peak Road would be closed (1.5 miles) and converted to non-motorized trail. Seasonal restrictions would be implemented on motorized use along the 10.56 miles of motorcycle trail to reduce effects on kidding areas (Skyline Trail from North Ogden Divide to Inspiration Point). Within the area of mountain goat habitat, this alternative would have 5.5 miles of open road and 10.56 miles of motorcycle trail. This 5.5 miles of road is located approximately mid-slope at the base of several cliff areas. The motorized trails within the area will not open until July 15th to protect goat kidding areas (See Wigal and Coggins 1982; Schenck and Suring 1993; Tongass National Forest Plan Standards and Guidelines 1997). No timing restrictions would be implemented on motorized use of the road. This alternative would make minor changes to reduce the effect of motorized recreation on goat habitat, only in the northern portion of habitat. Survivorship of kids would likely improve under this alternative.

Alternative 4

No changes would occur from existing conditions within mountain goat habitat. Currently, there are 7.31 miles of open road, 10.56 miles of motorcycle trail, and 1.54 miles of ATV trail, all of which have no restrictions on the seasonal timing of use. Motorized use and associated human activities may be concentrating goat use in the areas around Ben Lomond and Willard Peaks. This alternative would have the most effect on mountain goats and their habitat as compared to the other alternatives. Motorized activities within mountain goat habitat will likely continue to affect goat use within the area and may restrict mountain goat use to those areas currently occupied. Survivorship of kids may be negatively affected by this alternative.

Alternative 5

This alternative is the same as Alternative 3a, except, that under this alternative, in addition to seasonal restrictions on use of the motorcycle trail, seasonal timing restrictions would also be implemented on motorized use on a portion of the Willard Mountain road from Grizzly Peak to Inspiration Point. Similar to alternatives 2 and 3a, this alternative would make changes to reduce the effect of motorized recreation on goat habitat, only in the northern portion of habitat. Similar to alternatives 1 and 3a, survivorship of kids would likely improve under this alternative.

Moose

Moose can be rather tolerant of human activity. The alternatives with increased roads or motorized trails, especially in riparian areas with permanent flowing water or those within close proximity of springs and ponds could have a greater effect than those alternatives with roads or trails not in proximity to water (see the Fisheries and Watershed sections). There are only minor differences between the alternatives within areas utilized by moose such as riparian areas. The alternatives that create motorized trails within Silvia Hollow (Alternatives 1 and 2) and Box Elder Creek/Perry Reservoir (Alternatives 2, 3A and 5) will likely have the greatest effects. In areas where paved roads are present and vehicles can travel at highway speeds, for example Highway 39, moose can be susceptible to mortality by vehicle collisions. None of the alternatives are likely to increase the potential of vehicle/moose collisions.

Moose numbers on the Ogden RD are currently near carrying capacity and within Utah Division of Wildlife Resources (UDWR) management objectives (see Chapter 3, Wildlife). No substantial change in moose population numbers is expected with implementation of any of the alternatives.

Small Mammals

Information in the literature related to the effects of roads and motorized trails on small mammals is very limited (Hickman 1999). Roads and motorized trails can modify habitat, cause direct mortality, and disturbance may affect behavior and/or affect the use of adjacent areas, but considering the species small territory size and the vast abundance of habitat for each species, effects on small mammal habitat and their populations will be not be significant and will be minor for any of the alternatives.

Gray Wolf

Because only a dispersing animal (not a breeding pair or a pack) has been identified in Utah to date, there are no direct or indirect effects to the gray wolf from the proposed action or any of the alternatives. If wolves from the federal recovery areas (Wyoming, Idaho, and Montana) were to enter Utah, they will receive protection under the Endangered Species Act. However, the gray wolf is not on the threatened or endangered species list for Cache, Morgan, Weber, or Rich County. Currently the State of Utah is developing a plan for management of wolves within Utah.

The effects to the wolf will be related to the effects on their prey species such as deer and elk (see those respective sections) and the effects of increased road densities.

Studies have shown a strong negative relationship between higher road density and the presence of wolves (Claar, et al 1999). In the Midwest, wolves were not present where road densities exceeded 0.58 km/km 2 (0.93 mile/mile 2). In the Rocky Mountains, wolves occurred in areas with higher road densities, for example in the Ninemile area in Montana, where road densities exceed 2.5 km/km 2 (4.02 mile/mile 2) (Claar, et al 1999). Roads with low human activity can provide travel corridors for wolves.

Appendix B displays the miles of open road and motorized trail per square mile within sixth order watersheds within USFS managed lands (where USFS lands comprise 10% or greater of the watershed). Alternative 1 has seven watersheds; Alternative 2 has ten watersheds; Alternative 3 has eight watersheds; Alternative 3A has nine watersheds; Alternative 4 has seven watersheds; and Alternative 5 has nine watersheds with densities above 0.93 miles per square mile. Road density varies by alternative and watershed, but in most instances ranking alternatives by the fewest miles to most, are as follows: Alternatives 1, 4, 3, 3A, 5, and 2 (note: alternatives 1, 3, and 4 are very similar).

4.6.3.2 Effects on Management Indicator Species

Northern Goshawk

The northern goshawk is an Intermountain Region Sensitive Species (see Chapter 3, Wildlife). Potential effects to it are described here, since it is also a Wasatch-Cache National Forest Management Indicator Species (MIS).

Human disturbance to nesting goshawks has been a suspected cause of nest abandonment (Reynolds, et al 1992). Hamann, et al (1999) recommended the following: minimize human presence in active nest areas during the nesting season; maintain low road densities to minimize disturbance; and establish spatial buffers for nests at 400-500 meters (.25-.31 miles) (Jones 1979).

The effects are based on known goshawk nest territories, additional unknown territories likely exist but have yet to be found. The alternatives with fewer miles of road and motorized trail within the conifer vegetation type would likely have less affect to undiscovered goshawk nest territories.

Table 4.6.6 Distance to the Closest Open Road or Motorized Trail from the Nest and the Miles of Road or Motorized Trail within each PFA by Goshawk Territory for the Existing Condition.

Territory Name and Nest	EXISTING CONDITION ALTERNATIVE 4 Distance to the Closest Open Road and/or Motorized Trail from the Nest	Alternatives which change the Distance to the Closest Open Road and/or Motorized Trail from the Nest	EXISTING CONDITION ALTERNATIVE 4 Miles of Open Road or Motorized Trail within each PFA	Alternatives which change the Miles of Open Road or Motorized Trail within each PFA
OCB B	0.20 miles	no change	1.23 miles	Alt. 1 2,3,5 (+ 0.59 miles) Alt. 3A (+ 0.28 miles)
RF A	0.97 miles	no change	0 miles	no change
RW A	0.06 miles	no change	1.48 miles	no change
RW B	0.04 miles	no change	1.95 miles	no change
SNB A	0.33 miles	no change	0.54 miles	no change
SNB B	0.25 miles	no change	0.66 miles	no change
SNB C	0.16 miles	no change	0.92 miles	no change
SNB D**	0.16 miles	no change	2.28 miles	no change
SPB A	0.44 miles	Alt. 1, 2 (.03 miles) * Alt. 5 (.35 miles)	0.86 miles	Alt. 1, 2 (+ 2.92 miles) Alt. 5 (+ 1.28 miles)
SPB WC	0.14 miles	no change	1.88 miles	Alt. 1, 2, 5 (+ 0.7 miles)
WC	0.17 miles	no change	1.53 miles**	no change

* To meet standards and guidelines, the road would need to be closed during the active nest period or adjustments would need to be made to move the proposed trail outside of the nest area (i.e. relocating approximately 230 meters of trail).

** This nest is located on private property, but adjacent to the forest.

All open roads (USFS, state, county, and private roads) and motorized trails were used for the analysis of effects within goshawk territories. Roads designated for administrative use only will have very limited motorized use. Thus, for this analysis, there will be little to no effect on goshawks from these roads. All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of goshawk in all alternatives. All roads assessed for the SNB territory are private or under state or county jurisdiction. All nest locations known to have been active at some time since 1998 have been analyzed. Nest OCB A was not active since 1995 when the nest condition was poor and fell out of the tree. Nest PC A associated with the RF territory was last active in 1994 and the nest had fallen out of the tree by 2001. SPB territory consisted of two other nests which were active prior to 1998 and have fallen from the trees.

The effects within Post Fledgling Areas (PFA) and Nest Areas are assessed by using a circle of 600 acres centered on the specific nest location. Maps displaying the specific nests and roads are available in the project record.

Alternative 1

This alternative would create two motorized trails within the SPB goshawk nest territory. For nest SPB-A, an additional 2.92 miles of motorized trail would be created within the PFA for a total of 3.78 miles of road and motorized trail. To meet standards and guidelines, the road would need to be closed during the active nest period and/or adjustments would need to be made to move the proposed trail outside of the nest area, such as relocating approximately 230 meters of trail. For nest SPB-WC, an additional 0.7 miles of motorized trail would be created within the PFA for a total of 2.58 miles of road and motorized trail. The disturbance related to this alternative could reduce productivity or cause the abandonment of the SPB territory. This alternative opens the Curtis Ridge trail to ATV use which may increase motorized use within the RW goshawk territory in the future. Due to the closeness of existing nests to the existing road, increased use could cause disturbance of these nests and affect productivity. This alternative would add 0.59 miles of unauthorized existing road within the OCB goshawk PFA (on the outer edge of the PFA). All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of the goshawk. No changes would occur from the existing travel plan in the location or miles of roads or motorized trails within the other goshawk PFA's. This alternative would have approximately 54 miles of road and motorized trail within conifer habitat. This alternative would likely have the 2nd largest effect on the goshawk and their habitat.

Alternative 2

This alternative would create two motorized trails within the SPB goshawk nest territory. For nest SPB-A, an additional 2.92 miles of motorized trail would be created within the PFA for a total of 3.78 miles of road and motorized trail. To meet standards and guidelines, the road would need to be closed during the active nest period and/or adjustments would need to be made to move the proposed trail outside of the nest area, such as relocating approximately 230 meters of trail). For nest SPB-WC, an additional 0.7 miles of motorized trail would be created within the PFA for a total of 2.58 miles of road and motorized trail. The disturbance related within this alternative could reduce productivity or cause the abandonment of the SPB territory. This alternative opens the Curtis Ridge trail to ATV use which may increase motorized use within the RW goshawk territory in the future. Due to the closeness of existing nests to the existing road, increased use could cause disturbance of these nests and affect productivity. This alternative would add 0.59 miles of unauthorized existing road within the OCB goshawk PFA (on the outer edge of the PFA). All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of the goshawk. No changes would occur from the existing travel plan in the location or miles of roads or motorized trails within the other goshawk PFA's. This alternative would have approximately 62 miles of road and motorized trail within conifer habitat. This alternative would likely have the largest effect on the goshawk and their habitat.

Alternative 3

This alternative would add 0.59 miles of unauthorized existing road within the OCB goshawk PFA (on the outer edge of the PFA). No changes would occur from the existing travel plan in the location or miles of roads or motorized trails within the goshawk PFA's. All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of the goshawk. This alternative would have approximately 50 miles of road and motorized trail within conifer habitat. This alternative is comparable to Alternative 3A with regard to effects on goshawk.

Alternative 3A

This alternative would add 0.28 miles of unauthorized existing road within the OCB goshawk PFA (on the outer edge of the PFA). No changes would occur from the existing travel plan in the location or miles of roads or motorized trails within the goshawk PFA's. All USFS managed roads within the SNB territory are seasonally closed (between March 1 and

September 30) for the protection of the goshawk. This alternative would have approximately 53 miles of road and motorized trail within conifer habitat. This alternative is comparable to Alternative 3 with regard to effects on goshawk.

Alternative 4

This alternative is the existing travel plan, thus, there would be no changes in the location or miles of roads or motorized trails within the goshawk PFA's. All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of the goshawk. This alternative would have approximately 50 miles of road and motorized trail within conifer habitat. This alternative has the least affect among alternatives on the goshawk and their habitat.

Alternative 5

This alternative would create a motorized trail within the SPB goshawk nest territory. For nest SPB-A, an additional 1.28 miles of motorized trail would be created within the PFA for a total of 2.14 miles of road and motorized trail. The distance from the nest to the closest open road or motorized trail would change slightly to 0.35 miles. For nest SPB-WC, an additional 0.7 miles of motorized trail would be created within the PFA for a total of 2.58 miles of road and motorized trail. The disturbance related within this alternative could reduce productivity or cause the abandonment of the SPB territory.

This alternative opens the Curtis Ridge trail to ATV use which may increase motorized use within the RW goshawk territory in the future. Due to the closeness of existing nests to the existing road, increased use could cause disturbance of these nests and affect productivity. This alternative would add 0.59 miles of unauthorized existing road within the OCB goshawk PFA (on the outer edge of the PFA). All USFS managed roads within the SNB territory are seasonally closed (between March 1 and September 30) for the protection of the goshawk. No changes would occur from the existing travel plan in the location or miles of roads or motorized trails within the other goshawk PFA's. This alternative would have approximately 54 miles of road and motorized trail within conifer habitat. This alternative would have moderate effects on the goshawk and their habitat compared to the other alternatives.

During interdisciplinary team meetings, a potential seasonal road closure was discussed to provide additional protection to the RW territory nests (A and B) during the early portion of the goshawk nesting period due to the closeness of these nest sites to the existing road. This seasonal closure was considered but not adopted in any of the alternatives for the following reasons: 1) the existing road has been open as a motorized route since at least 1988 and management of the existing route meets existing goshawk guidelines; 2) the nests were established in the immediate vicinity of the open road along with the associated activity and still have produced young and fledglings; and 3) the area is in a remote location and consistent gate management and patrol would be challenging.

As discussed above the alternatives may affect the occupancy of specific territories and/or affect productivity at specific nest sites, but the effects on these few sites will not likely influence the forest-wide trend.

Additional information regarding Forest Plan monitoring and trend is available in the project record (Management Indicator Species of the Wasatch-Cache National Forest, USDA 2006).

Snowshoe Hare

As discussed in the small mammal section, information in the literature related to the effects of roads and motorized trails on small mammals is very limited (Hickman 1999). Roads and motorized trails can modify habitat, cause direct mortality, and disturbance may affect behavior and/or affect the use of adjacent areas. However, considering the vast abundance of snowshoe hare habitat available, the effects on their habitat and populations will not be significant and differences between any of the alternatives will be minor, as explained in the following paragraph.

The difference in the total miles of open road and motorized trail (newly created routes) between the least (Alternative 3) and greatest (Alternative 2) within conifer habitat is 11.84 miles. Most forest roads are approximately 12 feet wide, while motorized trails are approximately 5 feet wide. For simplicity, using a width of 20 feet (considering possible edge effects for all routes) the total newly affected area would be 11.62 hectares. This would be only 0.061%. of the total of 19,053 hectares of conifer habitat. Using the total cumulative effect of these open routes for Alternative 2 (the greatest amount) the area would be 60.69 hectares, which is only 0.31%. Thus, the effects of these open roads as compared to the total conifer habitat available would be negligible. There is no significant difference between alternatives on snowshoe hare habitat or their populations. Table 4.6.7 displays the miles of road and motorized trail by alternative within the conifer vegetation type.

As discussed above the alternatives have minor insignificant effects on snowshoe hares, thus the effects of the alternatives will not influence the trend in snowshoe hares within the Wasatch/Bear River Range.

Additional information regarding Forest Plan monitoring and trend is available in the project record (Management Indicator Species of the Wasatch-Cache National Forest, USDA 2006).

Table 4.6.7 Miles of motorized trail and open roads within major vegetation types on the Ogden RD (only USFS managed lands).

Vegetation Type	Alternative 1 Miles within Habitat	Alternative 2 Miles within Habitat	Alternative 3 Miles within Habitat	Alternative 3A Miles within Habitat	Alternative 4 Miles within Habitat	Alternative 5 Miles within Habitat
ASPEN	38.35	41.43	37.69	37.93	33.25	37.64
CONIFER	53.71	61.86	50.02	52.75	50.06	54.42
GRASS/SHRUBLAND	56.09	72.22	59.03	65.17	60.79	63.39
JUNIPER	1.34	5.46	3.68	4.71	3.65	4.71
OAK	8.84	24.11	17.95	22.49	22.70	22.29

Beaver

Waller, et al (1999) stated that disturbances to semi-aquatic mammals from recreation activities are poorly understood. Since the beaver is primarily nocturnal, the effect of motorized activities, which are usually more prevalent during the day, may be lessened. Beavers can be vulnerable to the effects of trapping; roads and trails can provide improved access for the trapping of beavers. However, with the changes in the fur industry, trapping has declined. Beaver trapping is not permitted in Big Creek, Randolph Creek (in the eastern portion of the Curtis analysis area), Pine Creek, Dip Hollow, and Peggy Hollow within the USFS boundary (in the northeast portion of the Monte analysis area), according to the 2004-2005 UDWR Furbearer Proclamation. Since there are very few changes from the existing condition, there are only minor differences between the alternatives within areas utilized by beaver. The alternatives that improve access within Silvia Hollow (Alternatives 1 and 2) and Box Elder Creek (Alternatives 2, 3A and 5) would likely have the greatest effect (by potentially providing improved access for trapping). No substantial change in beaver population numbers is expected with implementation of any of the alternatives.

As discussed above the alternatives have few changes from the existing condition on beaver, thus the effects of the alternatives will not influence the trend in beavers within the Wasatch/Bear River Range.

Additional information regarding Forest Plan monitoring and trend is available in the project record (Management Indicator Species of the Wasatch-Cache National Forest, USDA 2005).

4.6.3.3. Effects on Federally Listed Threatened, Endangered, Proposed, and Candidate Species

Canada Lynx

On July 3, 2003, the U.S. Fish and Wildlife Service issued a Notice of Remanded Determination of Status for the contiguous United States distinct population segment of the Canada Lynx (USDI 2003). The notice states that there is no evidence of lynx reproduction in Utah and that lynx which occur in Utah are dispersers rather than residents.

On November 9, 2005, the USFWS identified critical habitat for the Canada Lynx within the United States. Based on that report, no critical habitat is identified within the Ogden Ranger District or within Utah (USDI 2005). The USFWS Recovery Outline for the Canada Lynx (USDI 2005) identifies core areas, provisional core areas, secondary areas, and peripheral areas for the lynx. None of these areas have been identified to occur within the Ogden Ranger District.

A map of lynx locations, dated November 2, 2004, (available in the project record) shows that in August and September 2004, a transplanted lynx released in southwestern Colorado traveled on to the Wasatch-Cache National Forest. Since that time it moved northward through both the Ogden and Logan Ranger Districts, and off the Wasatch-Cache National Forest, and on into Idaho,

The Ogden Ranger District is a “travel corridor” between two larger habitat areas, in Idaho and in the Uinta Mountains of Utah, and is not considered permanent resident habitat (Figure 3.6.2). As stated in Chapter 3, Wildlife, the area within the

Ogden Ranger District was reclassified in 2002 from a Lynx Analysis Unit (LAU) to Linkage Area, due to a low percentage of primary lynx habitat found here.

The Lynx Conservation Strategy (Ruediger, et al 2000) notes, "There is little information available on the effects of roads and trails on lynx or its prey (Apps 2000, McKelvey, et al. 2000)", but "preliminary information available regarding lynx suggests that they do not avoid roads except for highways with high traffic volumes (Apps 2000)."
The Lynx Strategy also notes that, "Staples (1995) described lynx as being generally tolerant of humans" and that "Other anecdotal reports also suggest that lynx are not displaced by human presence, including moderate levels of snowmobile traffic (Mowat, et al. 2000, J. Squires, pers. comm. 1999, G. Byrne, pers. comm. 1999) and ski area activities (Roe, et al.1999)" and that "In a lightly roaded study area in north central Washington, logging roads did not appear to affect habitat use by lynx (McKelvey, et al. 2000)."

Singleton, et al (2002) developed a model to assess corridors for lynx and other carnivores in Washington. They note, "Roads (except at very high densities) are not expected to substantially influence lynx habitat selection. Lynx are not as sensitive to human disturbance as some other species; however they have not been documented to frequent heavily populated areas."

The Lynx Conservation Strategy specifies that "At this time, there is no compelling evidence to suggest management of road density is necessary to conserve lynx." The authors of the strategy recognized that many watersheds across the country are already highly roaded and research is needed to further investigate the effects of road densities on lynx.

Appendix B includes a table which displays the changes in miles of open road and motorized trail per square mile within sixth order watersheds, for USFS managed lands, and includes an assessment of human influence on adjacent non-USFS lands within the watershed. Miles of open road and trails per square mile can vary within alternatives and watersheds, but in most instances, ranking alternatives by the fewest miles to most, the ranking is as follows: Alternative 1, 4, 3, 3A, 5, and 2 (note: alternatives 1, 3, and 4 are very similar, and, alternatives 3A and 5 are similar).

No major highways exist within the Ogden Ranger District that would influence the north-south wildlife travel corridor. State Highway 39 is the only paved highway within the analysis area and it receives only moderate use. It occurs within the Monte, Curtis, and Wheatgrass analysis areas. A portion of it is closed to automobile traffic during the winter months. Interstate 84 is located along the southern boundary of the District and may restrict travel and movement of lynx. Roads and trails do increase snowmobile and other human uses of areas in the winter. Also, additional access to areas may increase the occurrence of incidental take of lynx by trapping.

The Lynx Conservation Strategy does not indicate any specific conservation measures to address "*movement and dispersal"* related to forest roads and trails. However, it does specify the following project planning guidelines related to highways: "Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g. straightened of curves, widening of roadway, etc.) in a manner that is likely to lead to significant increases in traffic volumes, traffic speeds, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat."

The July 3, 2003 U.S. Fish and Wildlife Service Notice of Remanded Determination of Status for the contiguous United States distinct population segment of the Canada Lynx (USDI 2003) specified that no evidence exists that certain risk factors pose a threat to individual lynx, lynx populations, or lynx habitat. They also specify that forest roads are not a threat in all four regions and that the threat is low within the Northern Rockies/Cascade Region (the Region in which Utah is located) from high volume traffic or development.

In relationship to effects to the wildlife corridor, the following is pertinent from the Notice: "To significantly impact a local lynx population, an activity would have to occur across a very large area (presumably at least the size of several home ranges), create a homogeneous forest that does not provide the various stand ages, species composition, and structure that are good snowshoe hare and lynx habitat, or result in a barrier that effectively precludes dispersal." The effects of forest roads and trails within the Ogden Ranger District would not create the above conditions.

The Lynx Conservation Strategy notes, "Construction of roads and trails may reduce the value of some lynx habitat by removal of vegetation and forested cover. On the other hand, in some instances, along less-traveled roads where vegetation provides good snowshoe hare habitat, lynx may use the roadbed for travel and foraging (Koehler and Brittell 1990)."

Although the lynx is not a permanent resident here, the potential effects of forest roads and motorized trails on the lynx are likely related to the effects to primary and secondary habitat, especially within the Monte and Curtis analysis areas. As described above, construction of roads and trails may reduce the value of some lynx habitat by removal of vegetation and

forested cover. Table 4.6.8 and Table 4.6.9 display the effects of each of the alternatives on primary and secondary habitat, respectively.

Table 4.6.8 Miles of motorized trails* and open roads within primary lynx habitat on the Ogden Ranger District (only USFS managed lands).

Analysis Area**	Alternative 1 Miles within Primary Habitat	Alternative 2 Miles within Primary Habitat	Alternative 3 Miles within Primary Habitat	Alternative 3A Miles within Primary Habitat	Alternative 4 Miles within Primary Habitat	Alternative 5 Miles within Primary Habitat
CURTIS CREEK	26.47	28.49	23.53	23.31	23.84	23.75
MONTE	2.54	2.83	2.54	2.83	1.99	2.83
WILLARD	2.39	2.66	2.39	2.66	4.43	2.66
TOTAL	**31.40**	**33.98**	**28.46**	**28.80**	**30.26**	**29.24**

* Motorized trails include only ATVs and motorcycles (not snowmobiles).

** Roads within the Middle Fork, Monte, Ogden Front, Pineview, Public Grove, South Fork, and Wheatgrass areas do not occur within primary habitat for any of the alternatives.

Table 4.6.9 Miles of motorized trails* and open roads within secondary lynx habitat on the Ogden Ranger District (only USFS managed lands).

Analysis Area	Alternative 1 Miles within Secondary Habitat	Alternative 2 Miles within Secondary Habitat	Alternative 3 Miles within Secondary Habitat	Alternative 3A Miles within Secondary Habitat	Alternative 4 Miles within Secondary Habitat	Alternative 5 Miles within Secondary Habitat
CURTIS CREEK	19.01	22.23	18.22	17.97	17.81	17.67
MIDDLE FORK	0.11	0.11	0.11	0.11	0.11	0.11
MONTE	29.19	30.68	28.25	29.05	24.03	29.32
OGDEN FRONT	1.73	2.94	2.94	2.94	2.94	2.94
PINEVIEW	1.14	1.14	1.14	1.14	1.14	1.14
PUBLIC GROVE	0.83	1.04	0.57	0.81	0.57	0.81
SOUTH FORK	0.47	0.47	0.47	0.47	0.47	0.47
WHEATGRASS	0.03	0.03	0.03	0.03	0.03	0.03
WILLARD	7.93	11.35	7.93	10.89	6.62	12.27
TOTAL	**60.44**	**69.99**	**59.66**	**63.41**	**53.72**	**64.76**

* Motorized trails include only ATVs and motorcycles (not snowmobiles).

Alternative 1

This alternative would have about 92 miles of road and motorized trail within primary and secondary habitat for the lynx of which about 77 miles would occur within the Monte Cristo and Curtis analysis areas. This alternative is comparable to alternatives 3A and 5 in the total miles within primary and secondary lynx habitat (moderate compared to all alternatives). It would have the second highest number of miles (of all the alternatives) within the Monte and Curtis analysis areas.

Alternative 2

This alternative would have about 104 miles of road and motorized trail within primary and secondary habitat for the lynx of which about 84 miles would occur within the Monte Cristo and Curtis analysis areas. This alternative has the highest number of miles within primary and secondary habitat and within the Monte and Curtis analysis areas.

Alternative 3

This alternative would have about 88 miles of road and motorized trail within primary and secondary habitat for the lynx of which about 75 miles would occur within the Monte Cristo and Curtis analysis areas. This alternative would have the second fewest total miles of road and motorized trail within lynx habitat. This alternative is comparible to alternatives 3A, 4, and 5 with respect to primary habitat within the Monte and Curtis analysis areas.

Alternative 3A

This alternative would have about 92 miles of road and motorized trail within primary and secondary habitat for the lynx of which qbout 73miles would occur within the Monte Cristo and Curtis analysis areas. This alternative is comparable to alternatives 1 and 5 in the total miles of primary and secondary lynx habitat (moderate compared to all alternatives), though it would have fewer miles within the Monte and Curtis analysis areas. This alternative is comparable to alternatives 3, 4, 5 with respect to primary habitat within the Monte and Curtis analysis areas.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails. This alternative has about 84 miles of road and motorized trail within primary and secondary habitat for the lynx of which about 68 miles occur within the Monte Cristo and Curtis analysis areas. This alternative would have the least amount road and motorized trail miles within lynx habitat. This alternative is comparable to alternatives 3, 3A, and 5 with respect to primary habitat within the Monte and Curtis analysis areas.

Alternative 5

This alternative would have about 94 miles of road and motorized trail within primary and secondary habitat for the lynx of which about 74 miles would occur within the Monte Cristo and Curtis analysis areas. This alternative is comparable to alternatives 1 and 3A in the total miles of primary and secondary lynx habitat (moderate compared to all alternatives). This alternative is comparable to alternatives 3, 3A, and 4 with respect to primary habitat within the Monte and Curtis analysis areas.

Bald Eagles
No new roads or motorized trails are proposed within the area where bald eagles winter (primarily the Pineview and the Wheatgrass {i.e. Causey Reservoir} analysis areas). Most of the existing USFS roads are closed to vehicle traffic (other than snowmobiles) in this area during the winter. Thus, there are no significant changes from the existing condition. All alternatives will have the same effect. Existing activities may affect individuals, but is not likely to adversely affect the bald eagle population. Additional information regarding bald eagle monitoring is contained within the project record.

Black-footed Ferret
Habitat for black-footed ferret is not provided for on the Ogden RD and there have been no recorded occurrences of this species. Therefore, this species will not be affected by any of the alternatives.

Yellow-billed Cuckoo
Parrish et al (2002) identified road construction and recreation impacts as a few of the causes of riparian loss and alteration affecting the Yellow-billed Cuckoo. They also specified that repeated disturbance of cuckoo nests may cause abandonment. On the Ogden RD, the USFS lands associated with the South Fork of the Ogden River is possibly the only area of potential yellow-billed cuckoo habitat, though recreational development, such as developed campgrounds likely restricts cuckoo use of this area. Parrish, et al (2002) recommended the following for the conservation of the the Yellow-billed Cuckoo with regards to road management: 1) design developments, such as roads, trails, pipelines, and housing, to avoid or minimize impacts to riparian habitats; 2) eliminate the loss of dense shrub layers in existing riparian areas and restore shrub layers where absent; and, 3) eliminate the destruction of existing native cottonwood-willow dominated riparian forests and restore riparian habitats where possible.

All of the proposed alternatives include new construction of approximately 300 feet of administrative use road within the South Fork analysis area. Existing recreational development (for example, numerous developed campgrounds) likely restricts cuckoo use of this area. There are no significant changes from the existing condition. All alternatives will have the same affect to Yellow-billed Cuckoos and their habitat.

Ogden Rocky Mountainsnail
The location of the Ogden Rocky Mountainsnail is near the eastern city limits of Ogden, near the Rainbow Gardens restaurant and is located in an area without roads or motorized trails. No new roads or motorized trails are proposed within the location of the Ogden Rocky Mountainsnail. Therefore, this species will not be affected by any of the alternatives. Also, recent genetic testing (Perez-Losada, et al 2004), suggests that the separation of this "subspecies" of *Oreohelix perpherica* is not justified, and thus it does not qualify for listing.

4.6.3.4 Effects on Forest Service Intermountain Region Sensitive Species

Northern Goshawk
Northern goshawks are also Management Indicator Species (MIS) for the Forest and are described in detail in Section 4.6.3.2 Effects on Management Indicator Species.

Peregrine Falcon
There are no known nest sites on the Ogden RD. The most suitable habitat for the peregrine falcon occurs on the cliffs on the west side of the district, just south of Brigham City to Weber Canyon. Several peregrine falcon observations have been documented in this area by the Utah Natural Heritage Program prior to 1984 (UDWR 2003). None of the alternatives will affect existing peregrine falcon nesting sites, but differences between alternatives do occur in areas of potential habitat and effects of disturbance. Peregrine falcons have been known to habituate to human disturbance and are found successfully occupying urban environments.

Alternative 1

The Willard ATV trail will be closed and obliterated; the Grizzly Peak Road will be closed and converted to non-motorized trail; and the motorized trail from Ogden Canyon to Willard Peak will be converted to non-motorized trail. This alternative may reduce motorized effects to potential habitat for the peregrine falcon.

Alternative 2

The Willard ATV trail will be closed and converted to non-motorized trail and a portion of the Grizzly Peak Road will be closed. This alternative may reduce motorized effects to potential habitat for the peregrine falcon.

Alternative 3

The Willard ATV trail and the Grizzly Peak Road will be closed and converted to non-motorized trail and the motorized trail from North Ogden Canyon to Willard Peak will be converted to non-motorized trail. This alternative may reduce motorized effects to potential habitat for the peregrine falcon.

Alternative 3a

The Willard ATV trail and the Grizzly Peak Road will be closed and converted to non-motorized trail. This alternative may reduce motorized effects to potential habitat for the peregrine falcon.

Alternative 4

This alternative is the existing travel plan, thus no changes in the location or miles of motorized trails within potential habitat for the peregrine falcon.

Alternative 5

The Willard ATV trail and the Grizzly Peak Road would be closed and converted to non-motorized trail. This alternative which may reduce motorized effects to potential habitat for the peregrine falcon.

Boreal Owl
The boreal owl is not known to occur on the Ogden RD, although large stands of conifer may provide potential habitat. Information in the literature related to the effects of roads and motorized trails suggests that boreal owls may tolerate some human disturbances (Hamann, et al. 1999 and Hayward and Verner 1994). The effects of any of the alternatives will be negligible on boreal owl habitat or populations.

Great Gray Owl
As discussed in Chapter 3, it is felt that the great gray owl is a winter vagrant that only occasionally visits Utah. The effects of any of the alternatives will be negligible on great gray owl habitat or populations.

Wolverine
Observations of wolverines appear to be related to road density (miles of open road and motorized trail per square mile). Rowland, et al (2003) noted that amount of habitat, low road density, and low human population density corresponded closely with observations of wolverines. Carroll, et al (2001) suggested occurrences of wolverine declined when road densities exceeded 1.7 km/km 2 (2.74 miles/mile 2). Rowland's model suggested a lower threshold than Carroll's. In Rowland's model, differences in occurrences were distinguishable between moderate and low road densities (0.71 miles/mile 2 to 1.71 miles/mile 2).

Appendix B displays the miles of open road and motorized trail per square mile within sixth order watersheds (for USFS managed lands) and includes an assessment of human influence on adjacent non-USFS lands within the watershed. Miles per square mile can vary by alternative and watershed, but in most instances ranking alternatives by the fewest miles to most are as follows: Alternative 1, 4, 3, 3A, 5, and 2. None of the alternatives have a watershed which would exceed 2.74 miles of open road and motorized trail per square mile.

Alternative 1

This alternative would have 11 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater). This alternative (and Alternative 3) would have the least effect as compared to other alternatives.

Alternative 2

This alternative would have 14 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater). This would be the greatest number among all alternatives and would likely have the largest effect on wolverines and their habitat.

Alternative 3

This alternative would be similar to Alternative 1, having 11 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater) and the least effect on wolverine and their habitat as compared to all other alternatives

Alternative 3A

This alternative would have 12 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater).This alternative would have moderate effects on wolverine and their habitat as compared to all alternatives.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails. This alternative has 13 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater); moderate, relative to other alternatives.

Alternative 5

This alternative would be similar to Alternative 3a, having 12 watersheds with densities of 0.71 miles per square mile or greater (within watersheds with USFS lands 10% or greater). This alternative would have a moderate effect on wolverine and their habitat as compared to other alternatives.

Townsend's Big-eared Bat and the Spotted Bat
Cave exploration has been known to negatively affect bat populations. Species such as the Townsend's big-eared bat is sensitive to human disturbance within their colonies. No new roads or motorized trails are proposed in the area of the Bat Cave, which is located within the proposed wilderness area. None of the alternatives would affect known Townsend's big-eared bat roosting sites, maternity colonies, or hibernacula. None of the alternatives would increase access to the Bat Cave. Information in the literature related to the effects of roads and motorized trails on small mammals is very limited (Hickman

1999). The effects to foraging habitat for bat species, mainly in riparian habitat areas, would be minor. It is unlikely any of the alternatives would influence bat numbers.

Flammulated Owl

Literature related to the effects of roads and motorized trails suggests that flammulated owls may tolerate some human disturbances (Hayward and Verner 1994 and Hamann, et al 1999). Oleyar (2000) suggests that human activities at a developed site (such as the Maples Campground adjacent to Snowbasin Ski Resort) influenced owls to fledge fewer young than at a site with fewer disturbances (such as the dispersed sites in the Mantua area near Dock Flat). Mika (2003) found the opposite trend within the same study area and specified that prey abundance and natural fluctuations were mostly responsible, though shifts in the amount of disturbance did occur between the study sites. Mika (2003) did observe nervous flammulated owl behavior and flushing from nests caused by human activity.

The Maples Campground area is currently gated and managed with a seasonal closure, which provides protection to flammulated owls during the breeding season. No changes are proposed to the management of roads within the Maples Area.

The alternatives with fewer miles of road and motorized trail within the aspen vegetation type will likely have less effect on flammulated owls.

Alternative 1

This alternative will have approximately 38 miles of road and motorized trail within aspen habitat (a moderate amount as compared to other alternatives). This alternative does not construct the Box Elder Creek motorized trail through an area with known concentrated flammulated owl breeding activity. This alternative is comparable to Alternative 3.

Alternative 2

This alternative will have approximately 41 miles of road and motorized trail within aspen habitat (the highest amount as compared to other alternatives). This alternative will construct the Box Elder Creek motorized trail within an area with known concentrated flammulated owl breeding activity. Increased disturbance activities will not likely eliminate use of the area by flammulated owls, but disturbance may reduce reproductive success. This alternative will likely have the largest effect on flammulated owls and their habitat.

Alternative 3

This alternative will have approximately 38 miles of road and motorized trail within aspen habitat (a moderate amount as compared to other alternatives). This alternative does not construct the Box Elder Creek motorized trail through an area with known concentrated flammulated owl breeding activity. This alternative is comparable to Alternative 1.

Alternative 3a

This alternative will have approximately 38 miles of road and motorized trail within aspen habitat (a moderate amount as compared to other alternatives). This alternative will construct the Box Elder Creek motorized trail within an area with known concentrated flammulated owl breeding activity. Increased disturbance activities will not likely eliminate use of the area by flammulated owls, but disturbance may reduce reproductive success.

Alternative 4

This alternative is the existing travel plan, thus no changes occur in the location or miles of motorized trails within habitat for the flammulated owl.

Alternative 5

This alternative would have a total of 38 miles of road and motorized trail within aspen habitat (a moderate amount as compared to other alternatives). This alternative would construct the Box Elder Creek motorized trail within an area with known concentrated flammulated owl breeding activity. Increased disturbance activities will not likely eliminate use of the area by flammulated owls, but disturbance may reduce reproductive success.

Three-toed Woodpecker
A review of literature related to the effects of roads and motorized trails suggested that disturbance from recreation did not present a problem to woodpeckers and cavity nesters as a group (Hamann, et al 1999). Parrish, et al (2002) did not suggest any recommendations related to management of roads or motorized trails in regards to the conservation of the three-toed woodpecker. The three-toed woodpecker will not likely be affected by implementation of any of the alternatives.

Sharp-tailed Grouse
Guidelines or recommendations for the management of sharp-tailed grouse primarily focus on the alteration of vegetation or habitat (Giesen and Connelly 1993, Parrish, et al 2002, and UDWR 2002). For sharp-tailed grouse, Parrish et al (2002) recommended to "Prohibit physical, mechanical, and audible disturbances within the breeding complex during the breeding season (March-June), if they may impact courtship activities and breeding during the daily display period, which is within 3 hours of sunrise or sunset." They also recommend, "Manage impacts from motorcycles, mountain bikes, OHVs, and other mechanical or motorized vehicles," and "avoid disturbance which impairs the "acoustical component" of breeding displays in the spring." UDWR (2002) notes, "Avoid activities that physically disturb breeding activity (March-June), including loud noise disturbances and mechanical, recreational, and photographic activities within 0.5 miles of an active lek."

As discussed in Chapter 3, the primary sharp-tailed grouse habitat associated with the Ogden Ranger District is located in the northern portion of the Public Grove analysis area. No leks are known to occur on the Ogden Ranger District, but they do occur within close proximity of the District.

Two routes (Three Mile Route 20113, in all alternatives, and Sink Hole Loop Route 26012, in alternatives 2, 3A, and 5) are located within UDWR mapped sharp-tailed grouse habitat. A third route (Clay Valley Route 26011 in alternatives 1, 2, and 3) provides motorized access into sharp-tailed grouse habitat within privately owned lands. None of these routes occur within 0.5 miles of an active lek site.

Table 4.6.10 Miles of motorized trail and open roads within sharp-tailed grouse habitat on the Ogden Ranger District (only USFS managed lands).

	Alternative 1 Miles within S-T Grouse Habitat	Alternative 2 Miles within S-T Grouse Habitat	Alternative 3 Miles within S-T Grouse Habitat	Alternative 3A Miles within S-T Grouse Habitat	Alternative 4 Miles within S-T Grouse Habitat	Alternative 5 Miles within S-T Grouse Habitat
TOTAL	**1.73**	**2.46**	**1.73**	**2.46**	**1.73**	**2.46 ***

* Timing restrictions are implemented in Alternative 5 on these roads during the strutting period and the major portion of the nesting period for sharp-tailed grouse.

Alternative 1

This alternative would have about 2 miles of road within sharp-tailed grouse habitat. This alternative would include the Clay Valley Road, Route 26011, thus providing motorized access which may affect this area of important sharp-tailed grouse habitat (both nesting and strutting sites). No seasonal closures would be implemented.

Alternative 2

This alternative would have about 3 miles of road within sharp-tailed grouse habitat. This alternative would include the Clay Valley Road, Route 26011, thus providing motorized access which may affect this area of important sharp-tailed grouse habitat (both nesting and strutting sites). No seasonal closures are implemented. This alternative would have the greatest affect on sharp-tailed grouse and their habitat, relative to other alternatives.

Alternative 3

This alternative would have about 2 miles of road within sharp-tailed grouse habitat. This alternative would include the Clay Valley Road, Route 26011, thus providing motorized access which may affect this area of important sharp-tailed grouse habitat (both nesting and strutting sites). No seasonal closures would be implemented.

Alternative 3A

This alternative would have a about 3 miles of road within sharp-tailed grouse habitat. This alternative would not include the Clay Valley Road, Route 26011, thus providing protection to this area of important sharp-tailed grouse habitat. No seasonal closures are implemented.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails. This alternative has about 2 miles of road within sharp-tailed grouse habitat. This alternative does not include the Clay Valley Road, Route 26011, thus providing protection to this important area of sharp-tailed grouse habitat. No seasonal closures are currently implemented. This alternative would have the least effect on sharp-tailed grouse and their habitat.

Alternative 5

This alternative would have about 3 miles of road within sharp-tailed grouse habitat, but timing restrictions are implemented on these roads which would minimize or eliminate effects during the strutting period and the major portion of the nesting period for sharp-tailed grouse. Two routes (Three Mile Route 20113 in all alternatives and Sink Hole Loop Route 26012 in alternatives 2, 3A, and 5) would be seasonally closed between November 15 and June 15. This alternative would not include the Clay Valley Road, Route 26011, thus providing protection to this area of important sharp-tailed grouse habitat. This alternative would have the least effect during the strutting period for sharp-tailed grouse.

Greater Sage Grouse

As discussed in Chapter 3, no active lek sites are known to occur on the Ogden Ranger District. Only one historic lek site has been documented, and this was in the Public Grove area. Information on this lek site is limited and no birds have been observed at this location since at least 1965 (personal communication, Ron Greer, UDWR Habitat Biologist). Based on sightings of sage grouse along Ant Flat road and the active leks associated with Hardware Ranch, the Curtis analysis area is likely more valuable (currently) for sage grouse than the Willard and Public Grove analysis areas. The effects of the alternatives on sage grouse would primarily be associated with their nesting and brood rearing habitats. Table 4.6.11 displays the miles of road and motorized trail within sage grouse habitat.

Guidelines or recommendations for the management of sage grouse populations and their habitats primarily focus on the alteration of vegetation or habitat. For sage grouse, Connelly, et al (2000) recommended that “Human activities within view of or less than 0.5 km (0.31 miles) from leks should be minimized during early morning and late evening when birds are near or on leks.” None of the alternatives have roads or motorized trails which would be managed by the USFS within 0.31 miles of an active lek site.

Table 4.6.11 Miles of motorized trail and open roads within sage grouse habitat on the Ogden Ranger District (only USFS managed lands).

Analysis Area*	Alternative 1 Miles within Sage Grouse Habitat	Alternative 2 Miles within Sage Grouse Habitat	Alternative 3 Miles within Sage Grouse Habitat	Alternative 3A Miles within Sage Grouse Habitat	Alternative 4 Miles within Sage Grouse Habitat	Alternative 5 Miles within Sage Grouse Habitat
CURTIS CREEK	4.44	7.63	6.76	8.14	6.56	8.13 **
PUBLIC GROVE	8.97	11.23	5.83	8.98	5.83	8.47 **
WILLARD	2.94	2.94	2.94	2.94	2.14	2.94
TOTAL	**16.35**	**21.8**	**15.53**	**20.06**	**14.53**	**19.54 ** **

* Roads and motorized trails within the other analysis areas do not occur within sage grouse habitat for any of the alternatives.

** Timing restrictions are implemented on a portion of these roads/motorized trails during the strutting period and the major portion of the nesting period for sage grouse.

Alternative 1

This alternative would have about 16 miles of road and motorized trail within sage grouse habitat. It is comparable to alternatives 3 and 4 in the total miles within sage grouse habitat. Like alternatives 3 and 4, it would have the least effect relative to all the alternatives. Specifically, this alternative would have the least effect in the Curtis analysis area.

Alternative 2

This alternative would have about 22 miles of road and motorized trail within sage grouse habitat.. This alternative would have the highest number of miles of road and motorized trail within sage grouse habitat and would have the greatest effect on sage grouse habitat relative to other alternatives.

Alternative 3

This alternative would have about 16 miles of road and motorized trail within sage grouse habitat. This alternative is comparable to alternatives 1 and 4 in the total miles within sage grouse habitat and like alternatives and 4, would have the least effect compared to all other alternatives. Specifically, this alternative and Alternative 4 would have the least effect in the Public Grove analysis area.

Alternative 3A

This alternative would have about 20 miles of road and motorized trail within sage grouse habitat. Effects of this alternative would be similar to Alternative 2.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails. This alternative has about 15 miles of road and motorized trail within sage grouse habitat. This alternative is similar to alternatives 1 and 3 in the total miles within sage grouse habitat and, like alternatives 1 and 3, would have the least effect compared to all other alternatives. This alternative and Alternative 3 would have the least effect in the Public Grove analysis area.

Alternative 5

This alternative would have about 19 miles of road and motorized trail within sage grouse habitat. However, timing restrictions would be implemented on a portion of these roads and motorized trails which would minimize or eliminate effects during the strutting period and the major portion of the nesting period for sage grouse. A total of 0.93 miles would be seasonally closed between November 15 and June 15 in the Curtis Creek analysis area and 5.28 miles in the Public Grove analysis area. With the implementation of the seasonal closures, this alternative is comparable to alternatives 1, 3, and 4, with fewer effects.

Pygmy Rabbit

As discussed in Chapter 3, the pygmy rabbit is not known to occur on the Ogden Ranger District. The closest known occurrences of the pygmy rabbit are at lower elevations in sagebrush habitats near Bear Lake (Janson 2002). There are no known occurrences on the District, and therefore, populations of this species will not be affected by any of the alternatives.

4.6.3.5 Effects on Neotropical Migratory Birds

Executive Order (EO) 13186, signed January 10, 2001, lists several responsibilities of federal agencies to protect migratory birds, including “Support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions” (Federal Register 2001 Vol. 66 No. 11). Additional direction comes from the Memorandum of Understanding (MOU) between USDA Forest Service and USDI Fish and Wildlife Service, signed January 17, 2001. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the Forest Service and Fish and Wildlife Service, in coordination with state, tribal and local governments. The MOU identifies specific activities for bird conservation, pursuant to EO 13186, including “Strive to protect, restore, enhance, and manage habitat of migratory birds, and prevent the further loss or degradation of remaining habitats on National Forest System lands.” This includes, identifying management practices that impact populations of high

priority migratory bird species, including nesting, migration, or over-wintering habitats, on National Forest System lands, and developing management objectives or recommendations that avoid or minimize these impacts.

As displayed in the Appendix, numerous neo-tropical migratory birds occur within the project area. A review of the literature indicates that roads and motorized trails may fragment habitat and the associated disturbance may disrupt breeding activity and may cause displacement of birds (Hamann, et al 1999).

In general, it can be assumed, the greater the miles of roads and motorized trails in an alternative, the greater the potential amount of habitat fragmentation. However, specific habitat types and habitat patch sizes may be influenced by specific road and motorized trail locations. See Table 4.6.7 for the differences by alternative for specific vegetation and habitat types.
Since, numerous neo-tropical migratory birds occur within the Ogden RD, this analysis focuses on those species with priority status under the Partners in Flight (PIF) ranking and those identified by USFWS as birds of conservation concern.

Brewer's Sparrow
Parrish, et al (2002) identified habitat loss and fragmentation caused by roads and trails as a concern related to the Brewer's sparrow. They also mention fragmentation is known to be a factor in increasing cowbird parasitism.

Parrish, et al (2002) recommended the following for the conservation of the Brewer's sparrow with regards to road management, "Avoid road and right–of-way construction in large, contiguous patches of shrub/steppe habitat. Manage large blocks of land for contiguous shrub steppe habitat and avoid activities that cause fragmentation. Re-vegetate old roads and other disturbance corridors to native grasses and shrubs."

The alternatives with fewer miles of road and motorized trail within the grass/shrubland vegetation type (see Table 4.6.7) will likely have less effect on the Brewer's sparrow.

Alternative 1

This alternative will have approximately 56 miles of road and motorized trail within grass/shrubland habitat. Most of the change from the existing condition is related to the closure in the area of Tilda Springs in the Curtis Creek analysis area. Much of the overall benefit resulting from the closures in the Tilda Springs area is offset by the opening of the power line trail to motorized vehicles in the Monte analysis area.

Alternative 2

This alternative would have approximately 72 miles of road and motorized trail within grass/shrubland habitat. Most of the change from the existing condition is due to changes in the area of the power line trail in the Monte analysis area. This alternative would likely have the largest effect on Brewer's sparrows and their habitat as compared to other alternatives.

Alternative 3

This alternative would have approximately 59 miles of road and motorized trail within grass/shrubland habitat. This alternative is comparable to alternatives 1and 4, with fewer effects on Brewer's sparrow than other alternatives.

Alternative 3a

This alternative would have approximately 65 miles of road and motorized trail within grass/shrubland habitat. This alternative would have moderate effects on Brewer's sparrows and their habitat as compared to other alternatives.

Alternative 4

This alternative is the existing travel plan, thus there would be no changes in the location or miles of roads or motorized trails within habitat for the Brewer's sparrow. This alternative has approximately 61miles of road and motorized trail within grass/shrubland habitat. This alternative is comparable to alternatives 1and 3, with fewer effects on Brewer's sparrow than other alternatives.

Alternative 5

This alternative would have approximately 63 miles of road and motorized trail within grass/shrubland habitat. This alternative would have moderate effects on Brewer's sparrows and their habitat as compared to other alternatives. The seasonal road closures associated with the Public Grove and Curtis Creek analysis areas (as described under the effects on sage grouse) would likely reduce the effects of disturbance for a portion of the Brewer's Sparrows nesting time period.

Broad-tailed Hummingbird
Threats to the broad-tailed hummingbird are largely unknown. Parrish, et al (2002) did not suggest any recommendations related to management of roads or motorized trails in regards to the conservation of the Broad-tailed Hummingbird. There are only minor differences between the alternatives within riparian areas (see the Fisheries and Watershed sections). The effects to foraging habitat, mainly in riparian habitat areas, will be minor and not be significant. The effects of any the alternatives will not likely influence Broad-tailed Hummingbird numbers.

Virginia's Warbler
Parrish, et al (2002) identified road construction and trail and off-road vehicle use as likely detrimental effects to Virginia's warbler, although the effects have not been studied. Parrish, et al (2002) did not suggest any recommendations related to management of roads or motorized trails in regards to the conservation of the Virginia's Warbler. The alternatives with fewer miles of road and motorized trail within juniper and oak vegetation types will likely have less effect on the Virginia's warbler. (See Vegetation Map, Chapter 3)

Gray Catbird
This species has only been observed within the South Fork and Pineview analysis areas. No new open roads or motorized trails are proposed within these areas. All of the alternatives include new construction of approximately 300 feet of administrative use road within the South Fork analysis area. This limited construction is not likely to significantly affect the gray catbird or its habitat. This species is not likely to be affected by any of the alternatives.

Williamson's Sapsucker
This species has only been observed at Dairy Ridge. The habitat of Williamson's Sapsucker is middle to high elevation conifer forests and conifer/aspen stands. Loss of snags associated with greater access for firewood harvest can have affects on cavity nesting species. The Ogden Ranger District does not have a firewood harvest program, thus, for this analysis the effects to species that are dependent on snags will be minimal. This species is not likely to be affected by any of the alternatives.

Black-Throated Gray Warbler
Parrish, et al (2002) identified road construction and trail and off-road vehicle use as likely detrimental effects to the black-throated gray warbler, although the effects have not been studied. This species has only been observed at Taylor Canyon. No new roads or motorized trails are proposed within the vicinity of Taylor Canyon. This species is likely to be found in other juniper vegetation areas. The alternatives with fewer miles of road and motorized trail within the juniper vegetation type will likely have less effect to the black-throated gray warbler. (See Vegetation Map, Chapter 3)

4.6.3.6 Effects on Species at Risk

Fringed Myotis
The fringed myotis has not been found to occur in the Bat Cave (as described under the Townsend's big-eared bat) nor has it been located anywhere on the Ogden Ranger District. The effects to foraging habitat for bat species, mainly in riparian habitat areas, would be minor. Similar to effects to the Townsend's big-eared bat, it is unlikely any of the alternatives would affect fringed myotis numbers.

American Pine Marten
Marten are vulnerable to the effects of trapping, which can be influenced by access provided by roads and trails. Marten trapping is not allowed on the Ogden RD. Currently, only the northeastern portion of Utah is open to marten trapping according to the 2004-2005 UDWR Furbearer Proclamation (UDWR 2004-2005). Thus, any changes in accessibility will not influence marten populations. The alternatives with fewer miles of road and motorized trail within the conifer vegetation types may have less affect on marten habitat, especially within the Curtis analysis area (see Vegetation Map, Chapter 3).

4.6.4 Mitigation

Mitigation (such as seasonal road closures) is included in the alternatives as described above for each of the wildlife subject areas. The disclosure of effects for wildlife species described above includes these mitigating measures.

4.7 Effects on Recreation

4.7.1 Introduction

The Ogden Ranger District is proposing to revise its current travel plan. Primary objectives of the revision, as related to recreation opportunities, consist of:

- Manage existing non-system/ user created trails and roads,
- Enhancing recreation opportunities from the proposed and existing network of system trails and roads, through some combination of closure/ reconstruction/ construction or relocation so that they respond to present and future needs of recreation users.

4.7.2 Issues Addressed and Measurement Indicator

Public scoping followed by Forest Service interdisciplinary team review identified the following issue to be addressed in this analysis:

Significant Issue

- The Forest Service is not providing a diverse range of **motorized recreation** in the current travel system.

Measurement indicator used to compare alternatives:

Change in acres from the existing Revised Forest Plan ROS maps of recreation opportunities settings.

Narrative description of changes to the experience of forest recreation users

4.7.3 Effects Analysis Methods and Assumptions

Baseline conditions were determined through review of literature, GIS data and field observations. To compare the environmental effects by alternative it was necessary to make the following assumptions.

- All unauthorized road or motorized trails will continue to be closed and rehabilitated. Unauthorized routes will be considered closed for the analysis of long-term effects on the recreation opportunity.

- Urban and Rural ROS managed areas will remain the same as in the Revised Forest Plan for all alternatives.

- ROS classification applies to Forest Service lands only.

- The analysis method used was the National Forest Service ROS Inventory Mapping Protocol, December 2003 using GIS computer technology. The program placed ½ mile and 3 mile buffers on motorized routes. For alternatives 1-3a & 5, ROS was based on the Forest's current database for operation and objective maintenance levels. This placed roads in primitive and semi-primitive ROS categories and motorized trails in primitive categories. This resulted in area designations that were then sorted by size and distance from motorized routes. A primitive setting required a minimum size and was at least 3 miles from a motorized route on Forest Service lands. Some routes were moved from Semi-Primitive Motorized to Semi-Primitive Non-Motorized by alternative to show roads and/or trails that would be closed or open.

- The analysis method did not modify buffers for topography, vegetation or lack of vegetation. Therefore, the sights and sounds of motorized vehicles may increase or be reduced because of these features in the landscape.

4.7.4 Direct and Indirect Effects

The location of a motorized travel route in relationship to non-motorized recreation areas has a direct effect on the recreation experience. Adding new motorized travel routes has the potential of decreasing remoteness and increasing evidence of humans in areas on the forest. The reverse is also true, that as motorized routes are reduced there is an increased likelihood the recreation experience could change to be more primitive, requiring more self reliance and less interaction with people.

When compacted soil no longer supports vegetation because of user created trails, roads and concentrated use areas, there is a negative effect on the ROS setting. This effect becomes dominant when:

- users change location to find a desired setting,
- users actions and activities create conflicts with other users,
- user created trails or roads create mazes of unorganized patterns on the landscape,
- it increases the potential resource damage in the surrounding area and impacts other visitors.

This effect can be reversed only by reducing or eliminating motorized use or by motorized users adhering to travel on designated routes identified in the revised Travel Plan.

4.7.4.1 Effects Common to all Alternatives

ROS setting Urban and Rural acres are the same for all alternatives. There is no Wilderness/Primitive and Wilderness/Semi-Primitive Non-Motorized setting within the Ogden Ranger District. Airplanes and the sights and sounds associated with them are part of the experience for all of the alternatives.

Roads changed to an open status will be included for annual road maintenance. This will result in improved surfacing, drainage, and usability.

The location of the proposed gravel pits and the improvements to the Concentrated Use Areas will have minimal effects to the ROS.

4.7.4.2 Effects by Alternative

Alternative 1

Alternative 1 is based on protection of roadless values. Under Alternative 1, there would be 187 miles of open road including 53 miles of administrative road and 39 miles of open motorized trail on National Forest lands.

Table 4.7.3 ROS Setting in Acres for Alternatives 1 and 4

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
Alt 1	76	2056	50070	21082	82657	4988
Revised Forest Plan (Alt 4)	76	2056	32445	55339	67976	0
Change in acres from Revised Forest Plan	**0**	**0**	**(+)17625**	**(-)34257**	**(+)14681**	**(+)4988**

Alternative 1 would increase SPNM acres 22% because of proposed changes in management to reduce miles of open motorized travel routes that would either be decommissioned, change to administrative use, or change to non-motorized use. With this rise in both SPNM and P acres, the likelihood of a non-motorized recreationist having a very-high to high probability of solitude, closeness to nature, and a high to moderate challenge and risk with little to some evidence of others is increased in relation to Alternative 4 acres. Changing motorized travel routes in Curtis Creek (Tilda Spring ATV trails), Public Grove (Flat Canyon road), and Willard (Skyline trail) analysis areas increased the possibility for solitude and self-reliance for a non-motorized recreation experience. Roaded Natural (RN) would increased by 54% by using the objective maintenance level in INFRA. This has the potential to decrease the degree of challenge for a person operating an ATV and increases the probability of sharing the road with sedans or other low clearance vehicles. There is a 62% decrease in SPM acres because of the change to a higher maintenance level. The increase in RN and subsequent decrease in SPM would provide greater opportunities for sedans and other low clearance vehicle users to recreate on the District.

Non-motorized trails will increase by 31 miles because of motorized trails converted to non-motorized uses. This would reduce opportunities for motorized recreation while increasing opportunities for non-motorized recreation.

Alternative 2

Alternative 2 is designed to increase motorized recreation experiences. Under Alternative 2, there would be 206 miles of open road, 61 miles of open motorized trail and 49 miles of administrative roads on National Forest lands.

Table 4.7.4 ROS Setting in Acres for Alternatives 2 and 4

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
Alt 2	76	2056	55058	29676	68077	4987
Revised Forest Plan (Alt 4)	76	2056	32445	55339	67976	0
Change in acres from Revised Forest Plan	**0**	**0**	**(+)22613**	**(-)25663**	**(+)101**	**(+)4987**

Alternative 2 in comparison to existing management shows an increase in RN of 70%. Most of this increase in acres is due to a change to a higher road maintenance level for sedans on some roads. The effects of this change from SPM to RN would be similar to Alternative 1 but to an even greater extent, with the major changes occurring in the Public Grove and Curtis Creek analysis areas. SPM dropped 46% from Alternative 4 with a portion of the acres going to RN and a portion to SPNM. The effect that this would have is that opportunities for all types of motorized users would increase in roaded natural areas. However, because semi-primitive motorized acres decrease, the experience of motorized users would be less primitive, remote and challenging. SPNM stayed about the same in most of areas of the District with an increase in primitive in the Wheatgrass and Middle Fork analysis areas. Alternative 2 would provide less of a primitive experience in SPNM than alternatives 1, 3 and 3a, but would have approximately the same number of SPNM acres as Alternative 4.

Non-motorized trails will decrease by 3 miles because of non-motorized trails converted to motorized uses in the Curtis Creek analysis area. On these trails, non-motorized users will have a less primitive, remote or challenging experience.

Alternative 3

Alternative 3 is designed to reduce impacts to wildlife habitat from roads and trails. Under Alternative 3, there would be 202 miles of open road, 35 miles of open motorized trail and 61 administrative miles on National Forest lands.

Table 4.7.5 ROS Setting in Acres for Alternatives 3 and 4

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
Alt 3	63	2053	56282	19366	77710	4987
Revised Forest Plan (Alt 4)	63	2053	34803	54678	67868	0
Change in acres from Revised Forest Plan	**0**	**0**	**(+)21479**	**(-)35312**	**(+)9842**	**(+)4987**

The effects of Alternative 3 are similar to those of Alternative 2 relative to the exchange of SPM for RN as compared to Alternative 4. The Primitive (P) acres are the same in alternatives 1-3A where they provide the possibility of higher degree of self-reliance and solitude. Alternative 3 is the second highest in SPNM acres with an increase of 15% from Alternative 4.

Non-motorized trails will increase by 18 miles because of motorized trails converted to non-motorized uses.

Alternative 3a

Under Alternative 3a, there would be 208 miles of open road, 49 miles of open motorized trail and 57 miles of administrative roads on National Forest lands.

Table 4.7.6 ROS Setting in Acres for Alternatives 3a and 4

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
Alt 3A	76	2056	55844	27631	70336	4987
Revised Forest Plan (Alt 4)	76	2056	32445	55339	67976	0
Change in acres from Revised Forest Plan	**0**	**0**	**(+)23399**	**(-)27708**	**(+)2360**	**(+)4987**

Alternative 3A has 15% more motorized acres than non-motorized acres and 4% fewer motorized acres than Alternative 4 placing this alternative near a balance of non-motorized to motorized experience, providing the opportunity for a broad spectrum of recreation opportunities ranging from self reliance to moderate to low risk. There would be an increase of RN because of the potential management of roads to a higher maintenance level which would have similar effects to Alternative 1.

Non-motorized trails will increase by 6 miles because of motorized trails converted to non-motorized uses in the Willard analysis area.

Alternative 4

Under Alternative 4, there are 198 miles of open road, 46 miles of open motorized trail and 51 miles of administrative roads on National Forest lands. There would be no change in ROS from current.

Alternative 5

Under Alternative 5, there would be 202 miles of open road, 58 miles of open motorized trail and 60 miles of administrative roads on National Forest lands.

Table 4.7.7 ROS Setting in Acres for Alternatives 5 and 4

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
ALT 5	76	2056	52443	31620	69732	5003
Revised Forest Plan (Alt 4)	76	2056	32445	55339	67976	0
Change in acres from Revised Forest Plan	**0**	**0**	**(+)19998**	**(-)23719**	**(+)1756**	**(+)5003**

Alternative 5 is within 2% of alternative 3A motorized to non-motorized acres, and would have effects similar to Alternative 3A. There would be a 62% increase in RN because of a change in road management from Alternative 4.

Non-motorized trails would increase by 3 miles because of motorized trails converted to non-motorized uses in the Willard analysis area.

Figure 4.7.1 compares the acres of ROS settings for each of the alternatives described in Table 4.7.8

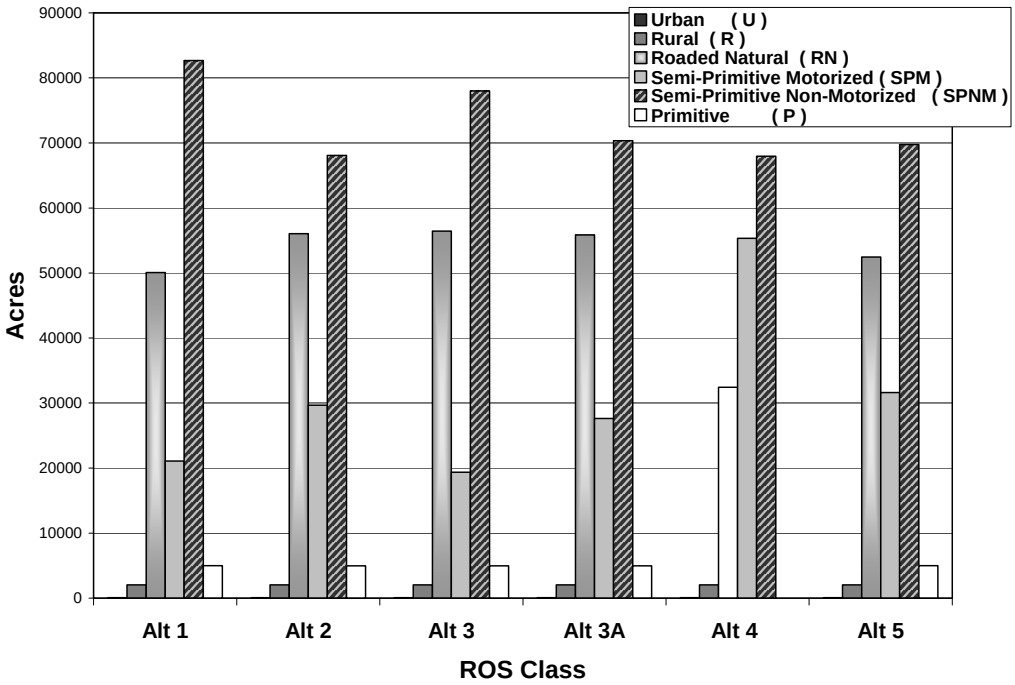


Figure 4.7.1 Comparison of ROS acreages by Alternative.

Table 4.7.8 ROS Setting in Acres for All Alternatives

Alternative (ALT)	Urban (U)	Rural (R)	Roaded Natural (RN)	Semi-Primitive Motorized (SPM)	Semi-Primitive Non-Motorized (SPNM)	Primitive (P)
Alt 1	76	2056	50070	21082	82657	4988
Alt 2	76	2056	56058	29676	68077	4987
Alt 3	76	2056	56459	19366	77985	4987
Alt 3A	76	2056	55844	27631	70336	4987
Alt 4	76	2056	32445	55339	67976	0
Alt 5	76	2056	52443	31620	69732	5003

Alternative 4 is the no action alternative and there would be no change in the management of the recreation opportunity spectrum for the District. Also, there are no changes to the miles of non-motorized trails in Alternative 4.

The following is a relative comparison of the alternatives based on ROS acreage. The Alternatives are ranked from highest to lowest reflecting the size of each ROS class. Urban and Rural ROS classes, which do not change by Alternative are not ranked. The recreation experience and opportunities provided by each Alternative were discussed above. The range of recreation opportunities are relative to the size of the ROS settings and vary by alternative as ranked below:

- Roaded Natural: 3>2>3a>5>1>4.
- Semi-Primitive Motorized: 4>5>2>3a>1>3.
- Semi-Primitive Non-Motorized: 1>3>3a>5>2>4.
- Primitive: 5>1>2=3=3a>4.

4.7.4.3 Unavoidable Adverse Effects

With the implementation of mitigation measures and the continuing closure of illegal routes, no unavoidable adverse impacts to the recreation experience are expected.

4.7.5 Mitigation

To maintain or improve recreation experiences, there should be coordination between recreation and engineering to insure that road construction, relocation, or rehabilitation maintains the current ROS the road is in.

4.8 Effects on Scenery

4.8.1 Introduction

The Ogden RD is proposing to revise its current travel plan. Primary objectives of the revision, as related to scenic resource, consist of:

- Manage existing non-system/ user developed trails and roads,
- Responding to situations of existing system roads and trails where scenic related resource damage is occurring from user created motorized trails and roads.
- Enhancing viewing of scenery from the proposed and existing network of system trails and roads, through some combination of closure/ reconstruction/ construction/ or relocation so that they better respond to present and future needs of recreation users.

4.8.2 Issues Addressed and Measurement Indicator

Public scoping followed by Forest Service interdisciplinary team review identified the following issue to be addressed in this analysis:

- Scenery as viewed from travel routes or viewpoints may be negatively affected by new trail construction.

Measurement indicator used to compare alternatives:

> Change in integrity as seen from existing High and Moderate concern level travel routes within the foreground (½ mile from viewer) and middle ground (½ to 3 miles from viewer). An analysis of the background was not done because the size of the disturbance of newly constructed trails would be negligible beyond 3 miles.

4.8.3 Effects Analysis Methods and Assumptions

Baseline conditions were determined through review of literature, GIS data and field observations. To compare the environmental effects by alternative it was necessary to make the following assumptions.

- All unauthorized road or motorized trails will continue to be closed and rehabilitated. Unauthorized routes will be considered closed for the analysis of long-term effects on the scenic resource.

- Authorized trails and roads would be maintained to Forest Service standards.

- Proposed new construction of single lane roads was assumed to be 12’ in width. Motorized trails were assumed to be 5’ in width.

- Existing roads and trails found in managed landscape character themes of Natural Appearing, Developed Natural Appearing, Resort Natural Setting, and Water Recreation Rural Appearing are a positive part of the described landscape character when they meet defined revised Forest Plan criteria.

- The effects of the alternatives will be based on new construction of proposed trails and roads and reduction of trails or roads moving toward a Natural Evolving Landscape Character.

- Full terminology, acronyms and scenery management concepts used in this analysis are defined in the revised Forest Plan while some discussion of them is available in Chapter 3 of this document.

4.8.4 Direct and Indirect Effects

Any constructed road or trail will have an effect of changing the character of the landscape that it is in, by slicing through the landform and creating an edge in the vegetative structure. The disturbance resulting from construction varies based on the landform's slope, density of the vegetation, and designed structure of the road or trail. A person's acceptance of the road or trail as part of the landscape character depends largely on the position of the viewer and how much the geometry of the road or trail dominates their view of the landscape. Generally the greater the dominance of a constructed feature the less the feature repeats forms, lines, colors of textures found in the surrounding landscape. The opposite result of less dominance is where the feature conforms, repeats, mimics and constructive design draws from the forms, lines, colors or texture found the surrounding viewed landscape.

User created trails, roads and concentrated use areas can also have a negative effect on the landscape character being viewed when compacted native soil no longer supports native vegetation. This effect becomes dominant when:

- user created trails or roads bisect open vistas,
- large unauthorized parking areas create barren openings,
- the geometry of vertical rutting visually fragments viewed grassed slopes,
- user created trails or roads create mazes of unorganized patterns in the viewed landscape.

This effect can be reversed only by reducing or eliminating motorized use or by motorized users adhering to travel on designated routes identified in the revised Travel Plan.

The degree to which these effects on the scenic resource could be reversed is based upon the potential for restoration of the road, trail, or parking area surface to a condition that will support native vegetation. This potential varies widely according to soil site relationships, and is subject to considerable temporal variation depending upon the effort put into closing and restoring a particular road, trail or parking area.

4.8.4.1 Effects Common to all Alternatives

Landscape Character descriptions for Natural Appearing, Developed Natural Appearing and Water Recreation Rural Appearing will have roads/trails, developed facilities and managed concentrated use areas as part of the desired landscape character.

This analysis of effects assumes that all user created routes will continue to be closed and rehabbed. Until this occurs, routes will continue to be potentially dominant on the viewed landscape.

The location of the proposed gravel pits and the improvements to the Concentrated Use Areas will have minimal effects to the SMS.

Table 4.8.1 displays the results of the most recent inventory of motorized trails and open roads on the Ogden District. This includes private, county, city, state, and forest service routes within the District boundary.

Table 4.8.1 Miles of Motorized Roads and Trails on the Ogden RD

Analysis Area	Miles of Road	Miles of Non-motorized Trails	Miles of Motorized Trail
Willard - Public Grove	29	8	13
South Fork – Middle Fork	9	3	0
Monte-Wheatgrass	49	41	2
Pineview - Ogden Front	31	33	17
Curtis Creek	80	25	14
Totals	**198**	**110**	**46**

*Includes roads within Ogden RD boundary

4.8.4.2 Effects by Alternative

Alternative 1

Under Alternative 1, there would be 187 miles of open road and 39 miles of open motorized trail within National Forest system lands. Twelve miles of constructed motorized trail include the following routes:

Table 4.8.4.2.1 Proposed Constructed Routes Alternative 1

Route #	Proposed route name	Screened by overstory for entire route?	miles
XXX9	Running Water Ridge ATV	Yes	1.71
XX10	Six Bit/Spencer ATV	Yes	0.56
XX11	Lower Dry Bread ATV	No	0.16
XX13	Dry Mitchell ATV	Yes	1.78
XX14	Dairy Wash ATV	No	1.07
XX30	Devils Hole ATV	No	1.80
XX32	Little Bear ATV	No	0.94
XX33	Dip Hollow ATV	No	2.53
20220	Public Grove 4x4	No	1.85
		Total miles	**12.40**

Routes XXX9, XX10, XX13 are located in an overstory of conifer or aspen and would be screened from the view of High and Moderate Concern Level travel ways. They would be compliant with a High and/or Moderate Scenic Integrity Objective (SIO) in a Natural Appearing landscape with appropriate mitigation.

The Lower Dry Bread ATV (XX11) trail is located adjacent to State Highway 39 (High Concern Level road in Developed Natural Appearing Landscape Character Theme (LCT) with High Scenic Integrity Objective (SIO) and runs parallel to the electrical transmission power line corridor (Natural Appearing LCT with a Moderate SIO) along a service road. The new motorized trail construction would occur near the toe of the slope of State Highway 39 on the west side of the road in aspen, and the remainder of the route follows the existing electric transmission line service road.

This area along State Highway 39 and along the electrical transmission line corridor is mapped incorrectly in the Revised Forest Plan (North Wasatch / Ogden Valley Scenery Management System map). The area is mapped as Natural Appearing LCT with a High SIO. The Revised Forest Plan clearly states that State Highway 39 (Forest Plan, p. 2-92) is a National Forest and State Scenic Byway and is managed within a ½ mile corridor of Developed Natural Appearing LCT - High SIO, and the electrical transmission line corridor is a 1-mile wide corridor managed as Natural Appearing LCT – Moderate SIO. Although the different LCTs and SIO seem to be in conflict, the intent is to manage activities and facilities associated with the electrical transmission line within a Natural Appearing LCT where the "existing landscape character has been influenced by both direct and indirect human activities, but appears natural to the majority of viewer…" (Forest Plan, p.4-95). The Moderate SIO is where "Noticeable deviations remain visually subordinate to the valued landscape" with cultural features that "harmonize with the surrounding landscape" (Forest Plan, p. 4-96). Since the service road will perform two functions, as service road and as a motorized travel route, this portion of the trail would comply with moderate SIO in a Natural Appearing LCT. Views of this section of the XX11 motorized trail are brief because the electrical transmission corridor is perpendicular to State Highway 39.

The proposed new construction portion of Lower Dry Bread ATV (XX11) will be screened by aspen and be below the view of travelers along State Highway 39 until the route intersects with the road. With appropriate mitigation this section of the road should be compliant with a High SIO in a Developed Natural Appearing landscape where "Deviation may be present but must repeat the form, line, color, and texture and pattern common…"to the LCT (Forest Plan, p. 4-97). The built feature of the motorized trail should "appear to be part of the natural appearing landscape by eliminating the geometry…" of the trail in the landscape.

Dairy Wash ATV (XX14) is located on the west side of State Highway 39 and runs approximately 1.1 miles in a Developed Natural Appearing LCT with a High SIO. Heading north for the first ½ mile, the new motorized trail is on the up hill slope in overstory vegetation and then moves to downhill side of the highway on the south end. At this point for approximately a 1/8 mile section the trail is in open mosaic of conifer and aspen and may be seen from State Highway 39 by travelers. The remainder of the trail is located in conifer and aspen and will be screened by this overstory vegetation. Using mitigation during construction of this trail and after the disturbed slopes have been re-vegetated the proposed Dairy Wash ATV trail

should be compliant with the High SIO of a Developed Natural Appearing landscape in the foreground view since a majority of the trail is located or screened in overstory vegetation.

Running south from Dock Flat the proposed Devils Hole Canyon ATV trail (XX30) meanders through a Natural Appearing LCT and High SIO of maple, oak, and conifer stands and open flats and side slopes. About 1/3 of this 1.6 mile trail is located in open grass flats and side slopes. This southerly portion of the trail can potentially be seen from Mantua Church Camp (XX31), a Moderate to Low Concern Level road. Most foreground views from Mantua Church Camp road would be screened by conifer and aspen patches that are adjacent to bought route XX31 and the ATV trail. Mitigation of establishing vegetation on the south facing slopes may take longer than other disturbed cuts and fills of the proposed trail, but should comply with the High SIO by following the contour of the landscape.

Connecting onto Forest Service Road #26018, the proposed Little Bear ATV trail (XX32) goes north along a flat open ridge line and drops through overstory vegetation where it connects into the Avon/Liberty road. Located in a Natural Appearing LCT and High SIO landscape the ATV trail may be seen in the foreground and middle ground from a private route to the northeast. By meandering the route along contour lines and through overstory the ATV trail should be compliant with the High SIO by following mitigation direction.

The Public Grove 4X4 (20220) route is an existing road for 2.9 miles on the east end. An additional 1.8 miles of new trail will be added on the west end. The proposed Dip Hollow ATV trail (XX33) connector loop, connects to the existing Public Grove 4X4 (20220) and Avon Gravel 1 to the Avon/Liberty road within a Natural Appearing LCT and High SIO landscape. The trail traverses hollows and ridges through mosaics of varying overstory and open slopes. Foreground intermittent views of the trail are seen from Public Grove 4X4 #20220 and Avon Gravel 1 #26473, both are Forest Service routes and have an existing Low Concern Level because of the amount and type of use. If this route is approved, the proposed trail and connecting routes would move up to a Moderate Concern Level travel way because of increase use. Using mitigation measures this route should comply with the High SIO of a Natural Appearing landscape.

Alternative 2

Under Alternative 2, there would be 206 miles of open road and 61 miles of open motorized trail within National Forest lands. Eleven miles of constructed motorized trail include the following routes:

Table 4.8.4.2.2 Proposed Constructed Routes Alternative 2

Route #	Proposed route name	Screened by overstory for entire route?	miles
XXX4	Tilda Spring 3 extension	No	0.72
XXX9	Running Water Ridge ATV	Yes	1.71
XX10	Six Bit/Spencer ATV	Yes	0.56
XX13	Dry Mitchell ATV	Yes	1.78
XX14	Dairy Wash ATV	No	1.07
XX30	Devils Hole ATV	No	1.80
XX32	Little Bear ATV	No	0.94
XX33	Dip Hollow ATV	No	2.53
XX34	Box Elder Creek ATV	Yes	1.24
6091	Inspiration Point	No	0.10
		Total miles	**11.50**

The effects are the same as Alternative 1, except the proposed Tilda Spring 3 extension (XXX4), Box Elder Creek ATV (XX34), and Inspiration Point (6091) are added and Lower Dry Bread ATV (XX11) is dropped. Route XX34 is located in an overstory of maple/oak and would be screened from the view of High and Moderate Concern Level travel ways and should be compliant with a High and or Moderate SIO in a Natural Appearing landscape with appropriate mitigation.

Tilda Spring 3 extension (XXX4) climbs the ridgeline from Tilda Spring 3 route #26003 to Davenport Hollow route #20196 in a Natural Appearing LCT and High SIO managed landscape. Both Davenport Hollow and Tilda Spring 3 have a Moderate Concern Level for scenery and are within the foreground of the proposed trail. The proposed trail begins at Davenport Hollow and meanders through sporadic overstory vegetation and sage covered slopes and is a continuation of the Tilda Spring 3 route #26. The duration of view of any disturbance created from construction would be very brief and should comply with a High SIO with mitigation applied.

Inspiration Point (6091) connects two exposed trails on the ridgline in a Natural Appearing LCT and High SIO where the geometry of the trail alignment would appear to be part of the landscape near the skyline. This new trail segment is extremely short and should comply with a High SIO in a Natural Appearing landscape with mitigation.

Alternative 3

Under Alternative 3, there would be 202 miles of open road and 35 miles of open motorized trail within National Forest lands. The five miles of newly constructed motorized trail includes the following routes:

Table 4.8.4.2.3 Proposed Constructed Routes Alternative 3

Route #	Proposed route name	Screened by overstory for entire route?	miles
XX11	Lower Dry Bread ATV	No	0.16
XX13	Dry Mitchell ATV	Yes	1.78
XX14	Dairy Wash ATV	No	1.07
6091	Inspiration Point	No	0.10
XX30	Devils Hole ATV	No	1.80
		Total miles	**4.9**

The effects are the same as Alternative 1 except, Running Water Ridge ATV #XXX9, Six Bit/Spencer ATV #XX10, Little Bear ATV #XX32 and Dip Hollow ATV #XX33 are dropped and Inspiration Point #6091 as analyzed in Alternative 2 is added.

Alternative 3a

Under Alternative 3a, there would be 208 miles of open road and 49 miles of open motorized trail within National Forest lands. The 7 miles of newly constructed motorized trails includes the following routes:

Table 4.8.4.2.4 Proposed Constructed Routes Alternative 3a

Route #	Proposed route name	Screened by overstory for entire route?	miles
XXX4	Tilda Spring 3 extension	No	0.72
XX11	Lower Dry Bread ATV	No	0.16
XX13	Dry Mitchell ATV	Yes	1.78
XX14	Dairy Wash ATV	No	1.07
XX30	Devils Hole ATV	No	1.80
XX34	Box Elder Creek ATV	Yes	1.24
6091	Inspiration Point	No	0.10
		Total miles	**6.77**

The effects are the same as Alternative 1 except, Running Water Ridge ATV #XXX9, Six Bit/Spencer ATV #XX10, Little Bear ATV #XX32 and Dip Hollow ATV #XX33 are dropped and Inspiration Point #6091 as analyzed in Alternative 2 is added.

Alternative 4

Under Alternative 4, there are 198 miles of open road and 46 miles of open motorized trail within National Forest lands. There would be no change in scenic integrity as mapped in the revised Forest Plan.

Table 4.8.4.2.5

Alternative	1	2	3	3a	4	5
Miles Road Opened	187	206	202	208	198	202
Miles Motorized Trail Opened	39	61	35	49	46	58
Trails New Construction*	10	11	5	7	N.A.	7
Roads New Construction*	N.A.	N.A.	N.A.	N.A.	N.A.	N. A.

*Miles of opened roads and trails on National Forest Lands

Alternative 5

Under Alternative 5, there would be 202 miles of open road and 58 miles of open motorized trail within National Forest lands. The 9 miles of newly constructed motorized trails includes the following routes:

Table 4.8.4.2.6 Proposed Constructed Routes Alternative 5

Route #	Proposed route name	Screened by overstory for entire route	miles
XXX4	Tilda Spring 3 extension	No	0.72
XX11	Dry Bread Loop ATV	No	0.16
XX13	Dry Mitchell ATV	Yes	1.78
XX14	Dairy Wash ATV	No	1.07
XX30	Devils Hole ATV	No	1.80
XX34	Box Elder Creek ATV	Yes	1.24
20220	Public Grove 4x4	No	1.85
6091	Inspiration Point	No	0.10
		Total miles	**8.72**

The effects for above mention routes would be the same as Alternative 3a with Public Grove 4x4 #20220 added as analyzed in Alternative 1.

4.8.4.3 Unavoidable Adverse Effects

With the implementation of mitigation measures and the continuing closure of illegal routes, no unavoidable impacts to scenic resource are expected.

4.8.5 Mitigation

To maintain or improve the integrity of the viewed landscape, trail construction should reduce or eliminate the geometry of constructed trails in landscape. Intersections should be at 90º wherever possible, the alignment of the trail should follow the natural contour of the landscape, cut and fill slopes should be kept to a minimum. Where cut slopes are required, lay back slopes, round or crush break lines at the intersection of disturbed soil, and seed with native grasses and forbs. Meander alignment of trail with long sweeping curves to help create interest and diversity in the view.

4.9 Effects on Private Lands, Permitted Uses and Fire Management

The purpose of this section is to describe the effects of alternatives on private lands, permitted uses and fire management activities on the Ogden RD.

4.9.1 Issues Addressed

Public and agency scoping, followed by Forest Service interdisciplinary team review identified the following non-significant issue. The issue did not drive the development of alternatives, but its effects across alternatives are tracked in this analysis.

- Legal access to private land, permitted special uses and forest administrative access (i.e. range use by livestock permittees or fire management) could be limited by the proposed action or alternatives.

4.9.2 Effects Analysis Methods and Assumptions

An evaluation of the intent of the Forest Service management and the intent of travel plan alternatives in relation to the private lands access, permitted uses, and fire management are considered in narrative form to determine what effect, if any, the alternatives would have on these uses.

4.9.3 Effects Common to All Alternatives

Effects on Private Lands - The District works with landowners on a case-by-case basis to achieve solutions for access that are appropriate based on Forest Plan management prescriptions and a demonstration of individual needs. Those decisions are not part of this travel plan analysis. However, keeping open existing access to these parcels has been built into each alternative. Access across private lands to access National Forest is under the jurisdiction by State or County government.

There are ongoing efforts in Cache and Box Elder County to designate public access across private lands that in some cases effect National Forests.

Permitted Uses – Each of these permitted uses is the subject of a separate NEPA analysis and accompanying decision document and public involvement process, as appropriate. Typically, access to sites for these permitted uses and use of roads or motorized trails is considered in those decisions. Decisions regarding access to these permits are not included in this analysis. However, existing access to these permitted uses is included in each alternative.

Range Allotments –Table 4.9.1 shows the existing miles of roads, motorized trails, and unauthorized routes on each allotment where travel plan decisions are being made. Several of the allotments on the Ogden RD are not displayed in the table because: 1) because the allotments are not grazed or are closed; or 2) because these allotments exist as isolated parcels of National Forest System lands surrounded by private lands and isolated from the major blocks of National Forest.

It is assumed that permittees currently use the roads and motorized trails listed in Table 4.9.1 as well as some of the unauthorized routes to get to areas in their allotments. The use of unauthorized routes by motorized vehicles for accessing livestock allotments is not approved by any alternatives presented in this analysis. This amounts to a closure and rehabilitation over time of a total of about 33 miles of unauthorized routes on allotments. It is expected that the ripping, reseeding and reclamation of these unauthorized routes could affect some permittees traditional access to livestock improvements if they were using motorized vehicles on these routes (which is currently not allowed).

District coordination with livestock permittees through annual operating plan meetings will discuss the rehabilitation of these unauthorized routes to ensure that permittees have adequate motorized access to their livestock operations and understand the intent of travel plan alternatives. Essential motorized Forest Service or permitted administrative access to allotments that are not open to the general public and not identified in the alternatives in this travel plan may be identified in individual allotment operating plans or permits.

Table 4.9.1 Current Miles of Roads, Trails and Unauthorized Routes in Ogden RD Grazing Allotments*

AREA OF RANGER DISTRICT Allotment Name*	Total Miles of Road	Miles of Roads Open to Public	Miles of Motorized Trails	Miles of Unauthorized Routes	Total Miles in Columns 2, 4, and 5 that have been used to access allotments
CURTIS CREEK					
Buck Springs	12.44	6.51	0.00	2.47	14.91
Bug Lake	14.15	11.24	0.00	1.65	15.80
Crawford Frazier	4.63	2.84	0.00	2.27	6.90
Davenport	0.00	0.00	0.00	0.00	0.00
North Randolph	21.28	8.06	0.00	.95	22.23
Pete's Hollow	.15	0.00	5.04	.44	5.63
Red Wells-Rock Creek	15.19	9.48	0.00	2.77	17.96
South Randolph	38.89	22.64	0.00	7.50	46.39
MONTE					
Blake Hollow	12.12	5.76	.49	2.14	14.75
Bountiful	11.55	9.53	0.00	2.83	14.38
Dairy Ridge	8.51	4.99	0.00	1.82	10.33
Dry Bread	10.93	7.69	1.34	1.45	13.72
Little Monte	8.33	4.90	0.00	3.25	11.58
Woodruff	6.40	1.85	0.06	1.35	7.75
PUBLIC GROVE					
Four Mile	.93	0.00	0.00	.68	1.61
Public Grove	15.64	7.87	0.00	1.63	17.27
WHEATGRASS					
Causey Creek	2.28	0.00	0.00	.20	2.48

*Allotments removed from analysis:

Blacksmith Allotment east of Hardware Ranch currently has no permittee.
Strawberry Allotment up at north end of Curtis is closed.
The Pole Canyon Allotment is an isolated parcel south of the Causey area and is closed.
The North Monte Allotment is three isolated 40-acre parcels between Monte and Curtis that are enclosed by private lands and not accessed by NFS roads.
The Dry Creek Allotment south of Snowbasin is an isolated parcel and is closed.
The Scare Canyon Allotment is an isolated parcel north of the Middle Fork Wildlife area and is closed.

Fire and Emergency Management Access – The Forest Service reserves the authority to use roads, trails or cross country access as needed for rescue or firefighting needs {26CFR251and 36CFR261.50(d)}. In general, motorized access will use established classified roads and trails before creating new routes or traveling cross-country. Helicopter or fixed-wing aircraft accomplish much of the emergency access and fire suppression activity to areas not accessed by roads or trails on the Ogden RD. Motorized access into the Upper South Fork Recommended Wilderness would only be allowed in life threatening situations.

Fire and emergency access would not be affected by any of the alternatives in this analysis.

4.10 Effects on Roadless Areas

The purpose of this section is to describe the effects of alternatives relative to motorized road and trail access on the wilderness attributes and the roadless area characteristics identified in Chapter 3 and in the revised Forest Plan FEIS.

Roadless areas can be affected by the construction or reconstruction of roads or motorized trails in the roadless area. However, identification as an inventoried roadless area in and of itself does not prohibit motorized uses or motorized trails or construction of trails or motorized trails.

Wilderness character, for example, would be affected by construction of roads or trails, since wilderness is in part defined by its roadless and non-motorized character. For roadless values not related to Wilderness, a non-motorized character is not always outside defined roadless qualities, although this point is often debated inside and outside the Forest Service.

One new road and one minor road realignment is proposed within an Inventoried Roadless Area (IRA) and only three new motorized trails are proposed. Forest Plan direction (including management prescriptions, standards and guidelines), the lack of perceived need to expand roads or motorized trails systems into roadless areas, and public sensitivity to impacting roadless areas with new roads or motorized trails are among the reasons for not proposing many new roads in roadless areas. This was a significant issue which drove the formulation of Alternative 1.

4.10.1 Issues Addressed

Public scoping and Forest Service interdisciplinary team review identified the following significant issue. The issue was instrumental in the development of Alternative 1, but its effects across alternatives are tracked in this analysis.

- The proposed action creates motorized access into inventoried roadless areas that may negatively affect their wilderness attributes and roadless characteristics.

Measurement Indicator: Narrative describing the effects on values identified in the Forest Plan Revision for both:
-wilderness attributes, and
-roadless characteristics.

4.10.2 Methods and Assumptions

As mentioned in Chapter 3, the Forest Service Intermountain Region has provided a template on how to consider effects to roadless areas in NEPA processes when doing project planning (Welsh, 2004).

In general, the overall effect of any kind of construction activity and the disturbances that result in new man-made structures (roads, buildings, trails) and modifications of ecosystem function within a roadless area may be negative with respect to its potential for Wilderness and to a lesser extent to general roadless area values.

The FEIS for the Revised Wasatch-Cache Forest Plan (USDA Forest Service, 2003) disclosed the existing motorized trails in inventoried roadless areas in Chapter 3, Topic 5 Wilderness Characteristics, Roadless Area Values, and Wilderness Management. See Table RA4 - Motorized System Trails in Inventoried Roadless Areas on page 3 – 299 for specific

information on motorized trails within inventoried roadless areas. 1) The Mollens Hollow IRA has 7 motorized trails and 7.5 miles of motorized trail within the roadless area; 2) The Willard IRA has 4 motorized trails and 8.0 miles within its boundary; and, 3) The Lewis Peak IRA has 6 motorized trails and 16.5 miles of motorized routes inside the boundary. The Sugar Pine, Burch Creek, Rock Creek – Green Fork, and Upper South Fork IRAs do not have any miles of existing or proposed motorized trails within their boundaries.

Alternative 1 maps show roadless areas superimposed as shaded areas on the travel system. Please note that the system roads that appear to be within the roadless areas on these maps are actually "cherry stemmed" into the area unless otherwise noted in the effects by roadless area section. That is, the roadless area boundary was drawn during the inventory process to exclude the road from the area providing a slight buffer between the roadless area boundary and the road. At the scale of the Alternative 1 maps this buffer is not visible.

For each roadless area during the Forest Plan revision and to comply with the Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000, GIS data layers were used to map the boundaries of each area. This GIS data was the best available data at that time. In the summer of 2004, an update to the road GIS data was completed. Any mileages of roads or trails within roadless areas are based on this new road data and the 1999 roadless boundaries. In most of the "cherry stem" road corridors into IRAs, minor changes in alignment occurred. Simply the result of the relationship between older GIS data layers for roadless areas and newer roads data (See explanation in Chapter 3, Transportation System). The effects analysis gives a count of how many times these kinds of data errors appear for each roadless area. The Wasatch-Cache National Forest will adjust these roadless boundaries at the earliest opportunity.

4.10.3 Direct and Indirect Effects

4.10.3.1 Effects Common to All Alternatives

As detailed in Chapter 3, Transportation Systems, new, more accurate data on the roads layer as it relates to existing data layers has created a need to correct GIS data on roadless areas, management prescriptions and other data layers. Correction of data related to roadless areas will make minor changes to roadless area acreages compared to those that were presented in Appendices C-1 and C-2 of the revised Forest Plan FEIS. This is an effect that is inherent in the development of new data and is not directly related to the proposals or alternatives in this analysis, but was discovered during this analysis.

Following that there is an explanation of errors related to the presence of mapped roads in the roadless areas, this section disclosed those errors occurring in each IRA.

The location of the proposed gravel pits and the improvements to the Concentrated Use Areas are not within any IRA boundary and therefore will not affect roadless values.

Effects on Mollens Hollow Roadless Area

There are two mapping errors associated with this roadless area: 1) showing a short section of administrative road near Thorsen Spring; and 2) a short section of road near Buck Spring, as within the roadless area. These will be corrected.

Effects on Rock Creek-Green Fork Roadless Area

There are three mapping errors associated with this roadless area: 1) a short section of administrative road in Green Fork; 2) a short section of new administrative road near Longhurst Spring; and 3) a section of the New Canyon Road. These will be corrected.

Aside from these three mapping errors, proposals for roads or motorized trails in this roadless area are the same in all alternatives, including No Action, and there are no new proposals for motorized trails or roads in the roadless area. The roadless area will remain heavily affected by existing road cherry stems. In all alternatives the less than one half mile of known unauthorized routes present in this roadless area will be closed and reclaimed over time.

This area will be improved by all alternatives relative to the wilderness attributes and roadless characteristics.

Effects on Upper South Fork Roadless Area

There are three mapping errors associated with this roadless area: 1) a short section of administrative road in Dry Bread Hollow; 2) a short section of road in Dry Bread Hollow; and 3) the Bluebell Flat road as in the roadless area. These will be corrected.

About 14,200 acres of the 17,200 acres of Upper South Fork roadless area were recommended for Wilderness in the Forest Plan Record of Decision. Under any of the alternatives in this analysis no new roads or motorized trails are proposed and there will be no effect on its Wilderness attributes. Similarly, none of the Upper South Fork roadless area roadless characteristics in the 3,000 acres outside the area recommended for Wilderness are altered by any alternative. Any unauthorized routes in the portion of the roadless area outside the Wilderness recommendation will be closed over time, and motorized mechanical means may be used. In that portion of the Upper South Fork roadless area within recommended Wilderness a minimum tool analysis will be done and unclassified routes closed and rehabilitated using non-motorized methods. In all alternatives the less than one half mile of known unclassified routes present in this roadless area will be closed over time.

This area will be improved by all alternatives relative to the wilderness attributes and roadless characteristics.

Effects on Burch Creek Roadless Area

There are two mapping errors associated with this roadless area: The first shows an administrative road in Uintah Highlands. This road was not included in the original data included in the Forest Plan roadless inventory and was discovered through the data updating contract. The second error shows a portion of a trailhead road at Beus Trailhead within the roadless area. These will be corrected.

There are no open motorized roads or motorized trails within this roadless area, and no alternative proposes any new open roads or motorized trails. In all alternatives there are approximately one mile of known unclassified routes present will be closed over time.

This area will be improved by all alternatives relative to the wilderness attributes and roadless characteristics..

Effects on Sugar Pine Roadless Area

There are three mapping errors associated with this roadless area: 1) a 1.4 mile section of administrative road in Cave Spring; 2) a .8 mile section of road in Dairy Ridge; and 3) a short section of State Highway 39 depicted in the roadless area. These will be corrected.

In all alternatives there are approximately 1.5 miles of unclassified routes present that will be closed over time. No new roads or motorized trails are proposed within this roadless area in any alternatives.

This area will be improved by all alternatives relative to the wilderness attributes and roadless characteristics.

Effects on Lewis Peak Roadless Area

There is one mapping error associated with this roadless area showing some of the North Ogden Pass power line road in the roadless area. This will be corrected.

In all alternatives there are approximately 1.5 miles of unclassified routes present that will be closed over time. No new roads or motorized trails are proposed within this roadless area in any alternatives.

This area will be improved by all alternatives relative to the wilderness attributes and roadless characteristics.

Effects on Willard Roadless Area

There is one minor mapping error with this roadless area that shows a short section of the main Willard road in the roadless area. This will be corrected.

4.10.3.2 Effects on Roadless Areas by Alternative

Effects on Mollens Hollow Roadless Area

There are three general areas in Mollens Hollow Roadless Area where different proposals exist across the alternatives: 1) Dry Gulch Road (20028) on the northeast side; 2) Zion Springs Road (20221) on the east side; and 3) in the Boundary Spring, Davenport Hollow, Tilda Springs area in the southwest corner of the area.

Dry Gulch Road is open in the existing condition (Alternative 4) and under Alternative 2 as a motorized road. Alternatives 1, 3, 3a and 5 close the road beyond where dispersed camping usually occurs. The situation with the Dry Gulch road is somewhat complex. The existing Travel Plan map shows an open road in the approximate alignment of route xxx2 shown on the analysis area maps. The GIS layer does not show any managed system roads here even though one exists on the ground. The GIS data will be corrected. For the purposes of disclosing effects to roadless characteristics, the analysis did not consider this to be a new road. This road is on the extreme eastern boundary of the IRA. It is extremely close to the main travel route through this area, Curtis Ridge Road (20069) which has a major effect to the solitude, primitive recreation opportunities and naturalness of the area. The Forest Plan does not show a cherry stem on this entire road. The effect to the wilderness and roadless character is a direct impact or improvement whether the road is closed or opened.

The Zion Springs Road (20221) is open in its existing condition (Alternative 4) to the Zion Springs area as a cherry stem that proceeds over a mile into the Mollens Hollow Roadless Area. Historic routes beyond this point are closed, and they have been closed for some time. The proposals for Alternatives 1 through 3a and 5 are all the same, that is, the Zion Springs Road will be closed to general public motorized access about a ¼ mile into the roadless area. At that point the road will be blocked, but the public will still have access to dispersed campsites located just outside the closure. Motorized Forest Service administrative use will continue beyond this point for resource management. The Zion Spring road extends well into the IRA in a cherry stem. Limiting travel to administrative uses will improve the adjacent lands wilderness and roadless characteristics.

In the southwest corner of the Mollens Hollow Roadless Area, alternatives focus on providing or not providing motorized trail systems for the area. The existing condition (Alternative 4) provides a motorized trail system for the area. In Alternative 1, the existing Boundary Spring, Davenport Hollow, and Tilda Springs trail system is fully converted to a non-motorized trail system. This will enhance the roadless characteristics and wilderness attributes. In Alternative 2, the trail system in the area is fully converted to a motorized trail system with new trails added to provide a loop experience from the Tilda Spring Overlook trail to the Davenport Hollow trail as well as open existing routes in this area. These motorized route extensions in the area provide additional motorized trail opportunities, including access to a scenic overlook from which the canyon of Mollens Hollow Research Natural Area (MHRNA) may be viewed; motorized travel beyond this point will not be allowed under any alternative. This alternative will have the greatest detrimental effect to roadless and wilderness values. Alternative 3 provides about the same opportunities for motorized trail use as Alternative 1, which will enhance the roadless values for this area. Alternative 3a and 5 provides a motorized loop trail opportunity as in Alternative 2, but does not provide motorized trail access to the MHRNA overlook or open the nearby existing routes. This will impact the roadless characteristics greater than the existing condition since additional mileage is added and a new loop may encourage an increase in use with its associated effects to sounds and sight from motorized recreation.

In Alternatives 3, 3a and 5 a reroute of the Buck Springs Road is proposed that will require road construction for a short distance along the southeast side and within the Mollens Hollow Roadless area (See maps.) This reroute is considered desirable for these alternatives, as it is intended to reduce impacts to boreal toad habitat and populations near Buck Springs. The existing road is the boundary of the Mollens Hollow Roadless Area and this reroute would move the boundary approximately 300 feet into the mapped area. The effect of this reroute to the roadless characteristics is a change of approximately six acres that does adjust the mapped boundary. This correction will be made by the Wasatch-Cache at the earliest opportunity after the reroute is constructed. These three alternatives, 3, 3a, and 5, also have a reroute of the motorized trail at Boundary Spring. The old trail next to the spring will be closed to motorized traffic but will still exist. This will have a slight detrimental effect to roadless characteristics here.

In the Forest Plan revision inventories of Wilderness and roadless values for Mollens Hollow were found to have low to moderate values for wilderness, except for those values associated with the intact ecology were the RNA is located. The area was not considered appropriate for wilderness recommendation during Forest Plan revision. Adding more miles of motorized trails in the southwest corner of the area will negatively affect any wilderness values there, but these values are not high. Alternatives that close off roads and motorized access along the east side will restore some of the area to non-motorized use and consequently improve overall wilderness characteristics.

With respect to roadless character and its associated recreation opportunities, the southwest corner of the area is currently intended for motorized trail use. Alternatives that increase motorized trail use through opening and/or building more trails can enhance this semi-primitive motorized trail experience. Conversely, alternatives that close motorized trails and convert them to non-motorized trails enhance that activity, at the expense of motorized users. Both motorized and non-motorized trails are allowed within roadless areas. Although, increasing motorized use decreases the more primitive roadless characteristics.

For effects on physical or wildlife resources refer to those sections in this chapter.

Effects on Sugar Pine Roadless Area

In all alternatives except the No Action Alternative (4), a short section of road on Eli Ridge that is currently open seasonally will be closed. This road is in a cherry stem and not inside the inventoried roadless area but vehicle uses here does have a detrimental effect from the sight and sound of motorized uses.

This road closure should have a positive effect on the attributes of the area as potential Wilderness by eliminating motorized use on it and will have similar effects on its inherent roadless character.

The Sugar Pine IRA has a medium ranking for roadless relative to the other Wasatch-Cache inventoried roadless areas as described in the FEIS for the Forest Plan. The opportunity for primitive recreation is low.

Effects on Willard Roadless Area

In every alternative except the No Action Alternative (4), The West Fork Willard Canyon Trail (6323) is converted into a non-motorized trail, reducing motorized effects to botanical communities and other resources for which this Special Interest Area was identified. There has been little demand for motorized use on this route, and it has been hard to maintain there because of the rocky, steep terrain. This will have a positive effect to roadless characteristics.

In Alternatives 2, 3a, 4 and 5 the 8-mile northern section of the Skyline Trail (Route 6001) that runs the length of the southern portion of the Willard roadless area from north Ogden Divide to Willard Peak is open as a motorized single-track trail. The trail will be closed only in the spring to protect wildlife. This trail is currently a motorized single-track trail within the Willard IRA. In Alternatives 1 and 3, the management of this trail will not change which will continue the detrimental effect of having a motorized trail inside this roadless area.

In Alternative 2 and 4 the Grizzly Peak 4x4 Road in the northern part of the roadless area is fully open or open for most of its length to motorized use. This road is within a cherry stem inside the inventoried roadless area however it is the only route in this general area. In Alternatives 1, 3, 3a, and 5 the Grizzly Peak 4x4 Road in the northern part of the roadless area is closed to motorized use. This road closure will enhance the roadless attributes for the Willard IRA.

The Box Elder Creek ATV trail will be a new motorized trail constructed in alternatives 2, 3a, and 5. The sight and sounds of motorized use in this drainage will have a detrimental effect to roadless and wilderness attributes in the northern portion of the Willard IRA. The other alternatives 1 and 4 will not construct this trail and will maintain the current roadless and wilderness attributes in the land between Perry Reservoir and the Brigham City Spring.

In Alternatives 1 and 3 the southern half of the Willard roadless area will be a roadless area where no motorized travel occurs, removing the sights, sounds and opportunity for motorized recreation. This occurs by closing the Skyline Trail (6001) to motorcycles and managing the trail as a non-motorized route. Alternatives 1 and 3 significantly enhance the Wilderness character of the southern half of this roadless area by removing motorized uses. Roadless non-motorized recreation characteristics are enhanced here also.

For Alternatives 2, 3a, 4 and 5 the Skyline Trail would remain open or seasonally open as a motorized trail. This will provide more recreation opportunities for motorized users but the detrimental effects associated with the sights and sounds of motorized use in this roadless area will continue.

As new motorized trail construction will occur in the Willard roadless area under some alternatives, effects to qualities identified during the Forest Plan inventories related to Wilderness potential or other inherent roadless characteristics will be affected very little. This is based on the current amount of motorized trail use in the Willard IRA. Alternatives where more of the area is open to motorized road or trail use will have a greater effect on Wilderness and primitive roadless character because of the accompanying sounds and sights of motor vehicles.

The FEIS for the Revised Forest Plan describes a medium level of roadless characteristics relative to the other IRAs in the Wasatch-Cache National Forest. Primitive unconfined recreation opportunities and solitude are limited.

For other effects on physical or wildlife resources refer to those sections in this chapter.

Effects on Lewis Peak Roadless Area

In all alternatives except Alternative 1, the 12-mile southern section of the Skyline Trail (Route 6001) that runs the length of Lewis Peak roadless area is open as a motorized single-track trail. This trail is currently a motorized single-track trail.

In Alternative 1 the area will be kept as a roadless area where no motorized travel occurs, removing the sights, sounds and opportunity for motorized recreation. Alternative 1 enhances the Wilderness character of the area by removing motorized uses. Roadless non-motorized recreation characteristics are enhanced also, but motorized single-track recreation is eliminated and this semi-primitive motorized opportunity is lost.

For Alternatives 2 through 5 this single-track motorized trail provides a motorized single-track recreation opportunity and its associated sights and sounds in this roadless area. Non-motorized values associated with Wilderness are lost with these alternatives and unchanged for roadless character.

The Lewis Peak IRA has a medium ranking for roadless characteristics relative to the other Wasatch-Cache inventoried roadless areas as described in the FEIS for the Forest Plan. The opportunity for primitive recreation is excellent but solitude is somewhat limited.

For other effects on physical or wildlife resources refer to those sections in this chapter.

4.11 Effects on ORV Business Environment and Social Setting

The effects of the alternatives on the ORV Business Environment or the effects on the social setting were not analyzed. See Chapter 1 (Table 1.6.1) and Chapter 3, Section 3.11 on the lack of significant issues and the current affected environment related to these topics.

4.12 Effects on Air Quality

The effects of the alternatives on Air Quality were not analyzed. See Chapter 1 (Table 1.6.1) and Chapter 3, Section 3.12 on the lack of significant issues and the current affected environment related to this topic.

4.13 Effects on Heritage Resources

4.13.1 Introduction

As stated in Chapter 3, road and trail construction or the reclamation and naturalization of areas formerly used as roads or trails can have negative effects on heritage resources by disturbing, displacing or destroying their contents

4.13.2 Issue Addressed and How Considered

New roads or trail reconstruction through known heritage resource sites may have negative effects on them.
A narrative consideration of the effects of the alternatives on known sites is provided.

4.13.3 Effects Analysis Methods and Assumptions

A review of the Wasatch-Cache National Forest site and project files for heritage resources was accomplished over the last year related to this project. Additionally, field surveys for sites along routes proposed for road or trail construction were also accomplished.

4.13.4 Effects Common to All Alternatives

A memo from the Utah State Historical Preservation Office dated October 22, 2004 stating that there will be no historic properties will be affected by this project (Utah Division of State History, 2004).

The decommissioning and reclamation of unclassified routes is provided for in all action alternatives. In all of these alternatives there is the possibility that heritage sites that have previously not been discovered could be affected by decommissioning work.

The field surveys discovered no new heritage sites, and the site and project file review determined only one area where proposed alternatives might affect a known heritage site.

Recently, the Forest Service developed a new policy entitled Draft Forest Service Policy for National Historic Preservation Act (NHPA) Compliance in Travel Management: Designated Routes for Motor Vehicle Use (12/07/04). This policy was prepared by the Washington Office of the Forest Service in consultation with the Advisory Council on Historic Preservation, and will apply to all national forests. All alternatives in this analysis, including the no action alternative will implement the conditions of this policy that include provisions for keeping vehicles on roads and trails, protecting historic properties, and monitoring the effectiveness of Travel Plan implementation for closing, opening, rehabilitating and constructing roads and trails.

The location of the proposed gravel sources and concentrated use areas will not likely have effects to heritage resources.

4.13.5 Direct and Indirect Effects of Alternatives

Alternatives 1, 3, 3A, 4, and 5 will have no direct effects on known heritage sites from construction of new roads or trails.

For Alternative 2, there could be disturbance or displacement of a known prehistoric site through proposed construction of a motorized trail.

4.13.6 Mitigation

Heritage site surveys will be completed prior to the reclamation of unclassified or classified roads and trails to determine if effects are possible to sites that might be discovered through these surveys. Prior to ground disturbance activities for the gravel sources or concentrated use areas, a final survey will be completed by the Forest Archeologist.

The requirements of 36 CFR 800 regarding identification, evaluation, assessment of effects, and if necessary, data recovery and site mitigation, will be followed to ensure that significant values of heritage resources are considered and protected. Consultations with the Utah State Historic Preservation Office will be undertaken as required.

Additional mitigation for this resource is found in Appendix D.

4.14 Cumulative Effects Analysis

4.14.1 Actions Considered in the Cumulative Effects Analysis

The National Environmental Policy Act and CEQ regulations for implementing NEPA direct federal agencies to consider cumulative effects of proposed actions. The regulations at CFR 40 1508.7 define cumulative effects as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable actions, regardless of what agency or person undertakes them.” The range of alternatives considered must include the no-action alternative as a baseline against which cumulative effects are evaluated. Cumulative effects result from spatial (geographic) and temporal (timing) concentrations of activities. The effects of human activities will accumulate when a second activity occurs at a site before the ecosystem can fully rebound from the effect of the first activity (CEQ 1978).

4.14.2 Past, Present and Reasonably Foreseeable Future Actions

District records and interactions with resource specialists developed the list of actions considered in this analysis. The cutoff for past actions was approximately 10 to 15 years, depending on the nature of the projects and their effects on the landscape. Future actions are those identified in planning schedules developed in response to Forest Plan objectives or known initiatives and opportunities. These actions are grouped into nine general categories: Livestock Grazing, Timber Projects, Wildland Fires and Suppression Activities, Prescribed Burns, Travel Plan, Riparian Fences and Improvements, Recreation, Treatments for Noxious Weeds, and Small NEPA projects. Small NEPA projects include actions of limited extent such as trail maintenance, races, campground water systems and facilities improvements.

Past Actions

Livestock Grazing
- Historic Livestock Grazing
- North Randolph Allotment EA (1988)

Timber Projects
- West Red Spur (1990), Roundup I (1991), Baxter-Sawmill (1994), Pole Canyon (1996), Roundup II (1995)

Wildland Fires and Suppression Activities

Prescribed Burns

Rock Creek Prescribed Burn (Ogden District, 1999)
Monte Cristo Prescribed Burn (partially burned in 2004 and 2005)

Travel Plan

The Travel Plan for the Ogden District was approved in 1991 and revised in 1997. Implementation of the provisions in the plan continues. Decommissioning of roads designated as closed in the Travel Plan will continue to take place through road obliteration, seeding, and signing.

Unauthorized use of roads and trails and creation of illegal trails by OHVs has occurred on the Ogden Ranger District for many years.

Individual road projects: Eli Ridge road termination (1991), Big Creek Road Realignment (1993) – response to timber development on private nearby lands, New Canyon Spur Road, temporary (1994), Public Grove Watershed Restoration, road closures (1999)

Riparian Fences and Improvements

Wheeler Creek (2005), Sugar Pine and Peggy Hollow (2000)
Red Rock Springs (partially completed in 2004)

Recreation

Anderson Cove Campground Reconstruction (1992), South Fork – closure of dispersed camping areas (1992), Snowbasin Land Exchange (1991), Snowbasin
developments, Phase I (1995-present), Pineview Reservoir (1998),
Ogden 29th Street Trailhead Development (late 1990's), Wheeler Creek Trail
Complex (2001), Beus Creek Trail Construction (1994)

Treatments of Noxious Weeds

Small NEPA Projects

Gravel sites: Elk Ridge/Bluebell (1997), Elk Ridge (1991), Curtis (1997)
Water storage and pipelines: Beus Creek (1994), Brigham City Birch Spring (2003), Uintah Highlands Waterline (1994), Old Canyon Pipeline (1991), North Otter Pipeline (1992)
Radio/Telecommunications: North Ogden Divide Optic Cable (2000), Monte Cristo Radio site, Weber Canyon Optic Cable (1999), AT&T Cable Removal (Hyrum-Randolph, 1998)
Other: State Road 39 rebuild at Pineview Dam and North Ogden Pass Divide reconstruction

Present Actions

See Chapter 3 for a description of current resource conditions and activities.

Road and Trail System

Current management of the existing road and trail system on the Ranger District.

Reasonably Foreseeable Future Actions

Range

Continued livestock grazing at approximately current levels and access patterns

Timber

Big Creek Vegetation Treatment (2007)

Prescribed Fire

Curtis Aspen Prescribed Fire (2007),
Completion of Monte Cristo Prescribed Fire (2006)
Uintah Highlands (2006)
Mountain Green (2007)
Snowbasin (2008)

Riparian Improvements
Red Rock, Ranger Hollow, Dry Fork, Randolph Creek riparian exclosures

Recreation
Front range non-motorized trails, South Fork campground complex waterline
Cemetery Point reconstruction, Anderson Cove group areas, Wheatgrass Wilderness proposal, Pineview summer home land sale, Snowbasin Master Plan amendment, Dispersed camping.

Special Uses
Tribe and Wangsgard Driveway Permit renewal, Pacificorp Weber Canyon Power line renewal,
Ogden - Pineview Yacht Club Permit renewal
Curtis Creek Warming Hut (2006)

Land Acquisition
Private in holding in the Willard Mountain & Public Grove Analysis area
Private in holding in the Curtis Creek Analysis area

Treatment for Noxious Weeds

Small NEPA projects

Continuation of existing special use permits, annual trail maintenance, road maintenance, and campground maintenance.
Temporary recreation events

4.14.3 Cumulative Effects on the Transportation System

Area of Consideration for Cumulative Effects – The area of consideration is the Ogden Ranger District.

Cumulative Effects on the Transportation System

This analysis considers the incremental effects of the 5 action alternatives when combined with the effects of the above listed past, present and reasonably foreseeable future actions on the managed system of roads and trails on the Ogden RD.

Access management on large blocks of property is a complex and evolving need. The Forest Service manages one of the largest systems of roads under one jurisdiction nationwide. The primary cumulative impacts to the transportation system can be summarized into the following categories:

- Travel Planning
- Timber Harvest
- Permittee access needs
- Adjacent private property access

Travel Planning – Past actions for travel planning go back to the original District Travel Map printed in 1980. Revisions to this plan have occurred in 1988 and 1991 where additional roads and motorized trails were added and others removed. Map reprints occurred in 1997, 2004 and 2005. Implementation of the travel plan has been an annual project. The maintenance and improvement to the signs, road maintenance, and enforcement of Federal Regulation violations occurs in various locations.

Timber Harvest - Common forest resources are managed as an available commodity that is produced by the Wasatch-Cache National Forest. A timber sale usually has the effect of adjusting the transportation system by adding new roads to access the targeted area. These roads can sometimes be temporary and not retained as a part of the Transportation System, a new road built to some level of Forest Service Standard, or an existing road improved to a higher level of maintenance standard to accommodate the commercial traffic. Commercial timber sales often have any new roads managed as administrative use only. The purchaser would be required to accept some maintenance responsibilities and the effected roads would have additional maintenance and may result in the roads being graveled or graded to allow a higher level of use, for example passenger cars or vans. At this time, two new timber sales are predicted in the Reasonably Foreseeable Future Actions listed previously. These will affect the transportation system.

Permittee access – Special use permits are issued on National Forest for commercial or private occupancy of National Forest system lands. The types of permits found on the District are described in Chapter 3.9.2 Permitted Uses. The roads created or used to access permitted activities are not limited to what is open to the general public. The permit operating plan or the permit description may authorize administrative use on or off a system road. The approval for use of heavy equipment by permittees, such as backhoes or crawler-tractors, is a common occurrence. Often a permitted activity will require an administrative road that must remain usable at all time but not necessarily open to public motorized use. An example of this is an access road underneath a high voltage power line. The terms and conditions of a grazing permit could approve administrative use in the annual operating plan. Any existing range improvement (fence, pond, cattle guard) needs maintenance at some point to keep it operational and may require motorized equipment. Water systems for municipalities along the Wasatch Front all have a need for periodic vehicle access and heavy maintenance that would require additional motorized access. Currently, no applications for a new long-term special use have been filed in our office.

Adjacent Property Access – This Ranger District has numerous privately owned in-holdings especially in the Curtis Creek area. Some of these are State Institute Trust Lands that may in the future be sold to private developers. Experience has shown that as owners of these parcels change, the new owner will reassess the need for access to the property through National Forest and will apply for a change to our road management. This may be in the form of a new road, a new closure, an upgrade to a system road, or a road easement.

In some cases, we acquire new lands that come with existing roads and access issues. The Snowbasin Land Exchange is an example of a past project that had effects to the transportation system. Future exchanges predicted for the Willard & Public Grove, Curtis Creek, and South Fork areas will have a minor effect to the transportation system.

4.14.4 Cumulative Effects on Watershed, Soils and Aquatic Resources

Area of Consideration for Cumulative Effects - The area of consideration is the Ogden Ranger District.

Cumulative Effects on Watershed, Soils and Aquatic Resources
Certain natural processes such as drought, wildfire, and flood are outside the influence of the Forest Service and have the potential to result in cumulative effects to aquatic resources, both negative and positive, across land ownership boundaries. It is difficult to predict effects to aquatic resources over the short- or long-term, whether direct, indirect, or cumulative, due to natural processes that operate at this spatial scale.

Existing conditions are the result of past and ongoing management activities such as forest roads, fisheries management, forest and rangeland management, as well as the natural processes discussed above. The interdisciplinary team identified past, present, and future ground disturbing activities. These are disclosed in detail at the beginning of this cumulative effects analysis. Given the nature of these activities, the primary cumulative impacts to the watershed, soil quality, aquatic habitat and aquatic/semi-aquatic populations can be summarized into the following categories:

- Historical and current livestock grazing
- Past, present and future roads and trails management
- Aquatic management (fishing, non-native fish introductions, boreal toad collecting)
- Timber harvest
- Fire (prescribed, suppression of natural and human-caused fire)
- Riparian fencing
- Water withdrawals
- Snowbasin Ski Area
- Dispersed recreation activities such as hiking and camping

Grazing - Grazing in riparian areas can have numerous direct and indirect effects on aquatic species including: reductions in abundance, habitat, and diversity (Platts and Nelson 1985). To reduce or eliminate both direct and indirect effects to aquatic species several grazing strategies have been implemented on the Ogden Ranger District. In addition, several riparian exclosures have been constructed to protect both BCT and boreal toad. These include fences at Sugar Pine Creek, Wheeler Creek, and Red-Rock Springs. Other fences have been constructed to improve riparian conditions.

High impacts to soil resources occurred from the late 1800s through the 1930s when active grazing management took effect in the area. A gradual improvement in land conditions have occurred as indicated by increased ground cover and absence of active soil erosion in most areas within grazing allotments.

Road and Trail Management - Erosion can be expected from roads and trails that are not adequately maintained. The Forest Service has relocated several of the roads on the District in the past, and proposes moving more under several of the alternatives to improve road conditions. Roads also provide access, and the activities that accompany access, and magnify their negative effects on aquatic habitats. Activities associated with roads within the analysis area include recreation, timber harvest, livestock grazing, prescribed fire, and fire suppression. In addition, roads provide an avenue for stocking non-native fish.

Unauthorized motorized roads and trails currently exist on the Ogden Ranger District. Some of these roads, due to poor locations and use under wet conditions, are eroded or rutted and are currently creating impacts to soil quality, water quality, and aquatic species. In addition, other illegal routes will likely be constructed by users. Many unauthorized roads and trails have been closed on the Ogden Ranger District and more will be will be closed and rehabilitated in the future as funding becomes available.

Aquatic Management - Impacts to BCT on the Ogden Ranger District from angling are likely limited. Popular fishing areas such as Pineview Reservoir, Causey Reservoir, and the Ogden River have small populations. A bigger concern is the introduction of rainbow trout, brown trout, and brook trout. These species are known to negatively affect BCT populations indirectly through competition for food and space, and directly through predation. In addition, rainbow trout are able to inter-breed with cutthroats creating hybrids. To help prevent introgression, the Utah Division of Wildlife Resources has stopped stocking viable rainbow trout in waters that support BCT. In addition, the UDWR and the Forest Service are working together to monitor BCT populations.

Boreal toads are slow moving and easy to catch. The public recently removed several from populations near Strawberry Reservoir. This is an illegal activity and can have dramatic effects on small populations. No known removals have occurred on the Ogden Ranger District, but this is an activity that is hard to document.

Timber Harvest - Much of the Monte Cristo area was harvested in the late 1800s. More recent timber harvest has occurred in the West Red Spur (1990), Roundup I (1991), Baxter-Sawmill (1994), Pole Canyon (1996), Roundup II (1995) areas. Riparian habitat conservation areas (RHCA) were used to protect riparian areas within harvest units. Currently, past harvest areas have been restocked and show very little soil erosion.

Fire - Effects of fire are difficult to predict due to the variation inherent to wildfires (intensity, size, location). Fire effects to vegetation and watersheds influencing hydrologic and temperature regimes and erosion may persist for years. Bonneville cutthroat trout populations have evolved with fire, and have developed characteristics that provide for resilience in the face of such events. However, they likely depend on large, well connected, and spatially complex habitats. In the case of small, isolated populations, wildfires could extirpate the entire population.

The Ogden Ranger District is currently treating several aspen units through the use of prescribed fire. All units have been analyzed for potential impacts to aquatic resources and the units have been modified to reduce/prevent any negative impacts from occurring.

Monitoring has shown that the Rock Creek and Monte Cristo burns followed the fire prescriptions determined for each area. Post burn monitoring of the Rock Creek burn revealed rapid growth of vegetation following the fire and no evidence was seen of erosion or sedimentation.

Riparian Fencing – Several riparian fences have been constructed on the Ogden Ranger District to protect aquatic resources from grazing and recreational impacts. Both Bonneville cutthroat trout (Wheeler Creek), and boreal toad (Red Rock Springs) have benefited from these projects.

Snowbasin - Post Olympic monitoring of construction projects at Snowbasin has shown that ground cover and soil erosion conditions are currently meeting Forest Plan standards and guidelines.

Dispersed recreation activities - While these activities may occur in association with roads and trails, it is not a reasonably foreseeable consequence of motorized use, nor is it likely to occur to any great extent. Accordingly, there is no practical to way to estimate or quantify where and how much dispersed camping use will be occurring.

Conclusions - To assess the cumulative effects for watershed and aquatic resources, the cumulative effects analysis area is the area within the sixth code subwatersheds that drains the road and trail system and the individual subwatersheds is shown in Appendix B. This area was chosen because the subwatersheds are a logical hydrologic unit at a scale where other past present and future activities will be able to be assessed along with the proposed action. Section 4.14.2 describes past,

present, and future activities that may have cumulative effects on water and aquatic resources. Past and present activities that have had the potential to decreased the quality of water and aquatic resources include livestock grazing, timber projects, wildland fires and fire suppression projects, prescribe fires, unauthorized roads and trails, dispersed and developed recreation. Many of these activities such as wildland and prescribed fire have short-term adverse effects, but in the long-term the vegetation recovers and the land returns to pre-activity conditions.

Past and present activities that have improved soil and water conditions are riparian fences and improvements, developed recreation site improvements, watershed improvement projects, and road closures and road improvements.

Existing conditions are the result of past and ongoing management activities such as forest roads, fisheries management, forest and rangeland management, as well as the natural processes. The Utah Division of Water Quality have sampled water in drainages within and downstream of the cumulative effects analysis area and have determined that the waters meet State water quality standards and fully meet their beneficial uses. Currently, water on the Ogden Ranger District is fully meeting its beneficial uses with the exception of Pineview Reservoir. This indicates that cumulatively the activities on Forest Service lands up to this point are not adversely affecting water quality.

Cumulatively, there will be very little effect of the proposed action or the alternatives on water quality or aquatic resources. This is because very little direct or indirect effects occur from the action alternatives compared to the no-action alternative. Although there are changes in the amount of roads between alternatives, very little direct or indirect effects occur because the roads already exist on the land and most roads are a long distance from water features, as they are high in the watershed. Even though new construction will be required for motorized trails under all alternatives, most of these trails are a long distance from water features, soil and water conservation measures such as mulching and seeding will take place to control erosion, and if any erosion occurs it will occur in the immediate area of the new trail and will be a short-term effect lasting for a season until vegetation establishes itself on the disturbed soil. Since there is very little change in the direct or indirect effects to water and aquatic resources, cumulatively, these effects will add very little to the total effect on these resources.

4.14.5 Cumulative Effects on Vegetation

Area of Consideration for Cumulative Effects – The area of consideration is the Ogden Ranger District.

This analysis considers the effects of the above listed past, present and foreseeable future actions on rare plants and noxious weeds.

Past Actions

Rare Plants - Personal communication with David Tait (BYU Graduate Student) with the Forest Botanist indicated that a portion of the *Draba burkei* population on Willard Mountain was eliminated by OHV use when the Skyline trail was created. In most cases off road use has not contributed to loss of or degradation of rare plant habitat, as these areas are at high elevation and beyond where motorized use has been allowed.

Noxious Weeds – Most of the above mentioned past projects have been identified to be contributors to noxious weed expansions both on and off the forest. Noxious weed expansion is a broad and common problem in this country that has only been brought to the forefront of management concerns in the last several years. The Wasatch-Cache National Forest is currently developing forestwide management that will address this problem.

Reasonably Foreseeable Future Actions

Rare Plants – If future recreation occurs at increased levels or intensity and is not channeled in high elevation ridgeline habitats, it could pose a threat to rare plants and their habitat on the Ogden Ranger District. The rest of the above mentioned management activities would have no cumulative effect to rare plants on the Ogden Ranger District.

Noxious Weeds - The above mentioned management activities together with the implementation of any of the travel plan alternatives have the potential to contribute to the expansion of noxious weeds. Mitigation actions to curtail and reduce weeds are included in any project analysis and implementation that are now undertaken to reduce this risk. Current efforts by the Wasatch-Cache National Forest in development and implementation of an Integrated Weed Management Plan will reduce the chance of spread and increase the chance of early detection and eradication. Due to mitigation applied to each travel plan alternative and all other foreseeable projects, it is anticipated that the cumulative effect of noxious weeds will be limited.

4.14.6 Cumulative Effects on Wildlife

The analysis of cumulative effects to wildlife has added considerations of Urbanization and Development of Adjacent Lands to the list of actions identified above.

Area of Influence
The area of influence for the cumulative effects analysis for wildlife is the area within the Ogden Ranger District for a majority of the species, though the management of adjacent lands may influence local populations of some species. Big game species such as deer and elk are managed by UDWR within harvest units which includes a portion of USFS managed lands and lands of other ownership (primarily private land ownership) (see Section 3.6 General Wildlife). For species with large home ranges/territories or that make large movements (e.g. lynx and wolverine), the area of influence is much larger than the Ogden Ranger District and includes adjacent lands. The Ogden Ranger District is located within a portion of a wildlife corridor that has regional importance in providing linkage to other larger habitat areas. This is especially true for forest carnivores such as the Canada lynx (see Section 3.6.2.3 Threatened, Endangered, Proposed, and Candidate Species).

Cumulative Effects on Wildlife
The interdisciplinary team identified the past, present, and future ground disturbing activities which, when combined with the proposed action or alternatives, could cumulatively affect wildlife and habitat within the analysis area. The major influences on wildlife and their habitats within and adjacent to the Ogden Ranger District have been livestock grazing (which has had an effect on cover, forage, and vegetation composition and species diversity), fire suppression (which has reduced the presence of early successional vegetation classes) and roads, trails, and recreation use (which has affected wildlife through disturbance). Because of the limited extent of occurrence of wildland and prescribed fire and timber harvest, these activities have had minor affects to wildlife within the Ogden Ranger District and adjacent areas.

Livestock Grazing
Historic records indicate that the number of sheep and cattle grazing this area 100 years ago were many times the number today. Historic livestock grazing at high levels has influenced wildlife habitat factors such as vegetation cover, forage, and species composition. A combination of livestock and big game grazing has influenced aspen regeneration and reduced the occurrence of fire in forested stands in the past. Historic livestock grazing has changed the understory species composition within stands. Past livestock grazing has created grazing-altered conditions such as the reduction of tall forb communities. Livestock grazing has reduced hiding and nesting cover for wildlife species that depend on cover for security. In general, livestock grazing has decreased vegetation structural diversity in portions of the area, particularly in riparian and aspen areas. A decrease in vegetation structure, species composition, and vegetation cover potentially decreases wildlife diversity and abundance.

Timber Harvest Projects
Overall, timber harvest has had a minor affect to wildlife in the area. The majority of the forest type is old or mature. Past conifer timber harvest most likely benefited species (those which prefer early successional stands) by the creation of openings and young conifer and aspen stands. This is especially true for species such as the snowshoe hare, which prefers young lodgepole pine stands.

Wildland Fire and Suppression Activities
Fire has had minor affect on wildlife in the area. Fire suppression has likely had the greatest affect by reducing the abundance of species that prefer early successional vegetation classes. Fire suppression has reduced habitat for wildlife species that utilize aspen. Prescribed fire and natural fire (including fire use) would benefit some wildlife species within the area by creating early successional stages and maintaining diversity in stand age and structure.

Prescribed Burn Projects
Overall, prescribed fire has had a minor affect to wildlife in the area. The majority of the forest type is old or mature. Past burns have benefited those species that prefer early successional stands. Prescribed fire and natural fire would benefit some wildlife species within the area by creating early successional stages and maintaining diversity in stand age and structure. Prescribed burn projects currently planned or proposed will begin the return a balance of successional stages moving the district closer to properly functioning condition (PFC).

Unmanaged Recreation
Currently unauthorized road and motorized trails occur within the Ogden Ranger District and affect wildlife species. These unauthorized routes and the associated human use can cause disturbance (noise and activity) to wildlife species, reduce habitat effectiveness, reduce security habitat, cause habitat fragmentation, cause direct mortality, change or remove vegetation used by wildlife for forage or cover, increase access for both legal and illegal shooting/trapping, and aid in the importation of weeds. Noise can affect the health, survivorship, reproduction, abundance, distribution of certain wildlife

species. Any unauthorized road or motorized trail not identified within the selected alternative within the travel plan will be closed in a timely manner to reduce impacts to wildlife. New unauthorized routes will be created and previously closed routes will be illegally used. A continous effort will need to be made to remove/restore unauthorized routes in order to reduce resource damage and impacts. It is difficult to assess the effects of illegal use on wildlife species and their habitat since it will vary by the location, amount, and duration of the illegal use. Illegal use could have a substantial effect on wildlife if not held in check.

Urbanization and Development of Adjacient Lands

Urbanization and development along the Wasatch Front (western portion of the district from Brigham City to Ogden) and within Ogden Valley and within Cache Valley have affected wildlife species, especially big game species dependent on winter range habitat.

The amount and quality of winter range for deer and elk is primarily the limiting factor for their populations. Continued development of adjacent lands will likely influence big game populations and habitat within the Ogden and Cache Harvest Units and to a lesser extent within the Morgan-South Rich Harvest Unit. Continued development of private lands stresses the importance of public lands for wildlife.

Appendix B displays the changes by alternative for miles of open road and motorized trail per square mile within sixth order watersheds within USFS managed lands. For some species, studies have shown a strong negative relationship between higher road density and species presence. The effects of urbanization and increased road densities within watersheds adjacient to USFS managed lands especially along the Wasatch Front (western portion of the district from Brigham City to Ogden) and within Ogden Valley have affected wildlife species and the movements of some species. Within some watersheds, road densities on private lands would likely exclude use by some forest carnivore species. Future development of adjacent lands will likely increase road densities within watersheds and could influence linkages within the wildlife corridor.

Riparian Fencing

Existing and proposed riparian fencing projects will improve vegetation/habitat conditions at the springs, wet meadows, and within riparian areas. These projects will improve water quality and wildlife habitat, thus benefiting many wildlife species (e.g. neotropical birds).

Recreation

Areas of extensive and/or concentrated recreational development (e.g. Pineview Reservoir and South Fork Campgrounds) have affected wildlife species by reducing or eliminating use for certain species within or adjacent to these areas. Our limited riparian habitat areas within the state are some of our most diverse and important areas for wildlife species (especially for neotropical birds). Many of our campgrounds have been developed within riparian areas and have likely influence species composition and diversity within these areas. Because of the importance of these areas, the forest plan limits development within riparian areas, thus limiting additional future effects to riparian habitat.

Snowmobile use can affect wildlife species, especially big game species on winter range. Many areas with wintering big game are restricted from snowmobile use, thus effects of snowmobiles within winter range are limited. Road and trail access and recreational use that results in snow compaction may allow ingress of coyotes into lynx habitat (linkage areas) resulting in increased competition for prey (Buskirk, et al. 2000). This is also likely for other forest carnivores such as the wolverine. In the July 3, 2003, U.S. Fish and Wildlife Service Notice of Remanded Determination of Status for the contiguous United States distinct population segment of the Canada Lynx (USDI 2003) states that there is no evidence of lynx being displaced by or avoiding forest roads. Also, there is no evidence of competition from other predators or competition caused by packed snow trails.

Hiking and mountain bike trails usually have reduced or minor effects to wildlife species compared to motorized uses, though this is dependent on the amount and location of use. The amount of vegetation/habitat directly affected by the trail is very limited. Wisdom, et al (2004) found that recreational activities have little difference in the measurable response during ATV, mountain biking, horse-riding, and hiking activities for mule deer. Wisdom, et al (2004) found that recreational activities have a substantial effect on elk behavior and that the reactions of elk were more pronounced during ATV and mountain biking activities, than those of horse-riding and hiking. Mountain bike activity is primarily associated with trails along the Wasatch Front, especially those near Snowbasin.

Land Exchanges

Past and proposed land exchanges typically have beneficial affects to wildlife species by consolidating lands into larger blocks: simplifying management and potential effects. In some of the past exchanges, the USFS has obtained more acres

than exchanged which usually benefits a greater number of species, though it is dependent upon on the specific habitat types being exchanged.

Treatment of Noxious Weeds
Existing and proposed noxious weed treatment projects will improve vegetation/habitat conditions for wildlife species. Loss of valuable wildlife habitat (e.g. big game winter range, riparian habitat) to noxious weeds can affect a range of species. These projects will improve vegetation conditions and wildlife habitat, thus benefiting many wildlife species (e.g. neotropical birds).

Miscellaneous Projects
Miscellaneous small projects such as gravel pits, communication towers, pipelines, and etc. usually have had minor localized effects on certain wildlife species, but the overall effects would be negligible as cumulative effects on wildlife.

Cumulative Effect
The effects of the actions of implementation of the alternatives for the travel plan and the cumulative effects discussed above (and within chapter 4 and appendix B) will affect species and their habitat. The degree of effect varies by species and by the specific alternative, but species viability will be maintained as require by NFMA within each alternative.

4.14.7 Cumulative Effects on Recreation

Area of Consideration for Cumulative Effects – The area of consideration is the Ogden RD.

Cumulative Effects on Recreation
This analysis considers the effects of the above listed past, present and reasonably foreseeable future actions for recreation activities on the Ogden RD.

Snowbasin Ski Area
Snowbasin Ski area has changed dramatically over the last ten years. The Snowbasin Phase I developments (1995-present), the land exchange, and the 2002 Winter Olympic Games were past actions that have had effects to the recreation activities on the District. In the case of the Ski Area developments, the amount of winter downhill skiers has increased each year and will likely continue to increase at a reduced rate. The Ski area also expanded into summer a operation that has increased the number of visits to the ski area. Lift served mountain biking has had an effect to the recreation occurring in and around the ski area.

Shoshone ATV trail
The naming of the Shoshone ATV trail in the Curtis Creek area and northward on the Logan Ranger District and adjacent BLM lands is not expected to change the use patterns, create new users, or commit to any construction or exceptional amount of annual trail maintenance. An estimate of the number of current visitors is being monitored with traffic counters and visitor counts. It is impossible to determine if the patterns of use are related to the naming of the Shoshone ATV trail or are a normal result of the increasing number of registered OHVs in northern Utah.

Foreseeable future actions could include with additional environmental analysis: opening new travel routes as proposed by the original Shoshone Trail map, improvements to identified parking facilities in the form of new signing or expanded parking, construction of new trailhead, further efforts to promote motorized recreation in the form of maps or media, and actions that would affect camping and picnicking, in both developed and dispersed sites. Some of these actions would likely occur off National Forest.

Trail maintenance and improvements
Past activities in trail maintenance and improvements have occurred primarily in the Ogden Front Analysis area. This includes additional trails in the Wheeler Creek drainages near Snowbasin and the Ogden City Front Range trails. Normal maintenance of trails occurs on a schedule defined by the management standard of the trail with high use, high standard trails receiving annual maintenance and low standard trails every five years. In 2004, the ORD completed a partnership agreement with Ogden City and Utah Parks and Recreation to acquire a SWECO brand trail machine. This small crawler-tractor is used to build new trails alignments and where conditions allow, maintaining existing trails. During the 2004 season, the trail cat was generally used in two areas, Wheeler Creek non-motorized trails and Tilda Springs ATV trails. The use of the trail cat will have the cumulative effect of widening the trail treads and clearing width and reduce the impacts from erosion by building bigger drainage structures and repairing erosion damage.

A foreseeable future action is analyses of trails in and around the Wasatch Front, from Weber Canyon north to Willard, with emphasis on the Bonneville Shoreline trail sections in South and North Ogden cities. This may occur with in the next two years. The cumulative effect of this action would be to slightly increase the system of trails managed by the ORD.

Dispersed Camping
The amount of dispersed camping on the Ogden RD either is generally confined to concentrated use areas or occurs primarily during the annual big game hunting season. An inventory of dispersed campsites was done in 1996 that is used to monitor dispersed camping. Two heavily used concentrated use areas exist on the Ogden RD. These are described in Appendix C as the Dock Flat and Dry Bread concentrated use areas. The effect of these concentrated dispersed sites is high amounts of compaction, damage to trees, sanitation impacts, and excessive trash and campfire residue. These two sites also have adjacent ATV opportunities and we have a proliferation of user created trails, hill climbs, noise, dust, and user conflicts.

Evidence of dispersed camping can be found along many of the forest roads on the Ogden RD. The 1996 dispersed inventory shows the vast majority of these campsites along maintenance level 3 system roads or in small clusters near roads. The high number of hunting camps in the Monte Cristo and Curtis Creek Analysis areas is notable. Observations indicate that most of these camps are only used during this time frame. The effect of dispersed camping on the transportation system is an increase or continuation of motorized uses from these camps. This would be in the form of access to and from these camps on system roads, ATV use of the roads and trails near these camps, and creation of unauthorized user created routes.

Cumulative Effect
Cumulatively, the actions describe above will have the effect of enhancing general recreation activities on the Ranger District This includes the action alternatives that change the transportation system and how the public will be allowed to use the routes.

4.14.8 Cumulative Effects on Scenery

Area of Consideration for Cumulative Effects – The area of consideration is the Ogden Ranger District and views from off Forest Service managed lands towards the Forest.

Effects of past, present, and reasonably foreseeable future actions
The previously listed past, present, and future actions are considered when combined with the alternatives that could cumulatively affect scenery within the analysis area. The major influences on scenery within and adjacent to the Ogden Ranger District have been timber harvest, prescribed fire, fire, roads, trails and recreation development that have the potential to change the vegetative cover and landform being viewed on the forest.

Roads, and trails provide a platform for people to access and view scenery on the Forest. Effects to scenery are going to be managed according to the guidelines provided in the revised Forest Plan for the area of the ORD (USDA Forest Service, 2003 pp. 4-91-103). Therefore cumulative effects on scenery are predictable within what those guidelines provide and are mapped for each management area on the ORD. Overall forest scenery will continue to be about what is viewable presently, however changes will occur in the landscape, primarily due to the accumulation of natural processes. Man caused changes to scenery will be very minor across the broader landscape.

4.14.9 Cumulative Effects on Private Lands and Permitted Uses

Area of Consideration for Cumulative Effects – The area of consideration for cumulative effects is the Ogden Ranger District, including private inholdings and private lands adjacent to the District.

As described in section 4.9 of this chapter, private property owners have the right of access to their land. Permitted uses must also be able to operate effectively for the authorized use. Currently there is no apparent increased demand for access for these uses above current levels. However, the sale, subdivision and development of state and private lands within or adjacent to the District could increase demands for access to those lands. Analysis of proposed roads and trails systems would need to be done to consider such new demands.

Except for the potential mentioned above, and considering the effects of the past, present, and reasonably foreseeable actions above, it is believed that over the next 5 to 10 years demands for private access and permitted uses will have little, if any, cumulative effect on private lands and permitted uses. The District will work with permittees, local governments and

landowners to understand and resolve access needs, and appropriate NEPA process and public involvement will accompany any decision regarding changing access for these uses.

4.14.10 Cumulative Effects on Roadless Areas

Area of Consideration for Cumulative Effects – The roadless areas on the Ogden Ranger District are the cumulative effects area of consideration.

General
The roadless areas on the Ogden Ranger District are largely roadless and undeveloped because there have been few attempts in the past to develop these areas due to their remoteness, lack of resources, or lack of interest and high cost of development. This will continue to be the case in the foreseeable future for these areas and there are no significant cumulative effects to roadless values. For the Upper South Fork recommended Wilderness, values for Wilderness are protected, and there should be no negative cumulative effects to these values in the foreseeable future.

The present alternatives for road or trail development in this travel plan in roadless areas are very minor or non-existent (See section 4.10 above). Similarly, of the projects listed above, few future actions in roadless areas is anticipated beyond current uses, except those that would tend to conserve or protect roadless values. Consequently, cumulative effects on roadless areas are anticipated to be negligible.

Livestock Grazing
Livestock grazing is likely to continue at approximately the same levels as it has occurred over the past decade. Most roadless areas on the eastern side of the district allow livestock grazing. Livestock grazing by itself does not compromise the general undeveloped values of roadless areas, however, the with respect to the various resources present within a roadless areas cumulative effects on them specifically can be found elsewhere in this cumulative effects section.

Timber Projects
Prior to the last decade new roads were sometimes planned so that timber harvest was conducted in roadless areas and roads were built to extract that resource. In the last decade no roads have been constructed in roadless areas.

A proposed vegetation treatment project in the Big Creek Watershed, Rich County includes roadless acres. At this time, the proposed action has not been developed and effects to Roadless, if any, are unknown.

Wildland Fires and Suppression Activities
In general, wildland fires are relatively uncommon on most of the Ogden Ranger District due to its high elevation, snow cover and relatively short fire season. Most of the acreage in roadless areas on the district also are at high elevation. Past policy on the Ogden Ranger District was generally to suppress human-caused and natural ignitions. More recently national fire policy has allowed for wildland fire use if appropriate prior planning for it is accomplished. In the future, natural fire starts are likely to continue at the same rate as they have historically, but suppression will occur depending on wildland fire use planning prescriptions, and may allow some fires to burn if they meet prescriptions that will help achieve Forest Plan objectives for vegetation, fuels, wildlife and rangelands.

Wildland fires are probably going to be allowed to burn more frequently in the future than they have in the past. The results will be changes to the vegetation mosaics, structure, and composition to try to trend these mosaics toward the historic range of variability for these vegetation communities.

Prescribed Burns
It is expected that prescribed burning will be more common in the near future than it has been in the recent past. This is due to the emphasis placed in the revised Forest Plan on this treatment type that can be used to help accomplish several Forest Plan objectives for vegetation, fuels, and rangeland management (USDA Forest Service 2003 pp. 4-29-32). Prescribed burning is applied to roadless areas, and is likely more common in these areas than where more development is present, as risks to infrastructure are lower. The cumulative effect of prescribed burning on roadless areas is likely to increase over the next decade as more treatments are applied. Some of the proposed treatment units in the prescribed burns on the future actions list above are within roadless areas. The results will be changes to the vegetation mosaics, structure, and composition to try to trend these mosaics toward the historic range of variability.

Travel Plan
In the past the current travel plan did not actively decide to close unauthorized routes. These has been some proliferation of these routes in roadless areas, which if not corrected can affect the undeveloped character of these areas.

The travel plan action alternatives in this document provide for closing any unauthorized routes in these areas over time. This should have the cumulative effect of improving the roadless values of these areas.

Beyond the direct effects for proposed motorized trail routes proposed by the alternatives in Section 4.10 Roadless Areas (above) there are no further planned changes to the Travel Plan for the Ogden Ranger District. Therefore, there would be no foreseeable future cumulative effects of road or trail construction beyond what is proposed in this document.

Riparian Fences and Improvements
The listed recent past Sugar Pine and Peggy Hollow and near future Red Rock Spring riparian fencing and improvement projects occur within the Sugar Pine Roadless area. These projects have been provided to ensure that wildlife habitat, vegetation, soil and riparian values are protected. Overall, these kinds of projects enhance natural ecosystem values and therefore, there should be no negative cumulative effects to roadless areas from this category of projects.

Recreation
The cumulative effects to recreation effects in roadless areas have been and should continue to be minor. In the past and in the foreseeable future most recreation in roadless areas is non-motorized and dispersed in nature – hunting, hiking, mountain biking and horse supported recreation on trails. In Alternatives 2 and 3, some motorized trails are provided in Mollens Hollow roadless area that was not present in the past. Similarly, the Buck Springs road realignment in Alternatives 3 and 3a to avoid boreal toads in Mollens Hollow has a minor direct effect, but no appreciable cumulative effect. In all other alternatives recreation opportunities are similar to those presently there, and no other anticipated changes to this are foreseeable.

Reasonably foreseeable future actions previously listed have proposed plans for improvement to trails in the Ogden Front trails which involve the Burch Creek and Lewis Peak roadless areas. The trail improvements will address the need for new trails, maintenance or realignment of existing trails, and management changes necessary to keep pace with changing user demands. The Wheatgrass Wilderness proposal would address the conversion of the Upper South Fork roadless area to a Congressionally Designated Wilderness. This plan would include a close look at the system of trails that currently exist in this area.

Treatments for Noxious Weeds
Past treatments for noxious weeds have not occurred in roadless areas in the past. Most noxious weed treatments occur near roads where larger infestations have occurred or can be most easily accessed.

It is likely that some future treatments of noxious weeds may occur in roadless areas as mitigation associated with the decommissioning and rehabilitation of unauthorized routes in these areas. The cumulative effect would be to restore roadless and natural values and reduce the occurrence of noxious weeds associated with decommissioning actions.

Small NEPA Projects
No past, present or reasonably foreseeable future small NEPA projects are present in roadless areas. Consequently, there is no cumulative effect to roadless areas from these projects.

Cumulative Effect
Cumulatively, the actions describe above will have the little effect to Roadless areas on the Ogden Ranger District. .

4.14.11 Cumulative Effects on Heritage Resources

Heritage resources effects are considered and mitigated most effectively at the site-specific scale. Only one heritage site is potentially affected by this travel plan, and those effects will be mitigated by compliance with regulations and policies. Large scale past actions (eg. development of Pineview Reservoir and major highway and road construction) surely did disturb valuable heritage sites, but much of this damage was done prior to the passage protective legislation and regulations. In the recent past, present and for foreseeable future actions potential effects will be dealt with through processes that consider and mitigate effects as required by law.

There should be no potential cumulative effects to heritage sites from this proposal in addition to those from past, present and other anticipated future projects.

4.14.12 Cumulative Effects on Air Quality

Meeting air quality standards is not a problem on the Wasatch-Cache National Forest, and there is no reason to expect problems in the near future. In the event that State of Utah air quality monitoring determines that forest management needs to change to address poor or deteriorating conditions, the Forest Service will work with the state to help achieve standards.

Potential cumulative effects to air quality from past and present Forest Service activities, including the alternatives presented in this proposal and other future activities are essentially non-existent.

Chapter 5
List of Preparers

The following are the members of the interdisciplinary team for the Ogden Travel Plan EIS.

Contributor	Education/Experience	Contribution
Michael Barry Wilderness and Trails Specialist W-C NF Supervisor's Office	B.A. Recreation, B.A. Forestry, 25 years experience with the Forest Service	Trails and Roadless Areas
Steve Blatt Wildlife Biologist Logan/Ogden Ranger Districts	B.S. Wildlife Management, 16 years experience in wildlife management.	Wildlife
Jim Chard Rangeland Management Ogden Ranger District	B.S. in Range and Soil Science, 26 years experience in range management with the Forest Service.	Range Management
Paul Chase Fisheries Biologist Logan/Ogden Ranger Districts	B.S., M.S. Fisheries and Wildlife Management, 5 years experience as a fisheries biologist.	Aquatic Resources
Charlie Condrat Hydrologist, W-C NF Supervisor's Office	B.S. Forestry, M.S. Watershed Science, 13 years experience with the Forest Service.	Hydrology and Watershed
Mike Duncan Botanist, Supervisor's Office	B.S. Botany, 5 years experience with the Forest Service	Botany,
Paul Flood Soil Scientist, W-C NF Supervisor's Office	B.S. Soil Science, 24 years experience with the Forest Service.	Soils
Dave Hatch Landscape Architect, W-C NF Supervisor's Office	B.L.A. in Landscape Architecture Environmental Planning, 14 years experience in the Forest Service	Scenery
Linda Ries Conservation Education, Intermountain Region	B.A in related aspects of forest management, about 15 years experience in the Forest Service in forestry and education	Editor Public Outreach
Sean Wetterberg NEPA Ogden Ranger District	B.S. in Forestry, 5 years experience in the Forest Service	NEPA Review Editor
Tom Scott NEPA and Social Science Ogden Ranger District	B.A. American History, M.A. Anthropology, 27 years experience with the Forest Service.	Team Coordination Roads Analysis
Tom Flanigan Heritage Program Manager Supervisor's Office	B.A., M.A. Anthropology, 4 years experience with the Forest Service as an archeologist.	Heritage Resources
Darcy Stock GIS Specialist Ogden/Logan Ranger Districts	Final year university student in Natural Resources Geography, 3 years of experience with the Forest Service	GIS Maps and Analysis
Chip Sibbernsen District Ranger Ogden Ranger District	B.S. Forestry 27 years experience with the Forest Service in forestry, recreation, and management	Forest Management Leadership
Rick Vallejos Recreation Forester Ogden Ranger District	B.S. Forestry, 25 years experience with the Forest Service in forestry, recreation, and special uses	Team Leader, Alternatives , Recreation

Intentionally left blank

Chapter 6
Consultation and Coordination

List of Agencies, Organizations, and Persons to Whom Paper Copies or CDs of the FEIS Were Sent

Federal Agencies

U.S. Department of Agriculture
National Agricultural Library
Natural Resource Conservation Service
USDA Animal and Plant Health Inspection Service
USDA Forest Service

U.S Department of Defense
U.S. Army Engineer Division
U.S. Coast Guard, Environmental Impact Branch

U.S. Department of Energy (USDOE)
Office of Environmental Compliance

U.S Department of Interior
Office of Environmental Project Review
U.S. Fish and Wildlife Service
Bureau of Land Management – Utah State Office

Environmental Protection Agency
Washington Office
Denver Office – Region VIII

American Indians
Shoshone- Bannock Tribe
Northwestern Band of Shoshone
Tribal Historic Tribal Preservation Office

Local Government

Utah Congressional Delegation
Congressman Rob Bishop
Senator Orrin Hatch
Senator Robert Bennett

State of Utah
Resource Development Coordinating Committee (RDCC)
Department of Natural Resources
Division of Wildlife Resources
Division of Parks and Recreation
Utah – Federal Highway Administration

County Governments
Cache County Commission
Rich County Commission
Weber County Commission
Box Elder County Commission

Libraries

Weber County Main Library
Ogden Valley Branch
North Branch
Brigham City Library
Colorado State University

Others

Many additional interested or affected individuals, businesses, and organizations received the Travel Plan Draft and Final Environmental Impact Statement for the Ogden Ranger District Revised Travel Plan.

Chapter 7
Literature Cited

36 CFR 212 Administration of the Forest Transportation System.

36 CFR 219.19(a) MIS

36 CFR Part 251. Land Uses. July 1, 2004. Subpart B - Special Uses. pp. 303-318. Washington. D.C.

36 CFR Part 261. Prohibitions. For prohibitions cited in current travel plan or that are available for areas designated by order, 261.50. Also. see 261.10 on illegal construction of roads and trails, etc., and 261.13 on use of vehicles off roads. Washington. D.C.

A

Apps, C.D. 2000. Space-use, diet, demographics, and topographic associations of lynx in the southern Canadian Rocky Mountains: a study. Pages 351-371, IN Ruggerio, L.F., et al. 1999. Ecology and Conservation of Lynx in the United States. University of Colorado Press, Boulder. CO.

B

Bearnson and Peck, L.C. Attorneys at Law. 2006, February 20. Letter regarding Section 31 Roadway, Box Elder County.

Bearnson and Peck, L.C. Attorneys at Law. 2006, February 7. Letter regarding Section 31 Roadway, Box Elder County.

Bearnson and Peck, L.C. Attorneys at Law. 2006, January 24. Letter and legal brief regarding Section 31 Roadway, Box Elder County.

Behnke, R.J. 1992. Native Trout of Western North America. American Fisheries Society: Monograph 6. Bethesda, MD.

Bissonette, J. A., L. J. Christiansen, and N. H. Smith. 1995. Final Report Franklin Basin (UT, ID) Wolverine Survey. Conducted for U. S. Forest Service, Caribou National Forest and Uinta and Wasatch-Cache National Forests, Idaho Department of Fish and Game and Utah Division of Wildlife Resources.

Blackwell, Boyde H., Pederson, Jordan C. 1993, February 19. Beaver Distribution, Habitat and Population Survey (1971-1982) Project Summary and Recommendations for Action. Utah Division of Wildlife Resources, Salt Lake City, Utah.

Bosworth, Dale. 2004, January 16. Four Threats to the Nation's Forests and Grasslands. USDA Forest Service, Washington D.C. and www.fs.fed.us/projects/four-threats/

Box Elder County 2004, September 10. Letter from Box Elder County to Chip Sibbernsen regarding their legal opinion on the status of roads that make up the Mantua Loop. Enclosures to the letter include Resolution #04-13 signed 5/25/2004 and the Box Elder County/Interagency Travel and Recreation Map.

Buskirk, et al. 2000. Cumulative impacts, Wildlife (page 4-71) steve said he's looking for this

Byrne, G. 1999. See Ruediger et al. below.

C

Campbell, J.B. 1970. Hibernacula of a population of Bufo boreas boreas in the Colorado Front Range. Herpetologica 25: 278-282.

Carroll, C., R. F. Noss, and P. C. Paquet. 2001. Carnivores as Focal Species for

Conservation Planning in the Rocky Mountain Region. Ecological Applications. 11:961-980.

Claar J. J., N. Anderson, D. Boyd, M. Cherry, B. Conrad, R. Hompesch, S. Miller, G. Olson, H. Ihsle Pac, J. Waller, T. Wittinger, and H. Youmans. 1999. Carnivores. Pages 7.1-7-63 IN Joslin et al. Effects of Recreation on Rocky Mountain Wildlife.

Clark, R.N. and G.H. Stankey. December, 1979. The Recreation Opportunity Spectrum: Framework for Planning, Management and Research. USDA Forest Service Pacific Northwest Forest and Range Experiment Station, General; Technical Report PNW-98.

Connelly, John W., Schroeder, Micheal A., Sands, Alan R. and Braun, Clait E. 2000. Guidelines to Manage Sage Grouse Populations and Their Habitats. Wildlife Society Bulletin 2000, 28(4):967-985.

Cook, J. G., B. K. Johnson, R. C. Cook, R. A. Riggs, T. DelCurto, L. D. Bryant, and L.L. Irwin. 2004. Effects of Summer-Autumn Nutrition and Parturition on Reproduction and Survival of Elk. Wildlife Monographs. 155:1-61.

Cowley, P. 2004, September 9. Aquatic Management Indicator Species. Technical Report.

D

Division of State History/Utah State Historical Society 2004, October 22. Concurrence letter from SHPO regarding affected historic property in the project area.

F

Federal Register 1977, May 24. 42 FR 269. 59. Executive Order 11989. Off Road Vehicles on Public Lands. Jimmy Carter.

Federal Register 2001, January 17 Wednesday. Vol. 66 No. 11 pp.3853-56. Executive Order 13186, 2001, January 10. Responsibilities of Federal Agencies to Protect Migratory Birds. William J. Clinton.

Federal Register 2003, July 3 Thursday. Vol. 68 No.128. USDI Fish and Wildlife Service Endangered and Threatened Wildlife and Plants; Notice of Remanded Determination of Status for the Contiguous United States Distinct Population Segment of the Canada Lynx; Clarification of Findings; final rule.

Federal Register 2004, March 31. Vol. 69, No. 2, p. 16889-92. Notice of Intent of to produce an Environmental Impact Statement for the Ogden Travel Plan.

Federal Register 2004, November 9. Vol. 70 No. 216 Rules and Regulations USDA Forest Service.

Federal Register 2005, November 9. Vol. 70 No. 216. 50 CFR Part 17 Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx; Proposed Rule.

Federal Register 2005, November 9. Vol. 70, No. 216, Wednesday, Rules and Regulations. pp. 68264-91. 36 CFR Parts 212, 251, 261, and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule.

Furniss, M.J., T.D. Roelofs, and C.S. Yee. 1991. Road Construction and Maintenance. American Fisheries Society Special Publication 19: 297-324.

G

Geisen, Kenneth M. and Connelly, John W. 1993. Guidelines for Management of Columbian Sharp-Tailed Grouse Habitats. Wildlife Society Bull. 21:325-333 (p325-333.)

Graham, R.T., R.L. Rodriguez, K. M. Paulin, R. L. Player, A. P. Heap, and R. Williams. 1999. The Northern Goshawk in Utah: Habitat assessment and management recommendations. USDA Forest Service General Technical Report Rocky Mountain

Research Station, Fort Collins, CO. GTR-22.

H

Hamann, B., H. Johnston, P. McClelland, S. Johnson, L. Kelly, and J. Gobielle. 1999. Birds. Pages 3.1-3.34 IN G. Joslin and H. Youmans, coordinators. The Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of the Wildlife Society. 307 pp.

Hasenyager, R.N. 1980. Bats of Utah. Utah Department of Wildlife Resources, Publication No. 80-15, Salt Lake City, Utah.

Haynes. 1992. Mountain goats (page 4-26)

Haysenager, Robert. 1999, December 12. Utah Division of Wildlife Resources, Northern Division. Managing for sustainable mule deer populations. Cache wildlife management unit (draft). With a cover letter dated 1/4/2000.

Hayward, G. D. and J. Verner, tech. editors. 1994. Flammulated, boreal, and great gray owls in the United States: A technical conservation assessment. Gen. Tech. Rep. RM-253. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experimental Station. 214 p. 3 maps.

Hickman, G.R., B.G. Dixon, and J. Corn 1999. Small Mammals. Pages 4.1-4.16 IN G. Joslin and H. Youmans, coordinators. The Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of the Wildlife Society. 307 pp.

Hill, Rebecca L. 2000. Suggestions for Conservation of the Three-toed Woodpecker Picoides tridactylus. Fishlake National Forest, Richfield Ranger District. 13 pp.

Hodges, K.E. 2000. The ecology of snowshoe hares in southern boreal and montane forests. Chapter 7 In: Ruggiero, L.F., K. B. Aubry, S. W. Buskirk, et al., tech. eds. 1999. Ecology and Conservation of Lynx in the United States. Gen. Tech. Rpt. RMRS-GTR-30WWW. Rocky Mountain Research Station, Forest Service, U.S. Department of Agriculture. Univ. Press of Colorado. Boulder, CO. 480 p.

Hogrefe, T. C., Bailey, Carmen L., Thompson, Paul D., Nadolski, Ben 2005 November. Boreal Toad (Bufo boreas boreas) Conservation Plan in the State of Utah (draft). Publication Number 05-37. Utah Division of Wildlife Resources, Salt Lake City, UT.

J

Janson Reuel. G. 2002. The Pygmy Rabbit from Utah to Montana. Montana Cooperative Wildlife Research Unit, University of Montana. Missoula, MT. 41pp.

Jones S. 1979. Habitat management Series for Unique or Endangered Species. Report No. 17. The Accipiters: Goshawk, Cooper's Hawk, Sharp-shinned Hawk. BLM Technical Note. 335. 55pp.

Joslin, G. and H. Youmans, coordinators. 1999. The Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of the Wildlife Society. 307 pp.

K

Kershner, J.L. 1995. Bonneville cutthroat trout. Pages 28-35 in M. K. Young, Tech. Ed. Conservation assessment for inland cutthroat trout. General Technical Report RM-256. Fort Collins, CO: U.S. Department of Agriculture, Forest

Koehler and Brittell. 1990. Canada lynx. (page 4-34)

L

Lengas Brad. 1994. A Survey of Bat Fauna of the Caves and Mines in Logan Canyon (Cache Co.) and Bat Cave (Weber Co.). Final Report. Wasatch-Cache NF, USDA Forest

Service. Utah. 32 pp.

M

Mcfetridge, Robert J. 1977. Strategy of Resource Use by Mountain Goat Nursery Groups. Proc. Int. Symp. On Mountain Goats 1:169-173.

McKelvey et al, 2000. Four Papers on Canada Lynx In Ruggerio, L.F., et al. 1999. Ecology and Conservation of Lynx in the United States. University of Colorado Press, Boulder. CO.

Mika, M. 2000. personal communication

Mika, M. 2003. Prey base differences and reproductive output of flammulated owls (Otus flammeolus) in northern Utah. Manuscript of a journal article submitted to the faculty of Brigham Young University in partial fulfillment of the requirements for the degree of Master of Science, Brigham Young University, Provo, Utah.

N

NatureServe. 2000, 2001, 2002. Web site: http://www.natureserve.org/.

O

Oleyar D. 2000, June. Flammulated Owl (Otus flammeolus) Breeding Ecology in Aspen Forests of Northern Utah: Including Responses to Ski Area Development. A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Raptor Biology, Boise State University.

Oleyar, David M. 1998 February 22. Annual Report: Flammulated owl nesting and productivity and disturbance Snowbasin Utah.

Oliver, George V. 2000, April 28. The Bats of Utah: A literature review. Utah Department of Wildlife Resources. Salt Lake City, Utah. Publication No. 00-14.

Olsen, R. and W.A. Hubert. 1994. Beaver: Water resources and riparian habitat manager. University of Wyoming, Laramie, WY.

P

Parrish J., F. Howe, and R. Norvell. 2002. Utah partners in flight avian conservation strategy version 2.0. Publication Number 02-27. Utah Division of Wildlife Resources. CD-ROM

Penner, David F. 1988. Report on the Behavioral Response and Habituation of Mountain Goats in Relation to Petroleum Exploration at Pinto Creek, Alberta. Bienn. Symp. North. Wild Sheep and Goat Council 6: 141-158. By David F. Penner. Penner and Associates Ltd., Sherwood Park, Alberta.

Perez-Losada Marcos, A. Nelson, and K.A. Crandall. 2004. Preliminary Phylogenic Study and Conservation Assessment of the Endemic Land Snail Oreohelix SPP. (Gatropoda: Pulmonata: Camaenidae) from Utah. 11pp.

Platts, W. S. and R. L. Nelson. 1985. Stream habitat and fisheries response to livestock grazing and in stream improvement structures, Big Creek, Utah. Journal of Soil and Water Conservation 40: 374-379.

Q

Quaelduling et. al. 1973. Mt Goats- from Schenck and Suring 1993

R

Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce, G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management Recommendations for the Northern Goshawk in the Southwestern United States. USDA Forest Service General Technical Report RM-217.

Richardson, A. H. 1971. Rocky Mountain Goats in the Black Hills. South Dakota Department of Game, Fish and Parks. Bulletin Number 2, Pierre, South Dakota, USA. Steve says he doesn't have the document?

Rowland, M. M., M. J. Wisdom, B. K. Johnson, and M. A. Penninger. 2004. Effects of Roads on Elk: Implications for management in Forested Ecosystems. Transactions of the North American Wildlife and Natural Resource Conference 69: in press.

Rowland, M. M., M. J. Wisdom, D. H. Johnson, B. C. Wales, J. P. Copeland, and F. B. Edelmann. 2003. Evaluation of Landscape Models for Wolverines in the Interior Northwest, United Sates of America. Journal of Mammalogy. 84(1). 92-105 pp.

Ruediger, Bill, Jim Claar, Steve Gniadek, Bryon Holt, Lyle Lewis, Steve Mighton, Bob Naney, Gary Patton, Tony Rinaldi, Joel Trick, Anne Vandehey, Fred Wahl, Nancy Warren, Dick Wenger, and Al Williamson. 2000. Canada lynx conservation assessment and strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Missoula, MT.

Ruggiero, L.F., K. B. Aubry, S. W. Buskirk, et al., tech. eds. 1999. Ecology and Conservation of Lynx in the United States. Gen. Tech. Rpt. RMRS-GTR-30WWW. Rocky Mountain Research Station, Forest Service, U.S. Department of Agriculture. Univ. Press of Colorado. Boulder, CO. 480 p.

Ruggiero, L.F., K. B. Aubry, S. W. Buskirk, et al., technical editors. 1999. Ecology and conservation of lynx in the United States. University Press of Colorado. Boulder, Colorado.

S

Schenck and Suring 1993. Mountain Goat Literature review.

Schenck T.E. and L.H. Suring. 1993 Conservation of Mountain Goats in Southeast Alaska: pages 240 thru 250 within A Proposed Strategy for Maintaining Well-Distributed, Viable populations of Wildlife Associated with Old-Growth Forests in Southeast Alaska. Interagency Committee Report by Suring et al. May 1993.

Sigler, W. F., and J. W. Sigler. 1996. Fishes of Utah: A Natural History. University of Utah Press. Salt Lake City, Utah.

Singleton, P.H., W.L. Gaines, and J.F. Lehmkuhl. 2002. Landscape permeability for large carnivores in Washington: a geographic information system weighted-distance and least-cost corridor assessment. Res. Pap. PNW-RP-549. Portland, OR. USDA, Forest Service, Pacific Northwest Research Station. 89 p.

Squires, J. 1999. Canada lynx. IN Ruediger et al.

Staples, W. R. 1995. Lynx and coyote diet and habitat relationships during a low hare population on the Kenai Peninsula, Alaska. M.S. Thesis, Univ. of Alaska, Fairbanks. IN Ruediger et al.

Stebbins, R.C. 1985. A Field Guide to Western Reptiles and Amphibians. Peterson Field Guides. Boston, MA

T

Thompson, P. 1999. Amphibian surveys in the Northern Region, 1998. Utah Division of Wildlife Resources. Annual Report. 13 p.

Thompson, P. and Chase, P. 2001. Boreal Toad (Bufo boreas boreas) Distributional Surveys and Monitoring in Northern Utah, 1999-2001. Publication Number 01-27. Utah Division of Wildlife Resources. Salt Lake City, Utah.

Thompson, P. and Chase, P. 2003. Boreal Toad (Bufo boreas boreas) Distributional Surveys and Monitoring in Northern Utah, 2003. Publication Number 03-43. Utah Division

of Wildlife Resources. Salt Lake City, Utah.

Thompson, P. and Chase, P. 2005. Boreal Toad (Bufo boreas boreas) Distributional Surveys and Monitoring in Northern Utah, 2004. Annual Report. Utah Division of Wildlife Resources. Salt Lake City, Utah.

Thompson, P. and Chase, P. and Nadolski, B. 2003. Boreal Toad (Bufo boreas boreas) and Spotted Frog (Rana luteiventris) Distributional Surveys and Monitoring in Northern Utah, 2002 . Publication Number 03-02. Utah Division of Wildlife Resources. Salt Lake City, Utah.

Thompson, P. and M. Smith. 2001. Bonneville cutthroat trout (Oncorhynchus clarki utah) surveys in the Northern Region, 2000. Publication Number 01-5. Utah Division of Wildlife Resources.

U

US Environmental Protection Agency 2004. The Plain English Guide to the Clean Air Act. Air Quality Planning and Standards. From website: http://www.epa.gov/oar/oaqps/peg_caa

USDA Forest Service 1980. May 1 Travel Map (Winter/Summer) and Special Order Signed by Chandler St John.

USDA Forest Service 1988. August 15, Revised Travel Map from 1980 signed by Dale Bosworth.

USDA Forest Service 1989. Threatened, Endangered, and Sensitive Plant Program Action Plan. Forest Service Intermountain Region. Ogden, Utah.

USDA Forest Service 1991. FSM 2621.1 Management Indicators

USDA Forest Service 1991. March 5, Revised Travel Map from 1988.

USDA Forest Service 1991. Forest Service Handbook 2309.18 - Trails Management Handbook. Washington D.C.

USDA Forest Service 1991. Forest Service Manual 2361. Wildlife, Fish, and Sensitive Plant Habitat Management

USDA Forest Service 1991. Susan Giannettino, Decision Memo authorizing the 1991 Travel Map.

USDA Forest Service 1992. Forest Service Handbook 7709.55 Transportation Management Planning Handbook.

USDA Forest Service 1993. Forest Service Handbook 1909.15.11 Environmental Policies and Procedures

USDA Forest Service 1997. Revised Travel Map from 1991. Wasatch-Cache National Forest, Ogden and Logan Ranger Districts.

USDA Forest Service 1997. Tongass National Forest Plan, FEIS. Tongass National Forest, Alaska Standards and Guides : NF Tongass Guidelines. XII Mountain Goat.

USDA Forest Service 1998. October 16. Snowbasin Possible Exchange Parcels, Devils Gate Valley. Internal Memo To: Doug Muir

USDA Forest Service 1998. Sub-Regional Assessment of Proper Functioning Conditions for Areas Encompassing the National Forests of Northern Utah. Unpublished manuscript on file at Wasatch-Cache National Forest. Salt Lake City, UT.

USDA Forest Service 1999. Endangered, Threatened and Sensitive Species of the Ashley, Uinta and Wasatch-Cache National Forests (Northern Utah Ecoregion). Wasatch-Cache National Forest. Salt Lake City, Utah.

USDA Forest Service 1999. Forest Service Manual 2600 Wildlife, fish,and sensitive plant

habitat management

USDA Forest Service 2000. Utah Northern Goshawk Project Decision Notice: Finding of No Significant Impact, Finding of Non-Significant Amendment. Manuscript on file at Wasatch-Cache National Forest, Salt Lake City, UT. Steve thinks its from Julies paragraph on viability and he said he'd help find the spot to put the citation in the text.

USDA Forest Service 2002. Report to GYCC. Wolverine natal denning habitat mapping and field surveys, Caribou-Targhee National Forest.

USDA Forest Service 2002. October. Road Analysis for the WCNF.

USDA Forest Service 2002. Roads Analysis for the Wasatch-Cache National Forest. Wasatch-Cache N.F. Salt Lake City, UT.

USDA Forest Service 2003. Final Environmental Impact Statement for the Forest Plan revision Appendix B-2 Terrestrial Diversity and Viability.

USDA Forest Service 2003. Final Environmental Impact Statement for the Forest Plan revision Appendix E: Vertebrate Wildlife Species of the Wasatch-Cache National Forest.

USDA Forest Service 2003. Forest Service Manual 2350, 2352, 2353 and 2355, Policies for managing forest trails, rivers, and similar recreation opportunities

USDA Forest Service 2003. Forest Service Manual 7700, 7710 and 7730 Provides policy for transportation planning.

USDA Forest Service 2003. Soil Management Handbook, FSH 2509.18, Section 2.2 Soil Quality Standards. Wasatch-Cache National Forest, Salt Lake City, UT.

USDA Forest Service 2003. Wasatch-Cache National Forest Plan FEIS, and Record of Decision, Wasatch-Cache National Forest, Salt Lake City, UT.

USDA Forest Service 2003. Wasatch-Cache National Forest Plan, Wasatch-Cache National Forest, Salt Lake City, UT.

USDA Forest Service 2004. Forest Plan Monitoring Wasatch-Cache National Forest- First Year Report: March 2003-March 2004. Salt Lake City, UT.

USDA Forest Service 2004. Memorandum of Understanding Concerning Off-Highway Vehicle Management Between State of Utah and USDA Forest Service, Intermountain Region and USDI Bureau of Land Management. FS#04-MU-11046000-019.

USDA Forest Service 2004. Revised Travel Map from 1991 reflecting 2003 Wasatch-Cache National Forest Plan changes.

USDA Forest Service 2004. February 23. Cowley, Paul and Williams, Rich. Revision of species at risk list.

USDA Forest Service 2004. February 9. Condrat, Charlie, Wasatch-Cache NF hydrologist. Personal communication with Tom Toole, Utah Division of Water Quality regarding the impairment status of the North Fork of the Ogden River.

USDA Forest Service 2004. Forest Service Manual 1925.04, Interim Directives for Timber Harvest and Road Construction in Inventoried Roadless Areas.

USDA Forest Service 2004. January 15. Blatt, Steve. Summary of Winter Surveys for Pygmy Rabbits on the Ogden Ranger District, Wasatch-Cache National Forest, Ogden, Utah. 1p.

USDA Forest Service 2004. January. Road Analysis for the Ogden Ranger District, Wasatch-Cache National Forest.

USDA Forest Service 2004. July 30. Welsh, Randy. Forest Plan and Road Analysis Status Checklist for Roadless ID. 7.30.04. First three pages. 10/12/2004- last 10 pages.

USDA Forest Service 2004. June. National Visitor Use Monitoring (NVUM). Washington

Office.

USDA Forest Service 2004. May 5. Survey questionnaire of the ATV and service industry along the Wasatch front. Wasatch-Cache National Forest, Ogden, Utah.

USDA Forest Service 2004. National Strategy and Implementation Plan for Invasive Species Management. FS-805.

USDA Forest Service 2004. November 30. Vertebrate Wildlife Species of the Wasatch-Cache National Forest.

USDA Forest Service 2004. Wasatch-Cache National Forest Weed Strategy. Wasatch-Cache National Forest. Salt Lake City, Utah.

USDA Forest Service 2005. Blatt, Steve. Location of Bald Eagle Surveys (Map) 2002-2005.

USDA Forest Service 2005. Forest Plan Monitoring Wasatch-Cache National Forest- First Year Report: March 2004-March 2005. Salt Lake City, UT.

USDA Forest Service 2005. August 31. Management Indicator Species of the Wasatch-Cache National Forest. Salt Lake City, UT Version 2005-2.

USDA Forest Service 2005. June. Analysis of beaver on the Ogden Ranger District-Beaver Survey Write-ups for the Ogden Ranger District.

USDA Forest Service 2005. November 23. Cover letter for the BE/BA from Chip Sibbernsen to Henry Maddux (USFWS) requesting concurrence on the USFS findings for threatened, endangered, candidate and proposed plant and animal species. The letter includes the USFWS NE/NLAA stamp of concurrence.

USDA Forest Service 2006. January 31. Response letter from Chip Sibbernsen to Brandon J. Baxter of Bearson and Peck, L.C. regarding the Selman property in Box Elder County.

USDI Fish and Wildlife Service 2002. November 6. Letter to Thomas Tidwell from Henry Maddox regarding Canada Lynx Habitat and Lynx Analysis Unit Mapping for Utah Forests.

USDI Fish and Wildlife Service 2004. Federally listed and proposed endangered, threatened and candidate species and habitat in Utah by county as of May 2004.

USDI Fish and Wildlife Service 2005. September 14. Recovery Outline. Contiguous United States Distinct Population Segment of the Canada Lynx. Approved by Sharon R. Rose, Acting Deputy Regional Director, USFWS, Denver, Colorado. 21 p.

Utah Department of Motor Vehicles 2004. ATV registrations 1998-2004

Utah Division of Wildlife Resources 2002. A report on Guidelines for management of Columbian Sharp-tailed Grouse Habitats. 14 pages.

Utah Division of Wildlife Resources 2002. GIS Data CD-ROM. State of Utah Natural Resources, Division of Wildlife Resources Utah Data Conservation Center Maps of historic species locations http://dwrcdc.nr.utah.gov/ucdc/

Utah Division of Wildlife Resources 2003. Adam Kozlowski- pygmy rabbit survey results.

Utah Division of Wildlife Resources 2003. December. Vertebrate Information Compiled by Utah Natural Heritage Program. A Progress Report. UDWR Publication #03-45. CD-ROM

Utah Division of Wildlife Resources 2003. Mclaughlin, Craig. The Future of Grey Wolves in Utah. Wildlife Review.

Utah Division of Wildlife Resources 2003. personal communication with Dennis Austin about pygmy rabbit

Utah Division of Wildlife Resources 2004 Austin, Dennis. Breeding Bird Survey- Route Summary Report.

Utah Division of Wildlife Resources 2004. Peregrine Falcon Database. CD-ROM

Utah Division of Wildlife Resources 2004. Summarized Bird Data. Austin, Dennis.

Utah Division of Wildlife Resources 2004-2005. Furbearer Proclamation. Pamphlet/flyer from State of Utah.

Utah Division of Wildlife Resources 2005. Justin Dolling. Data on Deer, Elk, and moose for Table 3.6.5. Personal Communication.

Utah Division of Wildlife Resources 2005. personal communication with Ron Greer-sage grouse. Table.

Utah State Parks and Recreation 2003. August 12. Shoshone Trail Map.

Utah, State of, 2004. Utah's Long Term Projections. (Population) Economic Report to the Governor. www.governor.state.ut.us/dea/ERG2004, p. 23.

Utah, State of. 2000. Standards of Quality of Waters of the State, Section R317-2, Utah Administrative Code. Utah Department of Environmental Quality, Division of Water Quality.

Utah, State of. 2002. Utah Water Quality Assessment Report to Congress 2002. Utah Department of Environmental Quality, Division of Water Quality.

V

Varley, Nathan. 1998. Report on Winter Recreation and Human Disturbance on Mountain Goats: A Review. From Northern Wild Sheep and Goat Proceedings 1998. Symbiosis Consulting, Yellowstone National Park.

W

Waller, A. J., C. A. Sime, G. N. Bissell, and B. Dixon. 1999. Semi-aquatic Mammals. Pages 5.1-5.25 IN G. Joslin and H. Youmans, coordinators. The Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of the Wildlife Society. 307 pp.

Welsh, R. 2004. July 30. Forest Plan and Road Analysis status checklist for Roadless identification.

Welsh, R. 2004. October 12. Suggestions for analyzing the effects to wilderness potential from project activities within Inventoried Roadless Areas. White paper. USDA-Forest Service, Intermountain Region, Ogden, UT.

Welsh, S.L., N.D. Atwood, S. Goodrich and L.C. Higgins. 1987. A Utah Flora Great Basin Naturalist Memoirs No. 9. Brigham Young University. Provo, Utah.

Wigal R.A. and V.L. Coggins. 1982 Mountain Goat: pages 1008 thru 1020 within Wild Mammals of North America by J.A. Chapman and G.A. Feldhamer. John Hopkins Press Ltd., London.

Wisdom, M. J., H. K. Preisler, N. J. Cimon, B. K. Johnson. 2004. Effects of Off-Road Recreation on Mule Deer and Elk. Transactions of the North American Wildlife and Natural Resource Conference 69: in press.

Wolfe, M.L., N.V. Debyle, C. S. Winchell, and T. R. McCabe. 1982. Snowshoe cover relationships in northern Utah. Journal of Wildlife Management 46: 662-670.

Intentionally left blank

Chapter 8
Response to Comments

This chapter provides the Forest Service response to comments received during the draft Environmental Impact Statement comment period and gives reference to additional clarification in the FEIS (where provided).

A Notice of Availability was posted in the Federal Register for the Draft Environmental Impact Statement (DEIS) for the Ogden Travel Plan revision on January 14, 2005. The comment period was extended to 75 days from the published notice. Copied of either the printed copy with maps or a Compact Disc version were mailed to approximately 390 interested parties. This included local, state, and federal agencies.

One hundred and twenty four written comments were received which contain approximately five hundred and sixty five separate comments. The comments were summarized as shown in this chapter. Each comment was categorized into a resource content area. The Forest Service Interdisciplinary Team member for each resource reviewed the comment summary and responded to that comment. That response is also shown in this chapter. The original letters were available to the Interdisciplinary Team member for clarification.

All summarized comments and responses are included in this chapter for public review. Individual letters are on file in the project record.

Changes in the Final Environmental Impact Statement (FEIS) were based on the comments received on the DEIS and further analysis by the Forest Service. The changes in response to comments included addition of another alternative and analysis of its estimated effects. The changes also include clarification of route miles in this analysis, MIS trends, additional information on monitoring and mitigation, additional effects analysis, and minor editing changes.

Letter		Name	Location	Summarized Comment	Response to Comment
1	1	Chris Bolieau	Box Elder Ck	Widening Route #26010 (Box Elder Ck) for safe, two way traffic would cause more severe erosion than is taking place now	FEIS section 4.4.4 discloses the effects of soil erosion from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be managed to Forest Service standards to properly drain trail surfaces and minimize the potential for erosion. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.
1	2	Chris Bolieau	Devils Hole Canyon	Does not want XX30 Devils Hole Canyon ATV Trail to be constructed so that it follows the old path from Upper Dock Flat down to the beautiful, quiet, fragile place in the bottom of the canyon.	The FEIS Alternative maps indicate the general route for road XX30 will leave Upper Dock Flat and climb uphill to an intersection with the Mantua Church Camp Road near its intersection with the Willard Mountain Road (20084), thereby avoiding the riparian areas in the bottom of Devils Hole Canyon.
2	1	Daniel Wynn	Zion Spring Rd	Do not want to see Zion Spring Road made administrative. Point where road would be closed is not a good trailhead location for day hikes.	Administrative use will allow hiking on the road. A trailhead is not needed for this road since the amount of use is expected to be low.
2	2	Daniel Wynn	Curtis Ck	Need to enlarge parking are at junction of FR59 and SR39.	The junction of the State road 39 and Curtis creek road is on private property. The Forest Service has an easement on Curtis creek for the three miles to Forest Service property which would allow some roadside parking. The Utah Dept of Transportation enlarged the side of the State Highway in 2004 which enlarged the parking for trailers at this point.
3	1	Jason Wooden	Public Grove	Alternative. 2 provides for better recreational use of Public Grove	Thank for your comment.
3	2	Jason Wooden	Public Grove	Does not want any seasonal closures of roads or trails under Alternative 2 in the Public Grove area.	The FEIS Alternative maps and FEIS table 2.7.2 indicate that no Public Grove area roads and trails will be subject to seasonal restrictions on use.
3	3	Jason Wooden	Willard/Grizzly	Closing Grizzly Peak road will meet with resistance.	Thank you for your comment.
3	3	Jason Wooden	Grizzly Peak Rd	This closure will be met with much resistance	Thank you for your comment.
3	4	Jason Wooden	Curtis Ck	Alternative. 3a does not provide for enough loops in the Curtis Ck area	Thank you for your comment. Reference Alternative 2 for additional loop trails in the Curtis Creek area.

4	1	Burt Lamborn	Willard Road	Goats are not native and the seasonal closure in 3a is not needed	There are questions regarding whether mountain goats were native to Utah and if so where, but regardless the US Forest Service is required to manage habitat for native and desirable non-native species. Additional information has been added to the FEIS with regards to the effects of disturbance.
5	1	Rick Golde	General	Alternative 1 is far too restrictive	The FEIS offers a range of Alternatives as required by NEPA.
5	2	Rick Golde	Willard Road	Would like to see more loop trails similar to what is proposed for the Willard--Public Grove area.	The FEIS describes a range of Alternatives with various loop trails.
6	1	Gene Poncelet	Skyline Trail	Wants to see the trails to Ben Lomond and Lewis Peak left open	The FEIS describes a range of Alternatives for the Skyline and Lewis peak trails. The Skyline trail will be closed until July 15 and open until November 15 each year.
7	1	Rick Golde	General	Email wanting to meet to discuss Alternatives	Met on March 9th, 2005
7	2	Rick Golde	General	In reviewing the Alternatives Comparison table it is clear that there is a disproportionate slant toward non-motorized trails. The slant is unfair.	The FEIS describes a range of Alternatives for motorized and non-motorized recreation.
7	3	Rick Golde	Devils Gate/Rocky Dugway	Any trails that are opened across private land should be patrolled utilizing volunteer user groups	Thank you for your comment. The Final EIS describes using a volunteer user group is an important effort.
8	1	Dennis Bingham	General	The Forest Service should be very careful before adding new motorized opportunities. Forest environments are very fragile and given the increase in population and demand motorized travel routes need to be kept to the minimum.	The FEIS describes a range of Alternatives for motorized and non-motorized recreation in section 2.4 Alternatives Considered in Detail. The effects of additional motorized use are described in Chapter 4.
9	1	Willie Duersch	General	The plan does not provide enough opportunities for motorized recreation. Many users think they have enough opportunities when in fact those trails are closed.	The FEIS describes a range of Alternatives in chapter 2 and documents the issue describing that the Forest Service is not enforcing travel plan restrictions. Page 1-13 FEIS
10	1	Michael Naeger	General	Need more law enforcement not banning ATVs.	The Forest Service recognizes the need for enforcement and that the US Forest Service has not adequately enforced travel plan restrictions. See Table 1.6.s in the FEIS.
11	1	Todd Skeen	General	What is needed is a system of interconnecting loop trails	The FEIS describes a range of Alternatives for loop trails.
12	1	Adam Doxey	Skyline Trail	Favors keeping the trail in the Ogden Front open to motorized use.	The FEIS describes a range of Alternatives for the Skyline and Lewis peak trails in the Ogden Front.

13	1	Willie Duersch	General	Why is the "preferred" Alternative the one with the most miles of closure? Who determines the preferred and why?	The preferred Alternative is the one the Forest Service believes to best meet the Purpose and Need as described in Chapter 1. The Selected Alternative is described in section 2.4.6 Alternative 5. -- The Selected Alternative which is the "Preferred" alternative with some minor road decision changes. This section describes how each alternative was developed.
14	1	John Harja Utah P&R via Utah RDCC	Box Elder Trail	Would like to see the portion of Trail #26010 from Dock Flat to Pete's Hollow left open for motorized use.	The FEIS describes a range of Alternatives for the Dock Flat and Pete's Hollow trail. Section 2.7.2 - Relative Changes to Transportation System by Alternative.
14	2	John Harja Utah P&R via Utah RDCC	Pete's Hollow	Given safety and other issues on this trail it could be left open as a non-motorized trail. If it is determined that it is a public road and that an appropriate route and funding source can be identified this route should then be opened to motorized use to provide a link from Brigham City to Dock Flat.	The analysis describes a range of Alternatives for the Petes Hollow trails in section 2.7.2 and in the FEIS.
15	1	Joe Boyce	General	Leave trails open and provide more opportunities for mechanized transportation.	The DEIS described a range of Alternatives for motorized and non-motorized recreation.
16		Rick Golde		NOT A COMMENT LETTER SPECIFIC TO OUR PLAN	N/A
17	1	J.W. Smith	Devils Gate	The EIS has totally ignored private property rights for lands adjacent to the Forest	Revised Forest Plan Standard 19 states "If the only access to National Forest requires crossing of private land where public access is restricted, the adjacent National Forest land will be closed to motorized and mechanized use without a permit authoring motorized use. " Box Elder County Resolution No. 04-13 and accompanying map identify those roads in the county that are open for motorized use by the public. Section 2.5.9 Private Lands and other Non-National Forest System Lands for additional information on the Box Elder County resolutions.
18	1	Robert Stout	Willard Basin/ Skyline/ Lewis Peak Trail	Neither the Skyline or Lewis Peak trails are designed for or tolerant of damage caused by ATV's. Also the damage caused by ATV's in the Willard Basin has been significant. These trails should all be closed.	The FEIS describes a range of Alternatives for the Skyline and Lewis Peak trails in section 2.7.2 - Relative Changes to Transportation System by Alternative. The action Alternatives for the Willard Lake trail, 6090, all describes closing these trails to motorized use. We agree that ATV use on these trails at this time should not considered.

18	2	Robert Stout	Willard Basin/ Skylinel/ Lewis Peak Trail	Gates and aggressive law enforcement are needed to protect these areas	The Forest Serviced recognizes the need for enforcement and this is described on Page 1-13 of the FEIS. Section 2.9 describes gating roads as a priority for implementing the travel plan.
19	1	Michael Knight	Skyline Trail	Very interested in keeping the entire Skyline trail open to motorcycles. If closed it would virtually eliminate any single track opportunities between Logan Canyon and American Fork	The FEIS describes a range of Alternatives for the skyline and Lewis peak trails. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
19	2	Michael Knight	Willard Basin	The trail between Willard Lake and Willard Peak should remain open to motorized use. Proper signing and gates would keep ATV's out and would provide a great single track opportunity.	The FEIS describes a range of Alternatives for the Willard Peak and Willard Lake trails. Improvements to the Inspiration Point trail will replace access through Willard Lake.
19	3	Michael Knight	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goats are not native and their population has exploded -- the closure cannot be justified.	There are questions regarding whether mountain goats were native to Utah and if so where, but regardless the US Forest Service is required to manage habitat for native and desirable non-native species. See FEIS sections 3.6.2.1 and 4.6.3.1 Mountain Goats. Additional information has been added to the FEIS with regards to the effects of disturbance.
20	1	Jeff Good	Skyline Trail	There is no justifiable reason to close the Skyline trail to motorcycles	4.6.3.1 Effects on General Wildlife - Mountain Goats describes the impacts of human activities. This section describes the relative impacts by Alternative.
20	2	Jeff Good	Skyline Trail	The trail between Willard Lake and Willard Peak should remain open to motorized use. Proper signing and gates would keep ATV's out and would provide a great single track opportunity.	See comment # 19 - 2.
20	3	Jeff Good	Skyline Trail	Very interested in keeping the entire Skyline trail open to motorcycles. If closed it would virtually eliminate any single track opportunities between Logan Canyon and American Fork	See comment # 19 - 1.
21	1	Doug Nelson	Pete's Hollow to Devil's Gate	Would like to see the trail from Brigham City to Devils Gate open to motorized use	The FEIS describes in section 2.4 two action Alternatives for the Petes Hollow trail #26022 on National Forest.
22		Jeff Good	Skyline Trail	DUPLICATE COMMENTS FROM #20	See comments from letter #20.
23	1	Fred Selman	Rocky Dugway to Clay Valley	This area looked better 30 years ago when there were twice as many sheep on it as it does now with ATV's on it.	Thank you for your comment.
24	1	Deb Badger	Public Grove	Shocked to see deep ruts and trash at Public Grove. Manage the land -- don't open more motorized routes.	Thank you for your comments. Section 1.3.2.3 - Forest Plan direction specifically identifies that the Public Grove area needs actions to reduce the impacts and minimize the deterioration of the resources.

25	1	Mary Herring	General	Have seen what happens when ATV trails are allowed. Too much noise, garbage and damage to the environment. Save some of Wild Utah for our next generation.	Thank you for your comment.
26	1	Robert Shribler	West Fork Willard Canyon, Grizzly Peak, and Pete's Hollow	Leave trails open and provide more opportunities for mechanized transportation. Has been using area for 40 years and is dependent on ATV access because of the Alternative issues.	The FEIS describes a range of Alternatives for the roads and trails in the Willard Peak area.
27	1	Valeen Peterson	Devils Gate	The Forest Service has no right to open trails on private property.	This is correct. The Forest Service is prohibited from opening trails on private land. See response to comment #17-1.
28	1	John Leibond	Skyline Trail	There are very few single track opportunities in this area. Leave the Skyline Trail open.	Thank you for your comment. The FEIS describes a range of Alternatives for the Skyline trail. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
29	1	Peggy Richards	General	Responsible riders Tread Lightly. Registration fees should be used to help with law enforcement.	Thank you for your suggestion. Registration and the use of those fees are managed by the State of Utah Parks and recreation.
30	1	Don Peterson	Devils Gate	It is wrong for the government to open land across private property.	This is correct. The Forest Service is prohibited from opening trails on private land. See response to comment #17-1.
31	1	Steve Larsen	General	Need more trails that are properly maintained.	Thank you for your comments. Section 4.3.4 Watersheds and Aquatic Resources Effects Analysis Methods and Assumptions states that all authorized trails and roads will be maintained to Forest Service standards.
32	1	Jonathon Smith	Devils Gate	The Forest Service needs to respect the rights of private landowners	This is correct. The Forest Service is prohibited from opening trails on private land. See response to comment #17-1.
33	1	Joanie Aponte	General	Has the Forest Service considered issuing permits for ATV's so the numbers out on any given day could be regulated -- similar to Pineview Reservoir and boat launches.	Thank you for your comment. This tactic has been considered but not as a part of this analysis.
34	1	Robin Bushman	General	Concerned Alternative 3a will create too many new roads in roadless areas.	Section 4.10 discloses the effects of roads and/or motorized trails on roadless values.
34	2	Robin Bushman	General	Prefers Alternative 3 because it will result in less fragmentation	Thank you for your comment. The Effects section in chapter 4 discloses fragmentation.

35	1	Debora Adam	Box Elder Trail	Would prefer that the Box Elder Creek area not be open to motorized off road vehicles This would reward illegal" ghost" trails and expand the amount of land already denuded of vegetation and promote soil erosion.	FEIS section 4.4.4 discloses the effects of soil erosion from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be managed to Forest Service standards to properly drain trail surfaces and minimize the potential for erosion. FEIS section 1.3.2.3 and 2.5.1 further defines the Forest Service standards that roads and trails will be managed to.
35	2	Debora Adam	General	Has heard the Forest Service is presently understaffed. How will they be able to provide the level of enforcement that is needed.	The FEIS identifies this Issue in section 1.6.4 Indicators and Non-Significant Issues. The non-significant issue of the US Forest Service not enforcing travel plan restrictions because of funding limitations.
36	1	Jason Langeveld	Skyline Trail	The Skyline Trail is the only single track trail in the area. Select Alternative 2.	Thank you for your comment. The FEIS describes a range of Alternatives for the Skyline trail. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
36	2	Jason Langeveld	Skyline Trail	The mountain goats are not native and were transplanted. Motorized use on the Skyline trail predated the goat transplant. Their population has thrived even with the motorcycle use. There is no need for the seasonal closure.	See response 19-3.
36	3	Jason Langeveld	General	Supports better signing and opening of new single track trails	Thank you for your comment. Appendix D Mitigation and Monitoring describes a functional signing program as necessary to reduce the impacts from inappropriate and illegal public uses. The FEIS describes a range of Alternatives for a trail system.
37	1	Janice Mize	General	Alternative 3a makes for too many new roads in roadless areas	Section 4.10 discloses the effects of roads and/or motorized trails on roadless values.
37	2	Janice Mize	General	Alternative 3a will result in fragmentation of habitat for deer, elk, Canada lynx, sharptail grouse, goshawk, and other wildlife	Thank you for your comment. Chapter 4: Wildlife, displays the effects of each of the Alternatives on wildlife species and their habitats.
38	1	Charles Rhodes	Skyline Trail	Leave the Skyline Trail and others in the Willard Peak area open	The FEIS describes a range of Alternatives for the Willard Peak area trails and the Skyline trail. Section 2.4 - Alternatives Considered in Detail include open or closed roads and trails as well as seasonal restrictions for the Skyline Trail.
39	1	Grant Robertson	General	Leave trails open	Thank you for your comment. The FEIS describes a range of Alternatives for motorized trail access. Section 2.4 - Alternatives Considered in Detail include actions on those trails analyzed in this document.

40	1	Matt Clark	Skyline Trail	Very disappointed to hear the Skyline Trail would be closed.	Thank you for your comment. The FEIS describes a range of Alternatives for the Skyline trail. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
40	2	Matt Clark	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goats are not native and their population has exploded -- the closure cannot be justified.	See response 19-3.
41	1	Matt Proudfit	Skyline Trail	Opposed to any closure on the Skyline Trail. If the goats need to be protected during kidding that is OK but the then the trail should be closed to all vehicles.	See response 103-1.
42	1	Mike Sturdevant	Skyline Trail	Understand there are concerns about the effect on OHV's on goats. If seasonal closure is necessary then this should be for the absolute minimum to protect the kidding.	Thank you for your comment.
43	1	Kate Skinner	Skyline Trail	Opposed to any closure on the Skyline Trail. If the goats need to be protected during kidding that is OK but then the trail should be closed to all vehicles.	See response 103-1.
44	1	Sam Love	Skyline Trail	Opposed to any closure on the Skyline Trail. If the goats need to be protected during kidding that is OK but the then the trail should be closed to all users.	See response 103-1.
45	1	Annette Loveland	Skyline Trail	Especially enjoy the Skyline Trail and do not want to see it closed. Does not support seasonal closure as the goat herd seems to be doing well.	Thank you for your comment.
46	1	Mark Weaver	Skyline Trail	These trails (Skyline, Ben Lomond, Lewis Peak) offer unique experiences for motorcyclists and should remain open. If seasonal closures are necessary then they should apply to everyone.	Thank you for your comment. The FEIS described a range of Alternatives for motorized and non-motorized recreation. Also see response 103-1.
46	2	Mark Weaver	Willard Basin	I would like to see restrictions also affect non-motorized users.	Thank you for your comment. The FEIS described a range of Alternatives for motorized and non-motorized recreation.
47	1	Fed Pashley	Mollens Hollow	ATV's can chew up trails and set the stage for accelerated erosion during rainstorms and snowmelt. ATV's do the damage that the Forest Service has been trying to prevent.	FEIS section 4.4.4 discloses the effects of soil erosion from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be managed to Forest Service standards to properly drain trail surfaces and minimize the potential for erosion. FEIS section 1.3.2.3 and 2.5.1 further defines the Forest Service standards that roads and trails will be managed to.

48		N. Utah Soil Conservation District Fred Selman, et al.	General	CC of a letter sent to Box Elder County	N/A
49	1	Vernon and Cindy Greenhalgh	Devils Gate	Appalled this trail would cross private property. The Forest Service cannot declare new rights of way across private property. Strongly suggest plans stop or legal action will follow.	See response to comment # 17-1.
50	1	Roberta Glidden	General	Prefers Alternative 3 because it will result in less fragmentation	Thank you for your comment. Chapter 4: Wildlife, displays the effects of each of the Alternatives on wildlife species and their habitats.
51	1	Sandie Shupe	Skyline Trail	Opposed to any closure on the Skyline Trail. Does not support seasonal closure as the goats seem to be doing fine	See response 103-1.
52	1	Sandie Shupe	Skyline Trail	Goats are not native and opposed to any closure on the Skyline Trail.	See response 19-3.
53	1	Thomas Shupe	Skyline Trail	Opposed to any closure on the Skyline Trail. Does not support seasonal closure as the goats seem to be doing fine	See response 103-1.
54	1	Marc Bryson	General	Would like to see more educational efforts and use of peer patrols. Supports Alternative 2.	Thank you for your comment. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses. Section 2.9 Implementation list the top priorities for travel plan to improve information to the users of the National Forest.
55	1	Tom Dickson	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goats are doing well and don't appear to be affected by motorcycles.	See response 103-1.
56	1	Rusty Olsen	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goat population has exploded – the closure cannot be justified.	See response 103-1.
57	1	Juston Dickson	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The motorcycle use on the trail predated the goat transplant by at least 14 years -- the seasonal closure cannot be justified based on the population doing better than expected. No US Forest Service or UDWR studies have been completed to warrant closure.	See response 103-1.

58	1	Stephanie Dickson	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The motorcycle use on the trail predated the goat transplant by at least 14 years -- the seasonal closure cannot be justified based on the population doing better than expected. No US Forest Service or UDWR studies have been completed to warrant closure.	See response 103-1.
59	1	Kevin and Shawn Grogan	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goat population has exploded and the studies used in the DEIS were conducted in Alaska-- the closure cannot be justified.	See response 103-1. The literature used for the FEIS was summarized from numerous studies in a variety of locations.
60	1	Aaron Johnson	Skyline Trail	Does not support the seasonal closure for goat kidding on the Skyline Trail. The goats are not native and their population has exploded -- the closure cannot be justified.	See response 103-1.
61	1	Todd Watanabe	Skyline Trail	Does not support the motorcycle closure on the Skyline Trail. Bikers and hikers with dogs have more affects than motorcycles.	See response 103-1.
62	1	Shauna Eccles	Devils Gate	Opposed to summary judgment by Box Elder County	Thank you for your comment.
63	1	Jerry Burn	General	Concerned that motorized recreation in the backcountry is in direct conflict with non-motorized recreation.	The FEIS describes a range of Alternatives that address your concern, i.e.. See Chapter 2, Alternative, also see Chapter 4, 4.7 Effects on recreation.
63	2	Jerry Burn	General	Concerned that motorized recreation destroys trails, increases erosion, and destroys peacefulness.	FEIS section 4.4.4 discloses the effects of soil erosion from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be managed to Forest Service standards to properly drain trail surfaces and minimize the potential for erosion. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.
63	3	Jerry Burn	General	Favors minimizing and reducing motorized trails	Thank you for your comment. Section 1.3.1 Purpose and Need for the Proposed Project describes the public need for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation. It also indicates the need to address the dramatic increase in demand for motorized recreational experiences. Section 2.4 - Alternatives Considered in Detail describes a range of Alternatives reducing motorized trails.

64	1	Ricky Long, Goring & Sons	North Gorge Canyon (20213), Gorge Canyon (20124), #20185	Concerned that these roads are only needed for access to private property and that they should be gated and limited to administrative use. NOTE it is not clear where gate #3 is located	The FEIS describes a range of Alternatives for the roads in the northern portion of the Curtis Creek area. The road 26719 where gate #3 is indicated on your map was not analyzed as an administrative road. This road has been closed to any motorized use.
64	2	Ricky Long	Lake Town Canyon Spurs (26717&20185	These roads are access across private property and there is no ROW. For this reason they should be gated and closed.	Thank you for clarifying the public access to these roads. The FEIS describes two action Alternatives for the Lake Town Spurs #1 and 2. The Final EIS will disclose the lack of deeded public access and the final decision will reflect that fact.
65	1	Nathan Stuart	General	Interested in new loops in the Davenport Hollow area and the trail connecting Dairy ridge and Wasatch Ridge roads. Appreciates what the Forest Service is doing to provide multiple use opportunities for everyone.	Thank you for your comment. The FEIS describes in section 2.4 a range of Alternatives for the roads and trails in the Davenport Hollow and Monte Cristo areas.
66	1	Brent Beecher	General	Appreciates what the Forest Service is doing to provide multiple use opportunities for everyone.	Thank you for your comment. Section 1.3.1 Purpose and Need for the Proposed Project describes the public need for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation.
66	2	Brent Beecher	General	Wants to go on record supporting the collection of user fees to help pay for maintenance and upkeep of the trails.	Thank you for your suggestion. An action to implement a user fee was not discussed in this analysis and considered beyond the scope of this analysis.
67	1	Nature Conservancy Joan Degiorgio	Public Grove	The Nature Conservancy is concerned about impacts of OHV use on Columbian sharp-tailed grouse in the Public Grove/Clay Valley Area.	Additional information has been added to the FEIS with regards to sharp-tailed grouse and the effects of the Alternatives on the sharp-tailed grouse and their habitats.
67	2	Nature Conservancy Joan Degiorgio	Public Grove	The Nature Conservancy is concerned about significantly more traffic through Clay Valley than present (Sink Hole Loop, Route #26012), especially if promoted as part of a larger OHV system (Shoshone Trail).	The naming of the Shoshone ATV trail in the Curtis Creek area and northward on the Logan Ranger District and adjacent BLM lands is not expected to change the use patterns, create new users, or commit to any construction or exceptional amount of annual trail maintenance. See section 4.14.7 in the FEIS.
67	3	Nature Conservancy Joan Degiorgio	Public Grove	The Nature Conservancy is concerned about impacts to boreal toads in relationship to the Selman Property.	No historical or recent surveys have identified boreal toad in this area.
67	4	Nature Conservancy Joan Degiorgio	Public Grove	The Nature Conservancy requests that the Sink Hole Loop, Route #26012 be eliminated from the preferred Alternative on the basis of negative impacts to the sharp-tailed grouse.	Additional information has been added to the FEIS with regards to sharp-tailed grouse and the effects of the Alternatives on the sharp-tailed grouse and their habitats.

67	5	Nature Conservancy Joan Degiorgio	Public Grove	It seems unwise to create public expectations for a route (Sink Hole Loop) that in the future could end at the forest boundary.	Section 2.5.9 Private Lands and other Non-National Forest System Lands Travel management decisions considered here relate only to Forest Service lands, not private land.
67	6	Nature Conservancy Joan Degiorgio	General	It is hoped that more loop trails will result in less destructive behavior, but perhaps loop trails should be implemented on a smaller scale first and where it would not place the major burden on private land.	The FEIS describes a range of Alternatives for the Willard and Public Grove areas in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes proposals for smaller loop trails such as the Dip Hollow trail, #xx33.
67	7	Nature Conservancy Joan Degiorgio	General	The Forest Service should not support economic development by attracting additional users at the expense of wildlife and other private business owners.	In section 1.3.1 - Purpose and Need for the Proposed Project, it states that this plan is needed by the public for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation in addition to providing for wildlife habitat, vegetation, stable soils, and high quality water. This section acknowledges the "need to address the dramatic increase in demand for motorized recreational experiences." The FEIS discloses in section 4.14.7 Cumulative Effects on recreation that OHV improvements have the effect of attracting motorized recreation visitors to this area.
68	1	Stephen Cowley	General	Support selection of Alternative 2	Thank you for your comment.
69	1	Lynne Thorne	General	Concerned that the Forest Service pick a balanced Alternative that does not impact wildlife or roadless areas	The impacts to wildlife and roadless areas are described for each Alternative in Chapter 4. The selected Alternative best meets the Purpose and Need while protecting resources.
70	1	Cache County/ Lynn Lemon/ Craig Peterson	RS2477 Roads	Cache County requests that the historic public roads identified on the map provided to the Forest Service be left open	Section 2.5.13 R.S. 2477 Roads states the current direction in reference to counties RS 2477 assertion on roads across National Forest.

71	1	Samuel Smith	Devils Gate/Public Grove	Concerned that many of the routes the Forest Service is proposing traverse through private land in the Devils Gate area. The maps in the DEIS indicate that the Forest Service will not include the connecting roads (on private land) in their Travel Plan. Is this correct? Will the public then infer they can travel across private land to connect to the next piece of Forest Service land? How will the public know when they leave a road on Forest Service property and when they are trespassing on private property? Will the Forest Service allow additional trails to be built that take off from the designated routes? Will the Forest Service be will to close illegal trails that are built on private land? The FEIS needs to discuss potential impacts to private property owners.	See response to comment 17-1. Motorized Access maps do not depict open roads on private lands because the Forest Service has no jurisdictional authority to make designations on private lands. The Forest Service will work with the Division of Wildlife Resources and Box Elder County to mark motorized travel routes that are open to public use. The Forest Service only has jurisdictional authority to enforce its regulations on National Forest System lands. The Forest Service does not have the authority to close (or open) roads or trails on private lands.
71	2	Samuel Smith	Devils Gate/Public Grove	Has the Forest Service tried to close the illegal routes and monitor the unauthorized use on their land? Has the Forest Service tried using groups like the Dedicated Hunters to close routes?	See section 2.5.1 on the annual maintenance program. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses.
71	3	Samuel Smith	Devils Gate/Public Grove	Is the Forest Service relying on Box Elder County's assertion that these are public roads? What happens if the County vacates their claim? The Forest Service should postpone any decision until the County makes a final decision on the status of the road.	The Forest Service recognizes the county's right to determine what is included in the county road system. If the county were to vacate its claim on these roads the Forest Service would restrict motorized access on National Forest System lands adjacent to the private land in question.
71	4	Samuel Smith	Devils Gate/Public Grove	Concerned that other routes that avoid public land were not considered. If other routes are not feasible then measures to mitigate and monitor impacts to private land should be developed including compensation for damage incurred on private land from ATV's not staying on designated routes.	See comment 17-1. Also see section 1.6.5 in the FEIS.
71	5	Samuel Smith	Devils Gate/Public Grove	Has the Forest Service ever maintained roads that go through private land? Who will maintain the roads in the future? Will the roads be widened to allow two ATV's to safely pass one another? Is the Forest Service liable if ATV's roll off of the road and further damage private land?	The Forest Service has no records to indicate it has ever maintained roads located on private lands in the Devils Gate area. Maintenance responsibility on county roads that traverse private land is the responsibility of the county. The Forest Service assumes no liability for personal injury or property damage that occurs on private land. See section 1.6.5 in the FEIS.
71	6	Samuel Smith	Devils Gate/Public Grove	Will approval of this plan affect winter use on the private land? How would winter use affect wildlife? Would there be any seasonal closures? How would they be patrolled?	This plan has no affect on winter use on private land. See Chapter 2 for a detailed description of the seasonal closures that are proposed by Alternative.

71	7	Samuel Smith	Devils Gate/Public Grove	What liability will private land owners have if the public leaves the designated routes?	This comment is beyond the scope of this analysis.
71	8	Samuel Smith	Devils Gate/Public Grove	Feels the private landowners should be able to charge the Forest Service or public a fee for use of private land.	Comment noted.
71	9	Samuel Smith	Devils Gate/Public Grove	Concerned people using the trails will be hunting and shooting on the private land. Who will monitor and sign so these activities are prohibited?	It is the responsibility of the landowner and local governments to post private property. The Forest Service will work with Box Elder County to develop signing notifying users they are crossing private property.
71	10	Samuel Smith	Devils Gate/Public Grove	Concerned there will be an increased risk of human caused fires on private land. How will the Forest Service control this?	Initial Fire control is managed by a Mutual Aid Agreement with the State, BLM, and Forest Service. In the event of a fire in this area, the closest resources would respond for initial attack. In an extended attack, the location of the fire will determine the jurisdiction. Fire Prevention messages are well known and common advocating the message of fire awareness.
71	11	Samuel Smith	Devils Gate/Public Grove	Concerned that ATV abuses will drive off people that have run cattle on their private property and this will adversely affect them.	The road and trail system will be patrolled by personnel from the Box Elder County Sheriff's Department, the Utah Division of Parks and recreation, the Utah Division of Wildlife Resources and the Forest Service.
71	12	Samuel Smith	Devils Gate/Public Grove	If Forest Service efforts at law enforcement have not worked in the past why will they work now?	See comment 71 - 11 and section 1.6.5 in the FEIS.
72	1	Pete Edmondson	General	Would like to see more ATV opportunities	Thank you for your comment. The FEIS describes a range of Alternatives for motorized trail access. Section 2.4 - Alternatives Considered in Detail include actions for more motorized ATV opportunities on trails analyzed in this document.
73	1	James and Nancy Lombardo	General	Against opening any more routes to ATV's including snowmobiles. Feels there needs to be places available for people to go that are non-motorized.	The FEIS describes a range of Alternatives that address your concern, i.e.. See Chapter 2, Alternative, also see Chapter 4, 4.7 Effects on recreation. Snowmobiling is not part of the scope of FEIS, see winter recreation plan Revised Forest Plan for more information for area open or closed to winter motorized activities.
74	1	Dick Coppock	General	Feels that the motorized recreationists contribute significant volunteer manpower and funding for the care and maintenance of trails	Thank you for your comment. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses.

75	1	Mary Tullius Utah Division of Parks and recreation	Pete's Hollow Trail	Recommends the portion of the Box Elder Creek ATV Trail #26010 from Dock Flat to the Pete's Hollow Trail #26022 should be left open for motorized use as it is stated in the Forest Service preferred Alternative.	The FEIS describes two actions for the Box Elder Creek trail. If the final decision is to add this route to our managed system of trails, it will be managed to Forest Service Standards as indicated in section 4.3.4 Methods and Assumptions.
75	2	Mary Tullius Utah Division of Parks and recreation	Pete's Hollow Trail	Recommends that should a public right of way be proven to the Forest Service boundary and that funding is secured to improve the trail this route (Brigham City--Dock Flat) should be designated motorized.	The FEIS describes a range of Alternatives for the Petes Hollow trails in section 2.7.2
76	1	Jere Wiederholt	General	Prefers no motorized trails in roadless areas.	Section 4.10 discloses the effects of roads and/or motorized trails on roadless values.
77	1	Jan St Clair	General	Prefers Alternative that places the most emphasis on wildlife	Thank you for your comment.
77	2	Jan St Clair	General	Motorized trails should not be placed in roadless areas	Section 4.10 discloses the effects of roads and/or motorized trails on roadless values.
77	3	Jan St Clair	General	Motorized trails should not be placed where they eliminate opportunities for quite recreation	The FEIS describes a range of Alternatives that address your concern, i.e.. See Chapter 2, Alternatives. Also see Chapter 4, 4.7 Effects on recreation.
77	4	Jan St Clair	General	Roads and trails should be located where they can be adequately maintained to prevent rutting, widening, and erosion.	FEIS section 4.4.4 discloses the effects of soil erosion and rutting from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be located to Forest Service standards that allow for properly drained trail surfaces and minimize that prevent trail rutting, erosion, and widening. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.
77	5	Jan St Clair	General	No new motorized trails should be built where invasive plants are present	See response to comment letter #104 comment #6.
77	4b	Jan St Clair	General	Prefers Alternatives where watershed protection takes precedence over additional ATV trails.	FEIS section 4.3.2 frames the analysis of watershed protection in terms of the potential of roads and trails to impact water quality based upon their proximity to streams. FEIS sections 4.3.5.1 and 4.3.5.2 disclose that immeasurable improvements in water quality would occur, under the proposed action and its Alternatives, when unauthorized roads and trails are closed and rehabilitated

78	1	Catherine Sharpsteen	General	Adding a motorized trail in the Mollens Hollow overlook area would make it easy for ATV's to stray into nearby sensitive areas.	Thank you for your comment. The FEIS sections 1.3.1, 2.6, 2.8 and Appendix D disclose that user education and law enforcement are also needed to control route pioneering and other forms of non-compliance with the Revised Travel Plan.
79	1	Ann Huss	Mollens Hollow, Public Grove and Box Elder Creek	Against opening ATV routes in the Mollens Hollow, Public Grove and Box Elder Creek areas because of the disregard for nature.	The FEIS describes a range of Alternatives for motorized use of the referenced areas. Section 2.4 - Alternatives Considered in Detail include actions on those trails analyzed in this document. In section 1.3.1- Purpose and Need for the Proposed Project, it states that this plan is needed by the public for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation in addition to providing for The alternative wildlife habitat, vegetation, stable soils, and high quality water. This section acknowledges the "need to address the dramatic increase in demand for motorized recreational experiences."
80	1	Gerald and Mary Ann Thompson	General	Ogden District does not have the resources to manage the existing trail system	Thank you for your comment. The FEIS identifies this Issue in section 1.6.5 was not addressed in this analysis.
80	2	Gerald and Mary Ann Thompson	General	Prefers Alternative that emphasizes protection of wildlife	Thank you for your comment.
80	3	Gerald and Mary Ann Thompson	Public Grove	Have witnessed off road damage done on non-designated roads at Public Grove by vehicles and would prefer the road be closed rather than allow more of this abuse to occur.	FEIS section 1.3.2.3 specifies that the Revised Ogden Ranger District Travel Plan will follow Forest Plan direction on page 4 -142 for the Public Grove area that will result in clearly marked designated off road vehicle routes, and the closure/restoration of illegal trails and OHV activity.
81	1	Garth Barker	RS2477 Roads	Feels the travel plan revision should be tabled until the RS2477 issues in Box Elder and Cache County are resolved.	The FEIS had disclosed in section 2.5.13 R.S. - 2477 Roads that individuals and entities may have established valid existing rights under R.S. 2477. Determination of those rights is not within the scope of this decision but will be made at the time each county submits the necessary claims.
82	1	Dan Schroeder	Corrections	Table of corrections	Corrections received.
83	1	Katie Dickson	Skyline Trail	Feels the Skyline trail should remain open with no restrictions. The mountain goat population is healthy and they seem to be impacting the vegetation.	See response 103-1.

84	1	Paul Henry	General	Feels providing a good ATV system will tend to draw in more responsible users who will put pressure on the irresponsible users	Thank you for your comment. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses.
84	2	Paul Henry	Red Spur	Leave the road open to the overlook.	The FEIS describes a range of Alternatives for the Red Spur road #20218 in the FEIS section 2.7.2 .
84	3	Paul Henry	Middle Ridge Power line and Silvia Hollow	Opening would provide additional motorized loop opportunities	The FEIS describes a range of Alternatives for the trails in the Monte Cristo area in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes proposals for making Silvia Hollow and the Power line road open motorized routes.
84	4	Paul Henry	Dry Bread Upper and xx11 ATV Trail	Favors because it would provide more short ATV loops in popular dispersed camping areas.	Thank you for your comment. The FEIS describes a range of Alternatives for the trails in the Dry Bread area in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes the trails you indicated.
84	5	Paul Henry	Dairy Wash ATV #xx14 to Dairy Ridge Road	Needed to provide a loop	The FEIS describes a range of Alternatives for the trails in the Monte Cristo area in section 2.7.2 - Relative Changes to Transportation System by Alternative including building the Dairy Wash ATV trail to connect Dairy Ridge to Wasatch Ridge roads.
84	6	Paul Henry	Box Elder Creek Trail #26010	Needed to provide a loop opportunity or Alternative to the Willard Mountain Road	Thank you for your comment. The FEIS describes a range of Alternatives for the Box Elder Creek trails in the Willard in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes the trails you indicated.
84	7	Paul Henry	Pete's Hollow #26022	Need the access from Brigham City. If it cannot be included as an ATV route then it should be added as a single track.	The FEIS describes two action Alternatives for the Petes Hollow trails FEIS section 2.7.2.
84	8	Paul Henry	Public Grove	Public Grove Road #20220 is needed for a connection to the Devils Gate area.	The FEIS describes a range of Alternatives for the Public Grove Road in section 2.7.2 - Relative Changes to Transportation System by Alternative.
84	9	Paul Henry	Devils Hole Trail #xx30	Devil's Hole Canyon ATV trail provides needed loop opportunities and a route to get ATV's off of the busy Willard Mountain Road	Thank you for your comment. This trail is included in all action Alternatives because of concern for use on the Willard Mountain. Road.
84	10	Paul Henry	Skyline Trail	This is an outstanding single track opportunity. The seasonal closure is not needed as the goat population seems to be thriving.	See response 103-1.
84	11	Paul Henry	Lewis Peak Trail #6041	This trail provides scenic views for single track users.	The FEIS describes a range of Alternatives for the Skyline and Lewis peak trails. Section 2.4 - Alternatives Considered in Detail include leaving this trail motorized or managing it as a non-motorized trail.

84	12	Paul Henry	Coldwater Peak Trail #6087	Feels this is a good Alternate and connection for single track users	The FEIS describes a range of Alternatives for the Skyline and Lewis peak trails including the Coldwater Peak trail. Section 2.4 - Alternatives Considered in Detail include leaving this trail motorized or managing it as a non-motorized trail.
84	13	Paul Henry	City View Trail #6040	Feels this is a good Alternate and connection for single track users	The FEIS describes a range of Alternatives for the Skyline and Lewis peak trails including the City View trail. Section 2.4 - Alternatives Considered in Detail include leaving this trail motorized or managing it as a non-motorized trail.
85	1	Diane Tracy	Public Grove	Concerned about rutting and loss of vegetation, litter around dispersed campsites, paint on trees from paint balls, and vandalism to Forest Service signs. For these reasons the Public Grove 4x4 road should be closed.	The impacts of each Alternative are described in Chapter 4. Also see comment 24 - 1.
85	2	Diane Tracy	General	Need more information signing so travelers will know what is open and what is closed. Signs need to be consistent and standardized.	The FEIS in section 3.2 describes the methods roads will be signed. This policy may change based on implementation of a new national policy on motorized recreation.
85	3	Diane Tracy	General	Forest Service should consider establishing trail user zones that considers backcountry areas, scenic corridor zones, and high use zones.	The Wasatch-Cache Forest Plan uses Management Prescription Categories (MPCs) to provide a general sense of the management or treatment of the land. The FEIS summarized the MPCs for the Ogden Ranger District in section 1.3.2.3 Forest Plan. These prescriptions and Recreation Opportunities (ROS) are similar to the trail user zones you describe.
85	4	Diane Tracy	General	In high use area the Forest Service should provide trailheads with maps, parking areas and toilets.	The Forest Service does provide many trailheads with maps, parking and toilets in high use areas.
85	5	Diane Tracy	Enforcement	Users need to know that the rules will be enforced.	We agree with this statement. Section 1.6.5 states this as an issue not addressed by this decision but implementation described in the Record of Decision Section II. Decisions and Reasons for the Decision states that education of users and enforcement of restrictions is critical to implementation.
86	1	Kevin Jeppsen	Willard Lake Trail #6090	Feels this trail should remain open to motorcycles because it is the only way to access the Skyline Trail from Willard Basin.	This route is not the only way to access the Skyline trail from Willard Basin. The Willard Mountain road which is open to motorized travel ends at the Skyline Trail. Improvements to the Inspiration Point trail will provide new access to the Skyline Trail.

86	2	Kevin Jeppsen	Pete's Hollow Trail #26022	Feels that because this trail has been in use for so long it should remain open to motorcycles. Over time it could be improve to meet ATV standards and opened to that type of use when appropriate.	The motorized use in and around Pete's Hollow Trail on National Forest has not been open to public motorized use in the last twenty years. The decision to open this trail to motorcycles will depend on the need for a transportation route, with the past history of use only a minor factor.
86	3	Kevin Jeppsen	Grizzly Peak Rd	Feel this road should remain open to ATV's and expanded to connect with an existing road to the White Rock area above Willard	The FEIS describes a range of Alternatives for the trails in the Willard and Grizzly Peak area in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes proposals for keeping Grizzly Peak road open as a motorized route.
86	4	Kevin Jeppsen	Chilly Peak Trail	Feels one of the two trails heading off Chilly Peak down into the North Fork of the Ogden River should be opened to motorcycles to create a loop opportunity over to the Avon Liberty Road.	The two trails mentioned, Ben Lomond trail #6042 and Cutler Basin trail #6085 were not analyzed as motorized routes in this assessment. They are both currently managed as non-motorized routes.
86	5	Kevin Jeppsen	Box Elder Creek Trail #26010	Feels this trail should remain open to Perry Reservoir because it provides a nice spot to visit. Feels that with education and improved signing past problems can be remedied.	The FEIS describes a range of Alternatives for the trails in the Willard and Perry Reservoir area in section 2.7.2 - Relative Changes to Transportation System by Alternative. This includes proposals for keeping Perry Reservoir road open as a public motorized route and addition of the Box Elder Creek ATV trail.
86	6	Kevin Jeppsen	Weber-Box Elder County line road: Willard Basin Rd to Public Grove	This road should be opened as it would provide an excellent loop opportunity.	Most of this route is outside of the Forest Service property and would require Box Elder County making it a public road. It is not on the county system at this time.
86	7	Kevin Jeppsen	Avon Gravel #26743 -- Jensen Spur Loop	This route should be opened to provide for additional dispersed camping opportunities and to relieve ATV traffic on the Avon - Liberty Road.	The Avon Gravel pit was abandoned and closed in the 90's. The road to the pit and past was also physically closed at that time since the road was not on the current Travel Plan as an open public road. The issue of excessive ATV traffic on Avon-Liberty road has not been a significant concern.

87	1	John Borg	Lack of a comprehensive route inventory	Concerned that the lack of a comprehensive and publicly reviewed route inventory at the beginning of the process significantly influenced the direction and scope and negatively affected the ability to create a manageable motorized trail system. The DEIS incorrectly considers trails that exist on the ground but that are not classified in the inventory as "new construction".	The existing Ogden Travel Plan revision in 1999 designated motorized roads and trails and this information was used as a base line for all of the alternatives. An inventory was completed by FS personal that verified and mapped existing designated classified routes and unclassified abandoned and user created routes prior to public comment. See Revised Forest Plan FEIS Chapter 1, section 1.3.1. Public comment has been an integral part of identifying issues, routes and development of alternatives. See Chapter 1, section 1.6 Public Involvement FEIS. FSM 7705 defines New Road Construction as: Activity that results in the addition of forest classified or temporary road miles (36 CFR 212.1).
87	2	John Borg	General Bias against OHV recreation	Concerned there is an unjustified bias against motorized recreation and trails in the DEIS.	The Environmental Impact Statement has a full range of alternatives for motorized access including proposals for additional motorized opportunities.
87	3	John Borg	Proposed Action	Concerned that there were several features (cited) in the Proposed Action that were not included in any of the DEIS Alternatives.	The roads and trails proposed in the Scoping Proposed Action that were not taken forward to the Draft EIS were removed because of comments during scoping along with further consideration by the Forest Service.. Section 2.2 describes how the Alternatives were formulated.
87	4	John Borg	Purpose and Need	Good job describing need for managed motorized recreation and acknowledging that many undesignated routes are historic in nature not recently pioneered.	Thank you for your comment.
87	5	John Borg	Wildlife Habitat	Concerned that too much emphasis is put on negative effects of motorized users and that impacts from humans on foot, horseback or mountain bike is ignored. Suggests some wording that could be used to improve the point that human disturbance is relative.	The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14 Cumulative Effects analysis for other activities.
87	6	John Borg	Regional Wildlife Corridor	Concerned that if this process was proposing major highways then impacts to the lynx corridor is a legitimate issue. Since forest roads are less traveled, with slower vehicles, for shortened seasons, etc. it should be a non-significant issue	See Section 4.6.3.3 Effects on federally Listed Threatened, Endangered, Proposed, and Candidate Species: Canada Lynx. "The effects are primarily related to the information that roads and trails may reduce the value of some lynx habitat by the removal of vegetation cover."

87	7	John Borg	Roadless Areas	Concerned that the DEIS is in effect increasing roadless area protections. ROS decisions were already made in the Forest Plan Revision. See suggested wording.	In the Revised Forest Plan FEIS roadless is a inventory to identify characteristics on forest service lands. See Chapter 3, section 3.10 Roadless Areas. Even thought ROS decisions were made in the RFP it was recognized that ROS would be dynamic as a guideline and could potentially change as road maintenance level were modified and or travel management direction was changed. See pg. 4-80 ROS Application to Travel Planning and Management, RFP.
87	8	John Borg	Roadless Areas	Feels that the refined route inventory should be reviewed by the public to determine the existing trails. Trails that existed prior to the Revised Forest Plan should not be considered new trail construction.	See reply to letter 87, comment 1.
87	9	John Borg	recreation	Concerned that the recreation issue statement should be redefined to narrow the issue to trail-based OHV opportunities, OHV recreation and motorized access.	The recreation significant issue on page 1 - 10 summarizes the issues raised by the public during scoping and internal concerns. Those comments were from both pro-motorized and anti-motorized individuals.
87	10	John Borg	recreation	Concerned that the term "diversity" should be narrowed to diversity of motorized routes and motorized opportunities.	Thank you for your comment. The term "diversity" was used to describe a variety of recreation opportunities including motorized and non-motorized uses.
87	11	John Borg	recreation	Concerned that the statement "additional ATV trails would dramatically increase the number of out of the area users to the District" should be considered a separate issues so it does not become confused with the Shoshone issue.	See section 1.6.5 listing the comment about additional increases in ATV uses was not addressed in this analysis.
87	12	John Borg	Wildlife Habitat	Concerned that there are many activities that can negatively affect wildlife and that singling out ATV use does not provide any indication of overall habitat effectiveness. Feels that the Forest Service should also quantify other potential impacts such as grazing, drought, hunting, non-motorized recreation, predation, etc., to determine the overall significance of motorized use on wildlife habitat.	The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of other activities.
87	13	John Borg	Regional Wildlife Corridor	Concerned that the Forest Service has overstated the effect of roads on lynx habitat. DEIS should only be considering effects of Type 3, 4,and 5 roads that are typical of what is found on the National Forest. The significant impacts to lynx habitat are really the major roads like US 39, US 89, I-84 and I-80 which are outside of the Ogden Ranger District.	See Section 4.6.3.3 Effects on federally Listed Threatened, Endangered, Proposed, and Candidate Species: Canada Lynx. "The effects are primarily related to the information that roads and trails may reduce the value of some lynx habitat by the removal of vegetation cover." The FEIS describes which highways are located within the Ogden Ranger District and which may effect lynx.

87	14	John Borg	Roadless Areas	Concerned that the narrative comparison is very subjective and biased. Feels there is an attempt to adjust decisions that were made in the Forest Plan toward more protection of roadless areas. Feels the DEIS indicates a trend that will result in a one-way loss of multiple use values.	The FEIS describes a range of alternatives that address your concern.
87	15	John Borg	recreation Issue	Concerned that by including non-motorized and motorized recreation as the same issue and using a single measurement indicator (ROS) the DEIS has eliminated the possibility of improving both. This indicates that the range of Alternatives is not sufficient since none of the Alternatives improves OHV recreation.	ROS is a descriptive method of describing the potential of both non-motorized and motorized experiences within a defined area in relationship to types of activities that are occurring. Semi-Primitive Motorized acres show the potential for self reliance, courser surfaced and slower speed travelways that could offer more of challenge to recreationists. See the FEIS for clarification of analysis for the change in the types of motorized and non-motorized travel. The theme of alternative 2 was to improve motorized recreation opportunities.
87	16	John Borg	Shoshone Trail	Concerned that the economic benefits of the Shoshone Trail should be analyzed. Analysis should recognize that most non-motorized use is occurring in SPNM and most improvements to the motorized trail system would have little effect on non-motorized recreation.	Decisions about the Shoshone Trail are not being made in this Travel Plan. Economics were analyzed in Chapter 4 for each Alternative.
87	17	John Borg	Safety	Concerned that because safety is related to route designation it should have been a significant issue. Forest Service should consider adding safety or traffic analysis to the process.	The route designation decisions were based on a broad variety of issues, including safety. The issue of safety was not identified as a significant issue in the analysis.
87	18	John Borg	Alternative Formation	Feels issues need to be re-evaluated so that they better address multiple use values, economic benefits, and trail-based motorized values.	The range of Alternatives in Chapter 2 addresses multiple use values, economic benefits and trail-based motorized values.
87	19	John Borg	Alternative Comparisons	Feels that there is a significant difference between current conditions and what is identified in the No Action Alternative. Concerned that many motorized recreationists, because trails are not adequately signed, are not aware that many of the trails they have been riding are actually closed trails. This has resulted in many motorized recreationists incorrectly thinking that the Ogden RD motorized trail system is adequate. Feels that the current conditions should be compared against all of the Alternatives so public can get a more realistic impression of the effect on motorized recreation.	It would be impossible for the Forest Service to fully understand the relative impression by the public of what roads were open or closed. This plan defines how these roads will be managed or changed from the existing management decisions including tactics to ensure the public knows which routes are open or closed.

87	20	John Borg	Single Track trails	Single track motorized trails are not identified as a separate entity in the comparisons or on the maps. Concerned that this is going to cause confusion with motorized recreationists who get the false impression that all motorized trails are open to ATVs. Clearly show in all comparison tables and on all maps a distinction between motorized single track and ATV trails.	Thank you for your comment. The final EIS will clarify the difference between single track motorized trails and ATV trails. See section 2.7 in the FEIS.
87	21	John Borg	General	Concerned that because Alternative 1 is designed to create or increase wilderness values where they currently do not exist. Feels that this Alternative will be unmanageable and will lead to more enforcement problems. Feels this Alternative cannot be considered in the final Travel Plan	The consequences of each Alternative are evaluated and disclosed in Chapter 4 of the FEIS. All of the Alternatives including Alternative 1 were considered (as required by NEPA 40CFR1502.14) in the final travel plan EIS.
87	22	John Borg	ROS	In Alternative 2 there is a concern that there should be the possibility of suggesting other trails in SPNM which may be valuable additions to the motorized trail system.	The FEIS describes a range of Alternatives that address your concern by proposing the creation of new routes or the eliminations of routes. Section 4.7 on effects to ROS.
87	23	John Borg	ROS	Concerned that in the DEIS, ROS is being used as a firm standard going into the process and that motorized routes are only considered in SPM or higher. The action Alternatives however in the DEIS contain incremental shifts in ROS to increase SPNM and P which results in an incremental loss of areas where motorized trails can exist.	ROS is a descriptive method of describing the potential of both non-motorized and motorized experiences within a defined area in relationship to types of activities that are occurring. See Chapter 4 of the FEIS for the ROS process used in this analysis.
87	24	John Borg	General	Concerned that ATV riders may be misled because the summary only identifies motorized trail mileage and doesn't split out motorcycle only. This in effect overstates ATV mileage by 22.5 miles.	Thank you for your comment. The final EIS will clarify the difference between single track motorized trails and ATV trails in Section 2.7.1.
87	25	John Borg	General	Feels that of the action Alternatives, Alternatives 2 is the only one that will provide a reasonable managed trail-based motorized system.	Comment noted.
87	26	John Borg	Skyline Trail	Concerned that despite the fact that the Skyline trail has been open to motorcycles the entire period of time since the mountain goats were introduced in the Willard Peak area and its population has increased nearly 1800% the Forest Service is even thinking of a seasonal closure. If it is closed seasonally to motorcycles then it should also be closed to non-motorized recreationists as well.	See FEIS sections 3.6.2.1 and 4.6.3.1 Mountain Goats.

87	27	John Borg	General	Concerned that this Alternative cannot meet the need for a motorized trail system and that it should not be considered in the FEIS.	The consequences of each Alternative are evaluated and disclosed in Chapter 4 of the FEIS. All of the Alternatives including Alternative 3 were considered (as required by NEPA 40CFR1502.14) in the FEIS.
87	28	John Borg	Skyline Trail	Concerned that the seasonal closure for goat kidding is not needed. The population has increased nearly 1800% in ten years despite the fact that the trail has been open to motorcycles with no restrictions.	See FEIS sections 3.6.2.1 and 4.6.3.1 Mountain Goats.
87	29	John Borg	General	Feels that this Alternative marginally meets the needs of motorized recreationists.	Comment noted.
87	30	John Borg	Alternative 4	Concerned that some users will confuse Alternative 4 with what is actually out on the ground. Alternative 4 in effect reduces the motorized trail system on the Ogden RD to complete failure.	The consequences of each Alternative are evaluated and disclosed in Chapter 4 of the FEIS. All of the Alternatives including Alternative 4 (no action) were considered (as required by NEPA 40CFR1502.14) in the FEIS.
87	31	John Borg	Annual O&M Plans	Feels that if motorized recreationists are given opportunities to meet their needs and expectations there is a good probability they will respond by actively participating in volunteer projects and peer patrols.	Thank you for your comment. The Forest Plan Goal #8 and the FEIS Appendix D Mitigation and Monitoring address the use of volunteers and peer patrols in travel management.
87	32	John Borg	Annual O&M Plans	The SWECO trail cat will provide increased efficiency (lower cost) on trail maintenance projects.	Thank you for your comment. The trail cat was purchased specifically for trail maintenance and construction. A significant amount of funding was awarded by the State of Utah motorized and non-motorized fiscal assistance program.
87	33	John Borg	Concentrated use and dispersed recreation areas	Feels the Forest Service should consider creating "kids loops" near concentrated use areas. Could feature kiosks, signage, and other features to educate young riders on trail ethics etc.	The Concentrated use Area plans in Appendix C describe the proliferation of OHV user trails in and around the dispersed camping areas. Many of these are created by users as kid loops.
87	34	John Borg	Mixed Use Analysis	Concerned that the EIS needs to contain more information regarding the mixed use analysis i.e.. Maps or lists of roads and type of permitted use.	The Mixed Use analysis was used to determine the uses of the lower standard roads. This document is available in the project record. The determination of the Mixed Use analysis would allow unlicensed ATVs on a majority of forest roads, especially where ATV traffic is currently occurring.
87	35	John Borg	Mixed Use Analysis	Concerned with how this analysis will be used in the context with other changes i.e.. The dramatic conversion of SPM to SPNM and RN. Mixed use analysis factors include ROS which could be used to suggest that OHV use is incompatible with street legal vehicle use.	A description of how ROS was applied in the different Alternatives is included in chapter 4 of the FEIS. This analysis will be a valuable tool used in our future decisions.

87	36	John Borg	Motorized Emphasis Trails	Forest Service should consider the concept of establishing "motorized emphasis" trails on which non-motorized use should be discouraged.	Thank you for your comment. This type of emphasis is not a common tactic for trail management. Section 2.5.6 discusses the relationship of non-motorized use on Motorized trails.
87	37	John Borg	Roadless Areas	Feels that motorized equipment on motorized trails in roadless areas should not be restricted to 50" or less. Feels full sized 4WD trails should be accommodated.	Forest Service Manual 2353.05 defines a "trail" as "a commonly used term denoting a pathway for purposes of travel by foot, stock, or trail vehicles." It also defines "trail vehicles" as "vehicles designed for trail use, such as bicycles, snowmobiles, trail bikes, trail scooters, and all terrain vehicles (ATV)." In contrast, it defines "a four wheel drive way" as a "a National Forest System road included in the Forest Transportation Atlas and commonly used by four-wheel drive, high-clearance vehicles with a width greater than 50 inches unless designated and managed as a trail." Also see response to comment 87 - 38.
87	38	John Borg	Roadless	Concerned that the DEIS has no authority to limit equipment on motorized trails in roadless areas to 50" or less. Feels that Forest Service Manual 2352.1 indicates otherwise.	Forest Service Manual 2352.1 says to "manage four-wheel drive ways as part of a National Forest Transportation System (Forest Service Manual 7703)." and to "restrict use to specific vehicle types to achieve recreational objectives (Forest Service Manual 7730)." The approved final Travel Plan will accomplish Forest Service Manual 2352.1.
87	39	John Borg	White Arrow Logo	Concerned that the policy should be that roads and trails are closed unless they are designated open rather than closed unless they are posted open. The later will result in much confusion if the White Arrow signs are missing.	The concept of the "White Arrow" signing is that the sign is necessary for the road or trail to be open for public motorized use. We will also be using signs marking roads closed to motorized travel. Section 2.5.17 will be the primary signing tactic.
87	40	John Borg	White Arrow Logo	Feels that the FEIS should emphasize the use of the Travel Plan Map and White Arrow to help users stay on designated routes. Additional information is needed along with the White Arrow to show what uses are designated on the route.	We agree that there is a need to use a combination of a Travel Plan map and route signing on the ground. The Record of Decision is in full compliance with the National Motorized Rule which directs the creation of Use maps and designated routes.
87	41	John Borg	Monitoring	Concerned that trail monitoring should include a mechanism to acquire information on how the trail can be improved to meet the motorize user's expectations. Should consider utilizing surveys to gather this type of information. Consider contacting the Fishlake NF for more information on their experience with the Paiute Trail.	Section 2.6 Monitoring Activities Common to All Alternatives lists recreation expectations as a specific thing we intend to monitor. This is primarily the motorized uses.

87	42	John Borg	Monitoring	Concerned that Table 2.7.1 incorrectly states that Alternative 4 offers "moderate motorized trail opportunity". Feels that in fact No Action offers inadequate motorized opportunities.	Thank you for your comment. The amount of motorized opportunity in Alternative 4 is a moderate level in relation to the other Alternatives.
87	43	John Borg	Forest Plan Consistency	Concerned that the DEIS action Alternatives dramatically change the ROS allocations which would lead to the need for a Forest Plan amendment. Feels that ROS should be kept the same except for minor adjustments based on the improved route inventory or new motorize routes that are within 1/2 mile SPNM.	ROS classifications are guidelines. Page 4-36 of the Revised Forest Plan states: "Guideline: statements describing a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance does not require Forest Plan amendment. Also see the Revised Forest Plan "ROS application and relationship to Travel Planning and Management", page 4-80.
87	44	John Borg	General	Concerned that Figure 3.1 unfairly creates the perception that the routes depicted on the map are all created by ATV's and appears to be intended as support for anti-motorized users.	The map shown as Figure 3.1 was intended to show the land ownership of the Ogden Ranger District. The FEIS map has been changed to remove many of the routes on private lands in this area.
87	45	John Borg	Signs	There is no NRCC standard or R4 guidance mandating the "closed unless posted open" policy. The FEIS should utilize "white arrow" pointers along with "open-to" symbols as well as "closed-to" symbols to designate trails. The Travel Map should be the trail reference for trail designations.	Section 3.2.2 Existing Conditions describes signs on the Ranger District as a general existing condition. The sign plan inventory mentioned in this section describes exactly what signs are used. The NRCC signing standards describes white arrows as directional signs as "recommended" not mandatory.
87	46	John Borg	Shoshone Trail	Feels that a large, connected trail system could provide many benefits, better compliance through adequate loop opportunities, foster volunteer interest, etc. But this depends on meeting OHV user needs and expectations.	Section 3.2.2 Existing Conditions describes the existence of the Shoshone Trail on the Ranger District as a general existing condition. We generally agree with your comment.
87	47	John Borg	Soils	Feels that a well designed, managed trail system has minimal impact to soils. An insufficient trail system will lead to continued non-compliance, pioneering of routes and associated erosion problems.	While we agree in general with your comment, FEIS sections 1.3.1, 2.6, 2.8 and 2.9 disclose that user education and law enforcement are also needed to control route pioneering and other forms of non-compliance with the Revised Travel Plan.
87	48	John Borg	Rare Plants	Feels that the impact from OHV's on rare plants in the vicinity of Willard Peak has been overstated 3.5.2.1. Legal OHV use will have no impact on the sensitive plants, since OHV's are restricted to designated trails.	The FEIS discusses the fact that sheep and foot traffic are a bigger concern. Section 3.5.2.1 states ..(rare) plants can be negatively affected by a variety of activities human and non human. Human activities include illegal ATV use, hiking, camping….. This section does not mention or imply threats to rare plants from legal ATV use.

87	49	John Borg	Wildlife Area of Influence	Feels that it would be more meaningful to show the amount of the DWR Harvest Unit that is influenced by the Ogden RD rather than how the Ogden RD is broken into harvest units. Suggests replacing Table 3.6.1 with the one provided in the comment letter.	We agree. The percentages calculated and provided in the draft were to represent the percentage of US Forest Service acres within the specific harvest unit. Changes were made to FEIS section 3.6.1.
87	50	John Borg	Wildlife Big Game Species	Feels that in addition to displaying herd size it would be important to valuable to also display the Ogden RD portion of deer and elk summer range. Feels that this would provide a ceiling for the maximum influence the Ogden RD could have on each unit. Comment letter includes an example for how this data might be displayed.	Thank you for your comment.
87	51	John Borg	Wildlife Big Game Species	Feels that an even more pertinent measure would be to only consider Ogden RD lands by MPC, ROS, etc. that are being considered for motorized roads and trails.	Thank you for your comment.
87	52	John Borg	TES Canada Lynx	Feels that because there is no scientific evidence that suggests the range of possible changes in low standard and motorized trail designations will impair connectivity or temporary habitat this insignificant issue should not affect the need to improve OHV opportunities.	Preliminary information available regarding lynx suggests that they do not avoid roads except for highways with high traffic volumes. The Lynx Conservation strategy recognized that many watersheds across the country are already highly roaded and research is needed to further investigate the effects of road density. Chapter 4 displays the effects of the Alternatives on lynx.
87	53	John Borg	recreation NVUM Project	Feels that the bulleted list of popular recreation activities on DEIS 3-31 is incorrect. Calculations should use % Main Activity rather than % Participating as the basis to calculate visits. Feels that the list is contrived and designed to diminish the ranking of OHV recreation. Comment letter includes a table that the writer feels would more accurately display the data.	This list is directly from the National Visitor Use Monitoring Program and is accurate See Literature Cited: USDA, Forest Service, June 2004 National Visitor Use Monitoring). Although we could display the data as suggested, we do not believe a change is warranted.
87	54	John Borg	recreation NVUM Project	Feels that it is important to emphasize the "local-applicability" of the information because the NVUM results look out of wacky for the east side of the Logan and Ogden RD's in relation to observed OHV recreation.	See comment 87 - 53.
87	55	John Borg	Motorized recreation	Feels that the Ogden Rd is one of the closest places on the Wasatch Front with OHV opportunities. Provides a table that shows that when OHV registrations from Salt Lake and Morgan Counties are added to the information provided in the DEIS it shows that over 50% of the registered OHV's in Utah are within a 1 hour drive of the Ogden RD.	Thank you for your comment. The Utah registration number for 2004 were not used in this analysis but do show another significant increase in the number of registered vehicles in northern Utah.

87	56	John Borg	Motorized recreation	Feels that the DEIS should recognize that OHV recreation has been already displaced from most areas close to the Wasatch Front. For OHV recreationists living along the Wasatch Front the Ogden RD may provide the nearest available OHV opportunity.	FEIS section 1.3.1 Purpose and Need states "a travel plan revision is needed to address the dramatic increase in demand for motorized recreational experiences". This increase is related to the proximity to the Wasatch Front. Section 3.7.4 also addresses the amount of motorized recreation demand likely to occur near the Northern Wasatch Front.
87	57	John Borg	Non-Motorized recreation	Feels that there are many more opportunities for non-motorized recreation than there are for motorized. For example, in addition to having non-motorized access to practically all of the public lands in the Ogden area most of the land is exclusively non-motorized. For this reason the writer feels that additional motorized trails can be added without any significant impact to non-motorized opportunities.	Thank you for your comment. A significant issue described in table 1.6.1 was the diverse range of motorized recreation in the Ogden Ranger District. This analysis focused on summer time motorized access.
87	58	John Borg	ROS	Concerned that the DEIS does not disclose the fact that the amount of non-motorized opportunities is much more extensive that the ROS SPNM would indicate. Feels that the FEIS could be improved if a map showing the RFP ROS and a table showing how much of the Ogden RD has been allocated exclusively for non-motorized recreation.	A new ROS map is planned for the Forest showing the management changes in ROS classifications. The creation of that map is outside of this decision although the final Record of Decision is expected to be included in the generation of this map.
87	59	John Borg	Roadless	FEIS should use specific Forest Plan direction (MPC, ROS, etc) to guide route decisions in roadless areas. Roadless areas are not defacto wilderness.	Because roadless was identified as a key issue the Final EIS analyzed the effects to roadless characteristics. The Revised Forest Plan also emphasizes the desire to continue to manage inventoried roadless characteristics in those areas. See key issues and Alternative development in charter 1 and 2 of FEIS.
87	60	John Borg	Economics	Concerned that the Forest Service has ignored the economic benefits of an OHV trail system. Feels that the economic benefit to smaller communities in Rich and Box Elder County could be significant. Would like to see the economic benefits analyzed across each of the Alternatives.	Economic impacts were discussed in Chapter 3. Section 3.11.1 of the FEIS discloses that the Forest Plan analyzed how general impacts of National Forest Management and decisions of the WCNF relate to the local economy. The analysis in this EIS is limited to significant issues and economics was not considered.
87	61	John Borg	Hunting	Providing better trail systems could provide better hunting opportunities while reducing OHV impacts that are now occurring.	Providing better access can provide additional opportunities, but it may also increase hunter competition and quality of the hunting experience.
87	62	John Borg	Economics	Evaluate economic contributions across Alternatives.	see response to 87-60.

87	63	John Borg	Economics	Consider using the Paiute ATV Trail economic estimate (Reid, 2004), and the Colorado economic Survey (Colorado Off-Highway Vehicle Coalition, 2001) as references for this Travel Plan.	See response to 87-60.
87	64	John Borg	General	There needs to be a clear distinction between motorized single track and 50" ATV trails.	Motorcycle trails and ATV trails are described in the Final EIS.
87	65	John Borg	General	A complete route inventory map which shows roads by maintenance level, motorized single track trails, ATV trails, non-motorized trails, and inventoried unclassified trails needs to be provided.	No individual map was created with all these items. Separate maps were used during the analyses which do include most of this information.
87	66	John Borg	General	Clearly identify on maps and tables ATV trails from motorized single track trails.	The final maps will indicated motorized routes and the tables in the Record of Decision will indicated allowed types of vehicles. Motorcycle trails and ATV trails are described in the Final EIS.
87	67	John Borg	General	Changes to Alternative 2 could be made to achieve the same benefits water quality, wetlands, and aquatic resources as the other Alternatives.	The Decision Maker has the ability to combine Alternatives for the final decision.
87	68	John Borg	Silvia Hollow	Reopening the Silvia Hollow road would have little impact on sedimentation.	Silvia Hollow road was closed due to the resource damage (sedimentation) it was causing. Since the route is right next to the stream, reopening it would increase sediment input to Silvia Hollow.
87	69	John Borg	Water Quality	Water quality impacts could be reduced in Alternative 2 by adding gravel or season closures or improving drainage on Public Grove 4X4, Campground Spring Spur, Box Elder Creek Trail.	We agree with your suggestion. FEIS section 4.3.5.2 discloses that sedimentation will continue on certain roads under certain Alternatives, until practices such as graveling or drainage can be accomplished to minimize this effect.
87	70	John Borg	Perry Reservoir	Use the administrative closure of the Perry Reservoir Road in Alternative 2.	The Decision Maker has the ability to combine Alternatives for the final decision.
87	71	John Borg	Toads	Alternative 2 could utilize the reroutes around Boundary Spring and Buck Springs and retaining the closure or considering a reroute around Zion's Spring to protect boreal toad.	The final decision will have reroutes around Boundary Spring and Buck Springs but not Zion Springs.

87	72	John Borg	General	Closing a trail or road to motorized public does not eliminate the TSRC, which is the same whether the trail is motorized or non-motorized or the road is open or admin. The DEIS only considered motorized roads and trails.	We do not agree with your comment that TSRC conditions will be the same for closed roads and trails as they would be for those open to motorized use. FEIS section 4.4.4 discusses the effects on soils, particularly the recovery of those properties which influence TSRC classification, from the complete or administrative closure of roads and trails to motorized uses. The disclosure of TSRC acres in this FEIS section 4.4.4.1 varies between Alternative based solely on the quantity of illegal, unclassified routes that will be either completely or administratively closed. Text will be added to the FEIS to clarify our basis for TSRC calculations.
87	73	John Borg	General	When TSRC is calculated for all road and trail exposed soil, Alternative 2 results in a smaller TSRC than either Alternative 3 or 3a.	We agree that changing the assumptions upon which TSRC values are calculated would result in different summary values for the Alternatives. FEIS section 4.4.4.1 uses different assumptions than does your analysis, but since there are no Forest Plan standards or thresholds for TSRC, summary values will ultimately only be a minor consideration in the decision of which Alternative will be chosen for revision of the Ogden District Travel Plan.
87	74	John Borg	General	How does a few miles more or less of trail in a vegetative MIS community impact the ability for the community to provide its indication?	A few miles, more or less, would not impact the ability for the community to provide its indication.
87	75	John Borg	General	Road and trail density will be so low regardless of Alternative that there will be virtually no effect to indication function of the MIS community.	Thank you for your comment. Also see comment 87 - 74.
87	76	John Borg	General	If the trail is already there, why will the MIS community be affected differently if it's managed as motorized or non-motorized?	Continued expansion of the trails due to illegal OHV use could affect the MIS community. Comparisons of alternatives are based on legal managed route.
87	77	John Borg	Willard Peak	The EIS should identify the introduced mountain goats as an impact to rare plants.	The impacts to rare plants due to the introduced mountain goats are an accumulative effect. The direct effects of impacts to rare plants due to the introduced mountain goats are not analyzed in this EIS.
87	78	John Borg	Skyline Trail	Reinforce the EIS to show that most of the impacts to vegetation in the steep, rocky areas along the Skyline Trail are generally not caused by motorized recreationists.	4.5.4.1 Effects Common to All Alternatives discusses the effects to rare plants from activities other than OHV use.

87	79	John Borg	General	The Wisdom study (2004) has limited conditions that make its application to the Ogden RD questionable for a fair analysis of effects.	The Wisdom study is one of the best studies conducted examining the effects of recreation on elk. These studies have been highly recommended by the current chief and a former chief of the US Forest Service. As stated within the FEIS, numerous other studies demonstrate that elk are affected by roads and the associated disturbance (e.g. Rowland et al 2004).
87	80	John Borg	General	Consider the additional potential impact from non-motorized uses.	The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of other activities.
87	81	John Borg	General	The DEIS didn't consider that since non-motorized use can actually cause an increased flight response to mule deer, closing a trail to motorized use will not necessarily decrease disturbance.	The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of other activities.
87	82	John Borg	General	Using a measurement indicator for mule deer based on road and motorized trail alone is flawed, must include non-motorized trails too.	The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of other activities.
87	83	John Borg	General	None of the Alternatives could have significant effect on mule deer population.	Section 4.6.3.1 Effects on General Wildlife: Mule Deer displays the differences between Alternatives with regards to winter and summer range.
87	84	John Borg	General	Effects of drought, hunting, competition for winter range and other factors have more significant impacts on mule deer populations.	Section 4.6.3.1 Effects on General Wildlife: Mule Deer specifies "Factors which have been identified as key factors in the decline of mule deer…are as follows: decrease caring capacity on winter range, increased human population impacts, changes in livestock grazing practices on winter range, increased effects of predators, competition from elk on winter range, and changes in public values regarding management tools (UDWR 1999)".
87	85	John Borg	General	The patch size table should include "current conditions" based on management, which didn't discourage use on many trails not on the current travel plan.	Section 4.6.2 describes the effects analysis assumptions, one of which specifies that "unauthorized routes will be considered as closed for the effects analysis". The effects of each Alternative are described within chapter 4, so comparisons can be made between Alternatives. Chapter 3, wildlife describes the existing condition as the conditions under the current Travel Plan (Alternative 4).

87	86	John Borg	General	The overall insignificance of motorized trails across Alternatives should be emphasized.	Section 4.6.3.1 Effects on General Wildlife: Elk displays the differences between Alternatives with regards to winter and summer range and disturbance effects related to patch size.
87	87	John Borg	General	It appears that the DWR population objectives are either too high or the DWR is allowing too much harvest. Trying to blame shortfall on wheeled OHV's cannot be supported with science.	UDWR population objectives are beyond the scope of this project. The EIS, Section 4.6 displays the effects of the Alternatives on wildlife species.
87	88	John Borg	Willard Peak	The mountain goat population has been growing dramatically despite no seasonal restrictions. If there really is a need to protect kidding areas, a seasonal closure would apply to all uses.	FEIS sections 3.6.2.1 and 4.6.3.1 discusses Mountain Goats. Additional information has been added to the FEIS with regards to the effects of disturbance.
87	89	John Borg	Willard Peak	Non-motorized users, especially those with unleashed dogs have a greater potential for impact to mountain goats than motorcycles.	FEIS sections 3.6.2.1 and 4.6.3.1 discusses Mountain Goats. Additional information has been added to the FEIS with regards to the effects of disturbance.
87	90	John Borg	General	There is no need to do an analysis for a species (Grey Wolf) with no breeding pairs and no critical need for habitat on the Ogden RD.	FEIS sections 3.6.2.1 and 4.6.3.1 discusses the Grey Wolf.
87	91	John Borg	General	There is nothing to support that any changes proposed in road/trail densities on the eastern side of the Ogden RD will have a significant effect on the ability of dispersing Canada Lynx to travel in the corridor.	With regards to the lynx, Section 3.6.2.3 and Section 4.6.3.3 discusses the Canada lynx.
87	92	John Borg	General	The regional corridor should be evaluated on a regional scale.	Evaluating the corridor at the regional level is beyond the scope of this document. The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of other activities.
87	93	John Borg	General	All DEIS action Alternatives dramatically reduce SPM area on the Ogden RD by converting SPM to SPNM and RN ROS categories.	Section 4.7.2 lists ROS changed by proposed changes to the travel plan as a non-significant issue. Section 4.7.3 Effects Analysis Methods and Assumptions explain the changes to ROS based on the analysis methods used.
87	94	John Borg	General	Alternative 2 could be done with the Revised Forest Plan ROS allocations, and provide reasonable OHV opportunities.	Thank you for your comment. Alternative 2 was created using the comments received during the scoping process. This included public and internal comments from the Forest Service specialists.

87	95	John Borg	General	Other indicators should be used to measure how well Alternatives meet the needs for trail based OHV recreation on the Ogden RD.	Indicators used to compare Alternatives in Table 1.6.1 were developed with the specialists. The indicators are quantifiable and interpreted for each Alternative in Chapter 4. When quantifiable indicators are not used, a qualitative interpretation of effects is presented. It is possible we could have used other indicators but not necessary.
87	96	John Borg	General	Please consider Forest Service Handbook 2309.18 for suggestions for features and length of a day trip for different classes of vehicles.	The Trail Handbook was considered during all trail related decisions. Length of day trips can not be a consideration when analyzing a Ranger District transportation system as small as the Ogden District. Lengthy trips would have to extend well beyond this District jurisdiction.
87	97	John Borg	General	All action Alternatives severely reduce OHV recreational opportunities based on ROS.	The Alternatives are compared to the No Action Alternative which is a measure of all legally open routes. All of the actions Alternatives as shown in Table 2.7.1 show additional motorized trail routes.
87	98	John Borg	General	Primitive ROS - the text mentions minimum size, but not minimum size values. The minimum size for a Primitive ROS is 5000 acres.	Delineating ROS attributes was done using GIS software. Section 4.7.3 partially describes how ROS was mapped. All the criteria for mapping ROS are used in the calculations including minimum acre size.
87	99	John Borg	General Bias against OHV recreation	Section 4.7.4 only looks at negative effects on non-motorized recreation, and doesn't consider positive effects or improvements to motorized recreation.	The effects to recreation are a significant issue as described in Table 1.6.1. This issue is a concern about a diverse range of trail-based recreation. Since this analysis is focused on the motorized trail opportunities, it leaves changes to the existing system of Non-motorized trails as an relative measurement of the effects by Alternative.
87	100	John Borg	General Bias against OHV recreation	Motorized users are not the only source of user created trails.	Thank you for your comment.
87	101	John Borg	General	Improving roads to a higher maintenance level for passenger cars will increase travel speeds and pose a greater risk for wildlife, OHV users, and non-motorized users.	We agree with your comment. Section 4.7.4.1 discloses that improved maintenance will allow use by passenger cars in some minor cases.
87	102	John Borg	General Bias against OHV recreation	The DEIS range of Alternatives only proposes routes for motorized travel in current SPM or more developed classes. This creates an incremental loss of areas where motorized trails will even be considered, which is unfair and inappropriate.	By definition, ROS categories lower than Semi primitive Motorized do not describe motorized recreation as an opportunity appropriate for those categories. This EIS does not prohibit future analysis that may change an existing forest plan ROS designation.
87	103	John Borg	General Bias against OHV recreation	Why are there differences in values from the Alternative tables in 4.7.4.2 and other tables.	The tables in 4.7.4.2 were developed by the Landscape Architect using GIS data from the Revised Forest Plan rather than the Travel Plan alternatives.

87	104	John Borg	General	Alternative 1 and 3 would likely result in increased non-compliance, displacement, and little interest in assisting the Ogden RD through volunteers.	Thank you for your comment. The FEIS includes a range of Alternatives
87	105	John Borg	General Bias against OHV recreation	Even the motorized emphasis Alternative has the effect of increasing non-motorized emphasis areas and reduces SPM areas.	Section 4.7 Effects to recreation illustrate by Alternative the changes in ROS. Your statement is correct as indicated in section 4.7.4.2 Effects by Alternative.
87	106	John Borg	General	Alternative 2 may meet OHV recreationists' expectations, providing that there's no conversion of ROS SPM to RN.	Alternative 2 was created to provide additional motorized recreation opportunities as indicated in section 2.4.1 on page 2-3.
87	107	John Borg	General	The balance between SPNM and SPM is biased.	ROS was expected to change by Alternative as described in section 4.7.4.2. Significant issue for recreation General identifies an issue of providing a diverse range of trail-based motorized and non-motorized recreation opportunities.
87	108	John Borg	General	Alternative 3a will only marginally meet OHV needs at this time. However, will result in continued non-compliance and will not attract responsible users.	Alternative 3a was similar to Alternative 3, the wildlife emphasis. Many of the changes from Alternative 3 to Alternative 3a were improved motorized opportunities as outlined in section 2.4.4.
87	109	John Borg	General Bias against OHV recreation	The DEIS 4.7.4.1 lists 110 miles of non-motorized trail on the Ogden RD, where did the 53 and 83 miles of non-motorized trail in the RFP FEIS go?	There are discrepancies in mileage caused by the difference in INFRA miles and GIS miles as described in section 3.2 Transportation System.
87	110	John Borg	General	If the Alternatives could be effectively compared using ROS (but they can't), all action Alternatives would dramatically reduce the quality of motorized recreation (See Table in Letter pg 45).	A range of Alternatives have been developed to meet the Purpose and Need.
87	111	John Borg	General	The DEIS fails to meet the need (improved motorized recreation experience) identified in the DEIS given its own measurement indicator shows significant reductions in SPM ROS.	Changes in ROS were used as indicators of relative changes in recreation opportunities. Reductions in SPM acres do not equal a failure to meet the purpose and need. Because the purpose and need was not to increase SPM opportunities specifically. Changes in ROS by alternative in chapter 4 indicate relative changes in motorized recreation opportunities.
87	112	John Borg	General	The ROS analysis must be completely redone using a meaningful measurement indicator.	See response to comment 87-111
87	113	John Borg	Scenery	A motorized single track should be less than 1/2 the 5' value used in the scenery analysis.	The width of the single track is useful for analysis because it provides a unit of measure the relative comparison of Alternatives. This relative comparison is adequate for this analysis.

87	114	John Borg	Mollens Hollow	The Mollens Hollow Overlook trail and the rest of the Tilda Springs ATV trails are need for ATV trail system improvements.	The route named here as the Mollens Hollow Overlook trail is the Davenport Hollow (29196) and Davenport Hollow Overlook (xxx8) routes listed in Appendix A - Curtis creek area. This appendix describes the current management of the routes as non-motorized opportunities. Footnote 1/ from Table 2.7.2 describes how the Tilda Spring and Davenport Hollow routes will be changed based on the final decision.
87	115	John Borg	General	The economic analysis should not be limited to OHV retailers, and should include potential effects on local communities.	See response to 87-60.
87	116	John Borg	General	Please consider the responsible OHV recreation Alternative	Thank you for your comment. Many of the items listed in your comment were considered in the development of all Alternatives including comparison to Alternative 4, the existing condition.
88	1	Michael and Bonnie Gilbert	General	Opposed to any new motorized trails on the Ogden Ranger District.	Thank you for your comment. The FEIS describes a range of Alternatives.
88	2	Michael and Bonnie Gilbert	Skyline Trail	Would like to see the Skyline trail closed to motorized use. Feels there is a need for non-motorized recreation in urban areas.	Thank you for your comment. The FEIS describes a range of Alternatives for the Skyline trail. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
89	1	Brett Hawkes	Skyline Trail	Wants to see the Skyline trail left open from Pineview to Willard Peak (and on to Mantua). The Forest Service need to keep opportunities for single track users.	Thank you for your comment. The FEIS describes a range of Alternatives for the Skyline trail. Section 2.4 - Alternatives Considered in Detail include leaving portions open or closed seasonally.
90	1	Terry Johnson	General	Wants to make sure ATV opportunities exist. Would like to see more law enforcement	Thank you for your comment. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses.
91	1	Kathryn McKay	General	Does not support the Ogden Travel Plan Revision	Thank you for your comment
92	1	Ron Wright	General	Supports comments in letter 89	See response to comment letter 89.
93	1	Alan and Elaine Bezzant	General	Supports comments in letter 89	See response to comment letter 89.
94	1	Max Weston	Skyline Trail	Does not support seasonal closure for goat habitat	Thank you for your comment.
95	1	Fred and Laura Selman	Rocky Dugway	Concerned about the effect of OHV traffic on Sharp-tailed grouse on their ranch. OHV users could easily cause the birds to disperse up to one mile to less desirable and productive habitat.	The of OHV's on Sharp-tailed grouse is disclosed for all Alternatives in Chapter 4 of the FEIS.
95	2	Fred and Laura Selman	Rocky Dugway	Concerned about the impact of OHV traffic on the historic sheep driveway that crosses their property.	The impacts to historic/cultural resources are disclosed in Chapter 4 of the FEIS.

95	3	Fred and Laura Selman	Rocky Dugway	Concerned that with all of the disagreement regarding the legality of the public right-of-way across their property it would be unwise to create an expectation for a route that in the future could end at the Forest boundary.	See response to comment 17-1.
96	1	Charles and Barbara Redd	Devils Gate	As owners of the private land request the Forest Service remove its trails and roads from their property.	See response to comment 17-1.
97	1	Alan Wheelwright	Public Grove	Against opening this area to motorized use.	Thank you for your comments. A range of Alternatives have been analyzed addressing motorized use in this area.
97	2	Alan Wheelwright	Law Enforcement	ORV routes should be limited to those that can be easily enforced	Thank you for your comment. Section 1.3.2.3 Forest Plan identifies in the Forest wide Goal 8 - Enforcement, increasing the participation of individuals and organized groups in monitoring uses.
97	3	Alan Wheelwright	General	Against rewarding illegal use by making routes legal	Thank you for your comment. Section 1.3.1 Purpose and Need for the Proposed Project describes the public need for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation. It also indicates the need to address the dramatic increase in demand for motorized recreational experiences. Section 2.4 - Alternatives Considered in Detail describes a range of Alternatives reducing motorized trails.
97	4	Alan Wheelwright	Signing	Motorized routes need to be better signed so that people that want to obey the law can do so.	Thank you for your comment.
98	1	Brett and Michelle Selman	Rocky Dugway	Opposed to opening the Three Mile road to connect to the Rocky Dugway. Concerned that ATV use will cause widespread damage.	See comment 17-1.
98	2	Brett and Michelle Selman	Rocky Dugway	Concerned that loop trails are not really the answer. They will only attract more people to the area and cause more problems.	Thank you for your comment.
98	3	Brett and Michelle Selman	Rocky Dugway	Forest Service should not be adding loops that go onto private land.	See comment 17-1.
98	4	Brett and Michelle Selman	Rocky Dugway	Concerned that this area is important transitional range for mule deer. Also concerned about what the impacts will be on Sharp-tailed grouse and sage grouse.	The effects of each Alternative on mule deer and grouse (sharp-tailed and sage) are disclosed in Chapter 4 of the FEIS.
98	5	Brett and Michelle Selman	Rocky Dugway	If this road is approved will the Forest Service consider strict seasonal closures for both wildlife and soil protection?	See Chapter 2 for detailed Alternative descriptions.

99	1	Shawn Grogan	Skyline Trail	Disagrees with the seasonal closure for goat kidding. The population seems to be thriving and from personal experience knows that the goats do not seem stress when ATV's pass near them. Concerned that this is a ploy by people that want to see the trail closed to motorized use.	See Response 103-1.
100	1	Wasatch Audubon Lynn Carrol	General	Wants to see ATV use on the National Forest reduced because of its impact on wildlife. Prefers Alternative 3 because of fewer miles of roads and motorized trail, fewer impacts on riparian areas, reduced impact on Brewers sparrow, reduced impacts on mountain goats.	Thank you for your comments.
100	2	Wasatch Audubon Lynn Carrol	Law Enforcement	Regardless of which Alternative is chosen there needs to be more enforcement and signage	The purpose and need indicated a need for more effective law enforcement.
101	1	Ogden Sierra Club, et al	P&N	A clearer articulation of the purpose and need for the proposal must be given.	Although the purpose and need for the project have not changed between draft and final, we will add some clarifying language to Section 1.3.1 to better articulate the purpose and need for the proposal.
101	2	Ogden Sierra Club, et al	EO and CFRs	EIS should cite applicable sections of CFRs and EO 11644 and EO 11989 and should undertake a route-by-route assessment to ensure route is located to minimize damage to soils, water, wildlife, vegetation, and conflicts with quiet uses of the forest.	EO 11989 was referenced in Section 3.1.1 and CFRs are referenced in many locations of the FEIS; applicable reference from EO 11644 was added to Section 3.1.1 in the FEIS for clarification. See Chapter 7 for a complete list of literature cited. As discussed in Sections 2.8 and 4.3.5.3, Best Management Practices (BMPs), standards and guidelines, and soil and water conservation measures will be implemented to avoid or reduce adverse effects, as disclosed in Chapter 4, The Environmental Effects.
101	3	Ogden Sierra Club, et al	Dispersed Camping	The Decision should include policies for dispersed camping and parking and vehicle-related events.	Thank you for your comment. Section 2.3 Number 7 addresses this issue.
101	4	Ogden Sierra Club, et al	Issues	The Forest Service conclusion that certain issues are non-significant is unsupported and arbitrary. EIS should include the following as issues: enforcement, water quality, sensitive fish populations, noxious weeds, rare plants, dispersed camping, and heritage resources.	A thorough discussion of the public scoping process and issue identification is provided in Sections 1.6.1 through 1.6.4 and on Table 1.6.1 of the FEIS. As identified in Table 1.6.1, significant issues were used to develop a range of Alternatives; non-significant issues, Although not used specifically to develop Alternatives, are included in the analysis and the effects are documented in Chapter 4, The Environmental Effects.

101	5	Ogden Sierra Club, et al	Cumulative Effects	Forest Service determination that cumulative effects are non-significant lacks merit. Simply providing a narrative of past, present, future projects fails to provide the public with info necessary to determine cumulative effects.	Section 4.14 discloses the information regarding the cumulative effects analysis. Past, present and reasonably foreseeable future actions are listed first, then each action (or group of actions) and the associated cumulative effects are discussed as applicable for each resource in the succeeding sections.
101	6	Ogden Sierra Club, et al	Shoshone Trail	Implementation of the Shoshone Trail is in violation of NEPA.	The Shoshone Trail is an administrative decision only. The FEIS discloses the history of the Shoshone Trail in section 3.2.2 Existing Condition and the cumulative effects in section 4.14.7.
101	7	Ogden Sierra Club, et al	Maintenance Costs	The costs (and comparison between Alternatives) of managing and maintaining trails should be included.	Historic funding for road and trail maintenance is in section 3.2. No further analysis of this issue was included in the document.
101	8	Ogden Sierra Club, et al	General	A mixed-use analysis must be part of the EIS (describing the estimated effects of closing or opening one trail on adjacent trails or use areas).	A mixed-use analysis, as discussed in the FEIS Section 2.5.5, will be completed and documented according to Forest Service Manual 2352.1 and Forest Service Handbook 7709.59, before the decision is signed. The mixed-use analysis looks at the effects of a mix of licensed vehicle use and non-licensed ATV use on applicable Forest Service roads.
101	9	Ogden Sierra Club, et al	Effects	The proliferation of user-created routes will vary by Alternative and should be acknowledged and quantified.	This analysis of effects assumes that all user created routes will continue to be closed and rehabbed. This assumption will be added where appropriate to the FEIS. Accurate speculation on the location and amount of new user created routes is not possible.
101	10	Ogden Sierra Club, et al	General	Trespass onto private property is an issue that must be analyzed.	See response to comment 17-1.
101	11	Ogden Sierra Club, et al	ROS	The total miles of non-motorized trails that are accessible and visible on the ground and that are within 1/2 mile from the nearest road or motorized trail should be disclosed in the EIS. The availability of hiking/walking trails is an important indicator of recreation opportunities.	According Ranger Districting to Section 1.3.1, purpose and need, "the travel planning effort is not intended to cover non-motorized trails or winter motorized travel". Although hiking/walking trails are among the spectrum of recreation opportunities on the Ogden Ranger District, displaying the miles of non-motorized trails on the District is outside the scope of this analysis and would not contribute to the decision-making for this project.

101	12	Ogden Sierra Club, et al	General	We are generally satisfied with the number and emphases of Alternatives. However, Forest Service should consider our "Conservation Alternative".	Thank you for your comment. Although not considered as an additional Alternative (see Section 2.3) several elements of the "conservation Alternative" are included within the Alternatives already analyzed in the FEIS. The decision maker has the opportunity to choose from among the many actions included within the range of Alternatives, as long as those actions have been analyzed. We feel we have considered a reasonable range of Alternatives within the scope of the project.
101	13	Ogden Sierra Club, et al	Public Grove	Alternative 1 should keep motorized routes out of Public Grove area.	Alternative 1 had an emphasis of Roadless areas described in the Wasatch-Cache National Forest Plan and Final EIS. Page 3-296 states the Public Grove Hollow area was dropped from consideration by the Roadless Conservation rule.
101	14	Ogden Sierra Club, et al	General	Alternative 3 should go further to protect wildlife habitat with closures in Clay Valley (26011), Public Grove (20220), Public Hollow Loop (20092), Tilda Spring (26102), and Boundary Spring (26735).	A range of Alternatives have been developed to meet the Purpose and Need.
101	15	Ogden Sierra Club, et al	General	One Alternative should provide more motorized trails by downgrading some roads to trails, such as Baldy-Wheeler (20071), Lambs Canyon (20216), and Running Water Spring (20192).	A range of Alternatives have been developed to meet the Purpose and Need.
101	16	Ogden Sierra Club, et al	General	Alternative 4 should include constructing new gates.	Since Alternative 4 is the current Travel Management Plan, it would be correct to identify new gate locations in this Alternative. As indicated in section 2.1, a No Action Alternative is used to describe Alternative 4. This Alternative assumed no additional management actions would be proposed in this document.
101	17	Ogden Sierra Club, et al	Dispersed Camping	The design and management of 2 concentrated use areas should vary by Alternative and "no action" and should enforce the current 150-foot limit for dispersed camping. Alternative 3 should restrict dips camping to designated sites only.	Implementation of developments in the two concentrated use areas is common to all alternative in section 2.5.2 because of the need to improve the camp sites for legal dispersed camping. A dispersed camping alternative was not considered as indicated in section 2.3 number 7.
101	18	Ogden Sierra Club, et al	Tin Cup Spring	Tin Cup Spring road (20210) should be managed like Tilda Spring trail (closed or downgraded to ATV trail).	The Tin Cup Spring road (20210) is currently a 0.7 mile road through open terrain and vegetation. A truck can drive easily on this road. It would be extra effort to restrict vehicle size and manage it as an ATV-only trail with little payoff in improved travel management.

101	19	Ogden Sierra Club, et al	Public Grove	If seasonal closure for Public Grove (20220) is kept in any Alternative, then closure should include route's western continuation (or seasonal closure will be ineffective). Include seasonal closures for 20113 and 26012 in same Alternative.	Thank you for your comment. A seasonal closure is being considered in the Final EIS on roads 20113 and 26012, Three Mile and Sink Hole Loop roads.
101	20	Ogden Sierra Club, et al	Willard Basin/Dry Bread	Include more seasonal closures; Alternative 3 should include seasonal closures in Willard Basin and Dry Bread.	More seasonal closures are being considered in the Final EIS.
101	21	Ogden Sierra Club, et al	General	The EIS describes the differences between Alternatives 3 and 3a as being primarily due to administrative need to emphasize another resource in specific areas. The EIS should identify what other resource is being emphasized in each of the areas affected by the differences between Alternatives 3 and 3a and explain how emphases relate to MPC for the affected areas.	Sections 2.4.3 and 2.4.4 to provide more information on the referenced Alternatives and the resource being emphasized in specific areas under each Alternative. The analysis references the differences in effects by alternative in Chapter 4 that should help clarify the comparisons.
101	22	Ogden Sierra Club, et al	Alternatives	It is misleading to designate Alternative 3a as the preferred and to describe it as similar to Alternative 3; it is closer to Alternative 2. If preferred Alternative is modified to coincide with our Conservation Alternative, then calling it 3a will be appropriate.	The differences between Alternatives 2, 3 and 3a are more apparent in the disclosure of effects, Chapter 4, than in the listing of open and closed roads as displayed in Chapter 2. The effects for Alternative 3a are more similar to Alternative 3; for example, for boreal toad and Bonneville cutthroat trout (Section 4.3.5.2) and for the effect on RCHA's (Section 4.3.5.6). The effects to wildlife, as discussed in Section 4.6, are generally more similar between Alternatives 3 and 3a than between Alternatives 3a and 2.
101	23	Ogden Sierra Club, et al	Scoping Process	The Forest Service impermissibly added several routes in the DEIS that were not in the Scoping Document or Notice of Intent. To remedy this, the Forest Service should postpone the decision until after summer 2005 so field reviews can be made of the new routes.	The best information available at the time was included in the Scoping Document sent out on July 18, 2003. Following GIS updates and a roads analysis during 2003-2004, a Notice of Intent to produce an EIS was published in the Federal Register (March 31, 2004) with the best available information at that time. Since that time numerous news articles have been published in local newspapers and newsletters. The public has been kept apprised of the developments in the analysis through several meetings and public forums. While we'd like to provide the opportunity for additional field reviews, the immediacy of the decision outweighs the merits of lengthening the environmental review process.

101	24	Ogden Sierra Club, et al	General	Forest Service must consider a full range of Alternatives for managing dispersed camping; the preferred Alternative should replace "150-foot camping rule" with "vehicle-supported camping at designated campsites only" (process for designation to follow travel planning).	Dispersed camping is outside the scope of this document. See section 2.3 Alternatives Considered and Eliminated from Details Analysis item 6.
101	25	Ogden Sierra Club, et al	Dock Flat/Dry Bread	Immediately implement and enforce the existing Travel Plan at Dock Flat and Dry Bread until a new Travel Plan is made.	The current Travel Plan is being implemented across the entire Ranger District. Signing in all areas is updated and maintained during the summer operating season.
101	26	Ogden Sierra Club, et al	Dispersed Camping	It is unclear whether "minor system roads" mentioned in Sec 2.5.2 are included in Table 2.7.2 or are additional. It is crucial these side roads be analyzed and shown on the final map. These routes should only allow motorized use for access to designated dispersed sites	Minor routes that are significantly longer than 150 feet and access existing dispersed campsites have been added to Table 2.7.2. Examples are the three Harriet Spring roads, xx35, xx37 and xx38.
101	27	Ogden Sierra Club, et al	Gravel Pits	The locations and status of all existing gravel pits on the District must be disclosed.	Gravel pit locations will be added to the maps in the FEIS for any additional information they may provide.
101	28	Ogden Sierra Club, et al	Definitions	Sec 2.5.14 incorrectly defines roads as "routes available to wheel to ground motorized vehicles"; the definition should be consistent with definitions used elsewhere by the Forest Service.	The term "wheel-to-ground" is used by the Forest Service to distinguish a summertime vehicle versus an over-the-snow wintertime vehicle. We agree that it is not a well known or well used term.
101	29	Ogden Sierra Club, et al	Monitoring	Sec 2.6 (Monitoring) should specify the frequency of various monitoring activities and describe the format to be used.	In this document, the decision to do additional monitoring is made. The format and frequency will be determined when this action is implemented.
101	30	Ogden Sierra Club, et al	General	Mileages and mileage summaries on pages 2-3 through 2-11, Table 2.7.1, and elsewhere in the DEIS are unclear, misguiding, and inconsistent. Mileages should be corrected, consistent, and the methodology for computing them should be completely described.	Thank you for your comment. The Final EIS will clarify the mileage used in the analysis for all roads and trails.
101	31	Ogden Sierra Club, et al	Maps	In general, the DEIS maps are nicely drawn and easy to understand. However, several improvements and corrections are needed. Table 2.7.2 provides a lot of information, however more information and several corrections are needed (as described specifically in the letter).	Thank you for your comment. Corrections and improvements to the maps and the document will be made for the Final EIS.

101	32	Ogden Sierra Club, et al	General	Page 2-16 briefly describes increased monitoring efforts; where is the data? The Forest Service must analyze costs of trail maintenance, enforcement, and monitoring and include in the EIS.	All Alternatives would be implemented to the extent annual budgets allow. Section 3.2 describes the recent annual budget for maintenance of roads and trails. The cost of day to day resource management activities is not a decision-making factor relative to this analysis. Indicators used to compare Alternatives and aid the Responsible Official in making an informed decision are displayed in Table 1.6.1.
101	33	Ogden Sierra Club, et al	General	The implementation section in the EIS should set priorities and sequencing for on the ground work, including mitigation.	The specific sequencing and priority setting for implementation of the decision is determined by District and Forest officials and is dependant on numerous factors, including annual budgets. Mitigation would be accomplished in conjunction with construction and decommissioning actions according Ranger Districting to their established priorities.
101	34	Ogden Sierra Club, et al	Area of Influence	The Forest Service limited its analysis to a narrowly defined area of influence which for most resources is confined to the Ogden RD. This should actually extend farther than indicated. The EIS must include adjacent lands.	The EIS describes direct and indirect effects for an area of influence for each resource, which in most cases is the Ogden Ranger District. This includes the areas directly affected by an action (such as construction of a motorized trail) and the adjacent area (the area surrounding the motorized trail) indirectly affected by the action. For cumulative effects, the area of influence again varies by resource, and for some resources extends beyond the District boundaries.
101	35	Ogden Sierra Club, et al	General	The EIS must acknowledge that unauthorized motorized travel will not be completely eliminated and must analyze the consequences in Chapter 4 (the effects of which will vary by resource conditions such as permeable soils, poor drainage, etc.)	The EIS acknowledges unauthorized motorized roads and trails and their consequences and notes that unauthorized routes will be closed as funding becomes available. (Section 4.14.4).
101	36	Ogden Sierra Club, et al	MPC's	The EIS should add a map that shows routes in the context of MPCs and describe how MPCs were used in development of Alternatives. EIS should provide an explanation of why routes in MPCs 3.1 and 3.2u are necessary.	Section 1.3.2.3 disclosed the MPCs established by the Revised Forest Plan. The effects analysis in chapter 4 lists by resource the impacts of new trail construction. No actions in this document would conflict with MPCs 3.1 and 3.2u.
101	37	Ogden Sierra Club, et al	General	Page 4-2 needs more info and clarification regarding contradictions between the map and text, the discussion on the seasonal closure, and inconsistent treatment of closed routes and non-motorized trails between Alternatives.	Thank you for your comment. Improvements to this section will be made for the Final EIS and the Record of Decision.

101	38	Ogden Sierra Club, et al	North Fork Ogden River	The North Fork Ogden River is not meeting its beneficial use due to dissolved oxygen level impairment. The Forest Service must take action to determine the cause of the impairment, thoroughly consider the proposed actions consequences on water quality in this stream, and describe the measures being taken to ensure this stream meets beneficial use in the future.	FEIS section 3.3.2.2 discusses existing water bodies within the analysis area with impairments to water quality. This section also documents rationale for not undertaking a special TMDL analysis for this water body. The concurrence of State of Utah Division of Water Resources with this rationale is further documented within FEIS Chapter 7, page 6.
101	39	Ogden Sierra Club, et al	Wetlands and Riparian Areas	Sec 3.3.2.3 should provide a complete list and map of all wetlands and riparian areas in and adjacent to the Ogden RD, including all those listed in tables on 4-7 to 4-9 plus Willard Lake trails and Public Hollow Loop (20092).	FEIS section 4.3.5 analyzes how sediment from District roads and trails might affect wetlands and riparian areas. FEIS sections 3.3.2.3, 4.3.5.1, 4.3.5.2 and table 4.3.5.6 disclose which roads and trails are currently affecting wetlands and riparian areas, and how these effects will vary under each of the Travel Management plan Alternatives. We believe that this is sufficient analysis and disclosure to address the issue, and feel a complete listing of all wetlands and riparian areas in and adjacent to the District to be unnecessary. The 2003 Road Analysis Process (RAP) reviewed potential effects of every Ogden Ranger District service level 1 and 2 road on wetlands and riparian areas. Text will be added to the FEIS to clarify this subject.
101	40	Ogden Sierra Club, et al	Devil's Gate	Concerned that wetlands, springs, intermittent streams were not inventoried on lands acquired in the Snowbasin land exchange or adjacent private lands impacted by continuation of road 20220/xx31. Forest Service should inventory and modify data and analysis in section 3.3 and 4.3 accordingly.	Inventory of wetland and riparian resources within the Snowbasin Land Exchange parcels in Devils Gate Valley are documented in an internal memo to the Ogden District Ranger entitled "Snowbasin Possible Land Exchange Parcels, Devils Gate Valley, Field reconnaissance of Soils and Watershed Condition and Resources ", dated 10/16/1998. This information will be added to the FEIS project record.
101	41	Ogden Sierra Club, et al	Public Grove	Page 3-6 should describe impacts to Bonneville cutthroat trout from altered hydrology of South Fork Little Bear River caused by road construction/motorized travel in Public Grove area.	Based on the Roads Analysis conducted for the Travel Plan Revision, road construction/motorized travel in the Public Grove area has not altered the hydrology of the South Fork of the Little Bear.
101	42	Ogden Sierra Club, et al	General	Page 3-7 should discuss whether there is suitable boreal toad habitat elsewhere on the district (for instance Willard and Public Grove areas); if suitable habitat but toads not present, why?	No historical or recent surveys have identified boreal toad outside the Monte Cristo/Curtis areas on the Ogden Ranger District. Although there is suitable habitat in other areas, it is unknown why it has not been occupied.

101	43	Ogden Sierra Club, et al	General	The no-action Alternative must include aggressive attempts to implement current travel plan and should be reflected in EIS analysis.	Alternative 4 (Section 2.4.5) includes a discussion about aggressively managing routes, limiting the transportation system to only those roads on the existing Travel Plan and any road used for administrative access. The Alternative also assumes routes identified as unclassified will be closed and rehabilitated.
101	44	Ogden Sierra Club, et al	Devils Gate/Public Grove	Impacts of proposed Public Grove 4x4 extension westward and through Devil's Gate Valley must be thoroughly discussed in the EIS (including private lands).	The impacts of each Alternative are described in Chapter 4.
101	45	Ogden Sierra Club, et al	General	Sec 4.3 should identify major locations of sediment along existing roads (per EO 11644) as candidates for closure (Big Spring road, for example).	FEIS table 4.3.5.6 discloses where sediment concerns are associated with the travel routes of the proposed action and its Alternatives. FEIS section 4.3.5.2 discloses the changes associated with Alternatives that propose closure of these roads. The Big Spring Road was not specifically noted to have potential sediment impacts on water quality or riparian dependent resources.
101	46	Ogden Sierra Club, et al	General	Tables on pages 4-7 through 4-9 need corrections.	Thank you for your comment. Improvements to this section will be made for the Final EIS.
101	47	Ogden Sierra Club, et al	Public Grove	Soil damage occurring along routes in Public Grove (especially 20092 and 20220) should be discussed in sec 3.4. The 12-foot width assumed in sec 4.4 should be increased because of inevitable braiding and route widening. The TSRC calculations should include impacts from dispersed camping. Mitigation should include seasonal closures and camping in designated sites only.	FEIS section 4.4.3 specifies that TSRC calculations for roads assume an average width of 12 feet. Most roads will have an actual bare soil disturbed area of less than 12 feet, however, due to braiding some will be much wider (as in 20092 and 20220). We believe, for the purposes of this analysis, an average width of 12 feet will allow for accurate disclosure of effects of the proposed action and its Alternatives on soils. We also believe that while dispersed camping may occur in association with roads and trails, it is not a reasonably foreseeable consequence of motorized use, nor will is it likely to occur to any great extent. Accordingly, there is no practical to way to estimate or quantify where and how much dispersed camping use will be occurring. Text will be added to FEIS sections 4.4.3 and 4.14.4 to clarify this.
101	48	Ogden Sierra Club, et al	Rare Plants	All known rare plant populations on and adjacent to the Ogden RD must be analyzed relative to the current Travel Plan and proposed Alternatives.	Forest Service Sensitive, recommended Sensitive and Watch List Rare Plant Species (identified in the WCNF Revised Forest Plan) that have habitat within the project area are addressed in 3.5.2.1 and the effects are addressed in 4.5.4.1.

101	49	Ogden Sierra Club, et al	Rare Plants	Must thoroughly discuss impacts to Burkes draba in Willard Peak area. Assuming impacts of Inspiration Point trail to Burkes draba can be adequately mitigated, we provisionally support this as northern terminus of the Skyline trail (rather than Willard Lake route).	The trail that would be the northern terminus of the Skyline Trail is located to the west of, and below, the ridgeline south of Inspiration point. The trail currently exists on the ground and already meets Forest Service Handbook 2309.18 standards for Motorized Bike Trails. The only activity that is expected beyond maintenance is a 0.1 mile connector trail from Inspiration point trail to the Skyline trail. The Record of Decision clearly indicated that the forest botanist would review the trail location prior to construction to identify any draba plants. Section 4.3.4 (Page 4-4) indicates that any future work or maintenance would follow Forest Service Handbook 2309.18 that would protect Rare Plants. With these provisions there will be no impact to Burkes draba by legal OHV use.
101	49	Ogden Sierra Club, et al	Rare Plants	Must thoroughly discuss impacts to Burkes draba in Willard Peak area. "It is simply unclear whether routes in this area are aligned in such a way to make impacts insignificant [or] prevent unnecessary impacts and if not whether they can be so realigned (given topographical constraints). DUNCAN REWROTE THIS COMMENT. SEE ORIGINAL ABOVE.	The trail that would be the northern terminus of the Skyline Trail is located to the west of, and below, the ridgeline south of Inspiration point. The trail currently exists on the ground and already meets Forest Service Handbook 2309.18 standards for Motorized Bike Trails. The only activity that is expected is maintenance that would prevent other types of motorized travel on the Skyline Trail . Section 4.3.4 (Page 4-4) indicates that any future work or maintenance would follow Forest Service Handbook 2309.18 that would protect Rare Plants. With these provisions there will be no impact to Burkes draba by legal OHV use.

101	50	Ogden Sierra Club, et al	Noxious Weeds	EIS must take a hard look at how Travel Plan can be used to control threat of noxious weed invasion. EIS should include a map of known infestations on and adjacent to Ogden RD. Sierra Club has provided some known locations to the Forest Service. The selected Alternative should minimize potential for new and intensified infestations.	Include map of known populations - Forest Service maps include known locations on Forest Service lands and some locations off of but immediately adjacent to Forest Service lands. The Ogden Ranger District is currently active in the Weber River Cooperative Weed Management Area (CWMA). The CWMA and the Forest Service are currently increasing efforts in mapping, and collecting population data on noxious weeds. Having a clearly defined travel plan would allow the Ogden Ranger District to concentrate efforts on closing illegal routes. Mitigation outlined in 4.4.4.6 Mitigation Pg 4-14 states that all roads and trails on the Ogden Ranger District will be continually monitored for Noxious Weeds and roads marked for closure will be certified weed free prior to closure and rehabilitation.
101	51	Ogden Sierra Club, et al	Wildlife	In addition to determining whether a wildlife species is likely to occur on the district, the EIS must disclose whether suitable habitat is present or was historically present and if that habitat is or was utilized. If not currently used disclose the reasons, including motorized activity, roads, and trails.	The EIS provides information in sections 3.6 and 4.6 regarding numerous species and their habitats. Until recently, information regarding many species was limited, especially regarding the species range and habitat use. For some species, there are questions why a species may not occur within a given area now or if it ever occurred there in the past.
101	52	Ogden Sierra Club, et al	Wildlife	The EIS must discuss the likely impact to wildlife of fully implementing and enforcing the existing Travel Plan in Alternative 4 and the relative impact of other Alternatives as compared to Alternative 4.	Section 4.6.2 describes the effects analysis assumptions, one of which specifies that "unauthorized routes will be considered as closed for the effects analysis". The effects of each Alternative are described within chapter 4, so comparisons can be made between Alternatives. Chapter 3, wildlife describes the existing condition as the conditions under the current Travel Plan (Alternative 4).
101	53	Ogden Sierra Club, et al	Wildlife	Forest Service must differentiate between species known not to be present and those for which incomplete data are available.	The EIS provides information in sections 3.6 and 4.6 regarding numerous species and their habitats. As displayed within the EIS, the amount of information available can vary greatly between species.
101	54	Ogden Sierra Club, et al	Wildlife	EIS must fully analyze impacts to wildlife from motorized use occurring in areas adjacent to the Ogden RD, including Brigham Face WMA, Devil's Gate Valley and Selman Ranch.	The Ogden Travel Plan EIS section 4.6 primarily addresses motorized routes within the Ogden Ranger District. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of these activities within adjacent areas.

101	55	Ogden Sierra Club, et al	Devils Gate/Public Grove/Rocky Dugway	The enclosed maps show how Public Grove-Devils Gate route would cut across high value elk summer range and fragment sage grouse habitat. The Sink Hole Loop would disturb Columbian sharp-tailed grouse habitat. The EIS should include this information.	Within the EIS Figure 3.6.4 displays elk habitat within the Ogden Ranger District and adjacent lands. Section 3.6.2.1 and Section 4.6.3.1 describe habitat and the effects of each of the Alternatives. Figures 4.6.1 and Table 4.6.5 displays information regarding fragmentation of elk habitat. Additional information has been added to the FEIS with regards to sharp-tailed grouse and the effects of the Alternatives on the sharp-tailed grouse and their habitats.
101	57	Ogden Sierra Club, et al	ROS	The Forest Service must identify and implement additional opportunities for SPNM recreation or explain why the imbalance (between SPM and SPNM) is acceptable.	Disclosure of the current and projected levels of SPM and SPNM is in the FEIS. This was a significant issue and considered in the development of alternatives.
101	59	Ogden Sierra Club, et al	Devils Gate/Rocky Dugway	Sec 4.9 should discuss the likelihood of trespass on private lands by public land users, especially in the Devils Gate and Sink Hole areas.	The Forest Service only has jurisdiction on Forest Lands for enforcement of Federal Regulations. As described in section 2.8 Monitoring, this office has coordinated through the Natural Resources Coordinating Council (NRCC) to increased patrols in the Willard area. These multi-agency patrols include local sheriff deputies who can enforce trespass rules on private land.
101	60	Ogden Sierra Club, et al	Public Grove/Mollens Hollow	The Alternate route shown in Public Grove should not be classified as a road; adding new roads is not permitted in MPC 3.1. The WCNF Plan's determination regarding Mollens Hollow roadless area may not be used to restrict this area from protection of roadless values.	The section of the Public Grove 4x4 route added as a new motorized route will be managed as a motorized trail. Motorized trails are allowable in roadless areas and in MPC 3.1. The relative roadless values for the Mollens Hollow area are documented in the Revised Forest Plan. This analysis did not change those documented values.
101	61	Ogden Sierra Club, et al	Mitigation/Monitoring	Mitigation to reduce air quality impacts should include prohibiting ORV use in dispersed camping areas and quantitative monitoring of trail use levels.	As described in section 3.12.1, it is disclosed that motor vehicles do impact air quality with exhaust emissions and dust along roads and trails. No mitigation or monitoring was proposed in the document because effects were not analyzed as indicated in section 4.12.
101	62	Ogden Sierra Club, et al	General	The EIS does not disclose the action to be taken to avoid, minimize, or mitigate adverse effect on a known heritage site. The Forest Service must make a reasonable effort to identify all historic properties in all areas subject to trail construction, reconstruction, increased access, and increased use.	We carefully consider any impacts to historical resources associated with any federal undertaking including this travel plan. The Forest Service will evaluate the impacts and consult with the State Historical Preservation Office. Necessary mitigation will be determined at that time.

101	63	Ogden Sierra Club, et al	Cumulative Effects	The Forest Service has impermissibly used the no-action Alternative as a baseline against which cumulative effects are evaluated. The Forest Service must complete a forest-wide evaluation of past impacts of travel planning decisions in conjunction with present situation and foreseeable future actions.	The WCNF has deferred non-winter travel management planning to future site-specific planning. Forest Plan Objective 2a states that the Logan, Salt Lake, and Ogden Ranger Districts update their Travel Management Plans within 5 years (of the Plan ROD). So a Forest-wide assessment will occur but District by District. Use of the no action alternative as a base line is consistent with chapter 10 of the FSH 1909.15 section 14.1.
101	64	Ogden Sierra Club, et al	Shoshone Trail	The Forest Service must conduct a comprehensive and cumulative evaluation of designating the Shoshone Trail; Forest Service must either supplement the Ogden Travel Plan DEIS with a thorough analysis of the Shoshone Trail or conduct a separate NEPA process for Shoshone Trail designation.	Naming a series of existing, open travel routes the Shoshone Trail does not require an environmental review under NEPA.
101	65	Ogden Sierra Club, et al	General	To be effective, seasonal closures should extend until about June 15 and resume about September 15 (to protect soils and roads surfaces during wet periods). See also 101-47.	Thank you for your comment. Seasonal Closures will be determined in the Final EIS based on the reason for the closure (wildlife, wet soil, etc.)
101	66	Ogden Sierra Club, et al	Appendix A	Appendix A is confusing and awkward to use; the intro should explain the INFRA database; the appendix should include more info about each route, including MPC, vegetation, Fed and non-Fed land it crosses, and wildlife concerns.	Appendix A was developed during the Interdisciplinary team reviews of the routes on the Ogden Ranger District. It is the current characteristics of our roads and captures the immediate need for action or a decision by this analysis.
101	67	Ogden Sierra Club, et al	Dry Bread Sink	A full range of Alternatives for management of dispersed camping areas must be analyzed in the EIS, complete with maps. We are concerned with the proposed ATV play area at Dry Bread Sink Hole.	In section 2.3 Alternatives considered and eliminated from detailed analysis, number 7 is a district-wide dispersed camping plan. The reason it was not discussed more in this document is that dispersed camping other than the concentrated use areas at Dock Flat and Dry Bread were not proposed to be managed any different than now.
101	68	Ogden Sierra Club, et al	Box Elder Creek	This valley provides an outstanding opportunity for quiet recreation in all seasons; unnecessarily mixing motorized and non-motorized recreation in this area would violate 36 CFR 295.2 that says Forest Service should minimize conflicts between ORV and other recreation uses.	This analysis has considered the policies and regulations which the Forest Service must follow including 36 CFR 295.2. The overall transportation plan did consider minimizing conflicts between ORV and other recreation uses. The Box Elder Creek ATV trail proposal does not eliminate other recreation uses in this area.

101	69	Ogden Sierra Club, et al	Public Grove	This area has impermeable soils and poor drainage; due to the adverse effects on soils and vegetation in this area, the Forest Service should immediately close roads 20092 and 20220 to motorized use until such effects can be prevented.	FEIS section 2.4 describes some level of motorized access and use in the Public Grove area for every Alternative analyzed. This indicates that at least some of these roads are a necessary part of the transportation network on the District. Closure of them would not meet the purpose and need of the Travel Plan Revision stated in section 1.3. FEIS section 4.4.4 discloses that wherever trails and roads are constructed as part of the District transportation network, there will be adverse effects to soil and its ability to support native vegetation.
101	70	Ogden Sierra Club, et al	Mollen's Hollow/Tilda Spring	The northern portion of road 20196 starting at the junction with 20197 is currently closed to motorized use, providing outstanding opportunities for quiet recreation; keeping only the northern half of this trail closed to motorized would not preserve this unique opportunity because users would have to share the southern portion with motorized, causing conflicts. The nearby Tilda Spring and Boundary Spring trails are likely to cause trespass on adjoining private lands.	Thank you for your comment. A range of alternatives was analyzed for these routes.
101	71	Ogden Sierra Club, et al	General	It is unclear from the DEIS which closed roads would be obliterated and which would be managed as non-motorized trails.	If the decision is to manage a closed road as a non-motorized trail, it is indicated in table 2.7.2
101	72	Ogden Sierra Club, et al	General	Under Alternative. 3A, impacts of motorized activity on quiet recreation. would be unacceptable.	Thank you for your comment.
101	73	Ogden Sierra Club, et al	General	Cumulative effects to elk patch size are significant.	Thank you for your comment.
101	74	Ogden Sierra Club, et al	General	Proposed road densities exceed established standards for elk, lynx, and sage grouse.	The EIS displays the effects to elk habitat by analyzing patch size (buffering roads) and displaying changes by Alternatives. Section 4.6.3.3 displays the effects to Canada Lynx by Alternatives. Additional information has been added to the FEIS with regards to sage grouse and the effects of the Alternatives on the sage grouse and their habitats.
101	75	Ogden Sierra Club, et al	General	The Forest Service analysis of effects on the environment is inconsistent with some common scientific practices, and fails to meet NEPA requirements.	Resource specialists on the interdisciplinary team used the best science available to analyze and draw conclusions as to the effects of implementing the Alternatives. Literature referenced and methodologies used to conduct analyses are included in the EIS.

101	76	Ogden Sierra Club, et al	General	The DEIS does not follow the methods used in assessing habitat impacts that a route might have on wildlife.	Section 4.6.3 Direct and Indirect Effects specifies, that " The primary focus of this analysis will be associated with the affects of disturbance and the affects within specific habitat types of roads and motorized trails on wildlife."
101	77	Ogden Sierra Club, et al	General	The summary tables fail to assess the number and kind of impacts that a particular route causes.	The EIS, Section 4.6 displays the effects of the Alternatives on wildlife species. The Alternatives are made up of a combination of routes. Maps for several species are provided within the EIS which can be used in comparison with the Alternative maps to determine if a route is located within a specific species habitat type (e.g.. elk habitat). Table 4.6.4 displays the miles of road within the Alternatives.
101	78	Ogden Sierra Club, et al	General	Summary tables fail to meet Forest Service requirements to ensure management of all uses occurs in a manner that does not impair the values and productivity of the NF.	The EIS, Section 4.6 displays the effects of the Alternatives on wildlife species. The tables compile information in a way which is easier to display to the public. The alternative selected in the ROD meets applicable Forest Service requirements.
101	79	Ogden Sierra Club, et al	General	Summary tables don't provide numbers that can be compared to measurable Forest Service standards.	Additions, clarifications, and/or corrections were made to tables where needed in the FEIS.
101	80	Ogden Sierra Club, et al	General	The Forest Service fails to conduct route density analysis required by the Forest Plan.	Roads densities are discussed in the EIS (for example, page 4-24 and 4-31 and Appendix B) for all Alternatives.
101	81	Ogden Sierra Club, et al	General	Route density standards need to meet wildlife objectives and regulatory obligation.	General information summarizing the effects of road density on wildlife was added to the EIS in Section 4.6.3.
101	82	Ogden Sierra Club, et al	General	The preferred Alternative increases trails in some of the most important wildlife habitat in the region, but doesn't assess the potential problems	The effects of the preferred Alternative on wildlife are disclosed in Section 4.6, Section 4.14.6, and in Appendix B; references are cited, as applicable, for drawing conclusions; it would be too cumbersome and add unnecessary volume to the EIS to include all the maps and survey data used in the estimate of environmental effects. However, all maps and surveys are available for review in the project file.
101	83	Ogden Sierra Club, et al	General	The DEIS fails to consider appropriate and needed scientific research.	Your suggestion for a comprehensive study of the effects of OHV impacts is a good one. However, the decision to invite scientists to conduct sophisticated, long-term OHV studies on the Ogden Ranger District is beyond the scope of this analysis. Monitoring of the decisions made in this analysis will be done, however, according to the strategy outlined in the EIS.

101	84	Ogden Sierra Club, et al	General	The DEIS fails to consider the public/private land interface and habitat connectivity.	The EIS acknowledges the interspersion of public and private lands in the analysis, however the scope is limited to lands upon which the Forest Service has the authority to make decisions.
101	85	Ogden Sierra Club, et al	General	The DEIS doesn't provide cumulative effects analysis.	Section 4.14 discloses the information regarding the cumulative effects analysis. Past, present and reasonably foreseeable future actions are listed first, then each action (or group of actions) and the associated cumulative effects are discussed as applicable for each resource in the succeeding sections. As much information as is currently available is provided for the reasonably foreseeable future projects.
101	86	Ogden Sierra Club, et al	General	The DEIS implies that the Ogden Ranger District does not offer particularly important lynx habitat.	The EIS section 3.6.1 states that "the Ogden Ranger District is located within a portion of a wildlife corridor, which has regional importance in providing linkage to other larger habitat areas. This is especially true for forest carnivores, such as the Canada lynx..."
101	87	Ogden Sierra Club, et al	General	The problem with using Ruediger (1998) to claim that lynx do not avoid roads except for highways is that the author only addresses highways.	With regards to the lynx, Section 3.6.2.3 and Section 4.6.3.3 utilizes many sources of literature and information. The most applicable information is contained within the Lynx Conservation Strategy (Ruediger et al 2000) and the USDI (2003).
101	88	Ogden Sierra Club, et al	General	The take home message should be is that we don't know very much about the impacts of roads and trails on lynx.	With regards to the lynx, Section 3.6.2.3 and Section 4.6.3.3 utilizes many sources of literature and information. The most applicable information is contained within the Lynx Conservation Strategy (Ruediger et al 2000) and the USDI (2003).
101	89	Ogden Sierra Club, et al	General	The Travel Plan should cite lynx recovery objectives and strategies to effect recovery of lynx, and how the preferred Alternative. might interact with these goals and objectives.	Providing much of this information within a EIS is beyond the scope of this project. The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. The EIS provides information in sections 3.6 and 4.6 regarding the lynx.
101	90	Ogden Sierra Club, et al	General	Increased roads and trails lead to increased trapping, shooting, and vehicular mortality in lynx.	Yes the literature supports that with more roads there is a greater occurrence of incidental take or illegal shooting, but increases in mortality due to collisions with vehicles are more associated with highways.
101	91	Ogden Sierra Club, et al	General	Roads and trails have been tied to reduced amounts of downed logs which are important for lynx denning habitat, and may lead to disturbance of dens and even abandonment.	The Ogden RD lies within a travel corridor for the Canada lynx rather than permanent resident habitat.

101	92	Ogden Sierra Club, et al	General	The Forest Service should consider using 0.6 km of road/km^2 to delineate effective lynx habitat and use this number to assess effects of proposed roads.	The lynx conservation strategy specifies "at this time, there is no compelling evidence to recommend management of road density to conserve lynx." Road density has been assessed within 6th order watersheds (Appendix B).
101	93	Ogden Sierra Club, et al	Mollen's Hollow	Portions of the proposed route pass through primary and secondary lynx habitat.	Tables 4.6.7 and 4.6.8 display the miles of road and motorized trail located within primary and secondary habitat for lynx by Alternative and within analysis areas (Curtis Creek area).
101	94	Ogden Sierra Club, et al	General	The DEIS only superficially addresses the impacts of the preferred Alternative. on snowshoe hare and its habitat.	Additional information regarding the snowshoe hare has been added to the EIS and within the project record.
101	95	Ogden Sierra Club, et al	General	Follow the Lynx conservation and strategy.	The FEIS, Section 4.6.3.3, page 4-27, 3rd paragraph displays the information which is applicable from the Lynx Conservation Strategy "Conservation Measures to Address Movement and Dispersal". The standards and guidelines you refer to are Conservation Measures to Address Risk Factors Affecting Lynx Productivity. These conservation measures generally apply only to lynx habitat within the LAUs.
101	96	Ogden Sierra Club, et al	General	The DEIS doesn't consider that low herd numbers can be attributed to current ORV trails and motorized use.	Section 4.6.3.1 displays the effects of the Alternatives on deer and elk, especially Tables 4.6.1 thru 4.6.5.
101	97	Ogden Sierra Club, et al	General	The preferred Alternative will reduce the quality elk habitat in the area.	The EIS displays a range of Alternatives which addresses elk habitat.
101	98	Ogden Sierra Club, et al	General	Concerned that the preferred Alternative will impact deer and elk summer and winter range (Box Elder/Black Mt. trail, Devil's Gate/Public Grove, Mollen's Hollow).	The EIS displays a range of Alternatives which addresses deer and elk and their habitat.
101	99	Ogden Sierra Club, et al	General	More road and trail closures would increase elk habitat and herd numbers	Thank you for your comment. The EIS displays a range of Alternatives which addresses elk habitat.
101	100	Ogden Sierra Club, et al	General	Elk and deer avoid areas near roads and trails.	Section 4.6.3.1 displays the effects of the Alternatives on deer and elk.
101	101	Ogden Sierra Club, et al	General	The FEIS should include more citations on impacts or ORV on elk and elk habitat.	Thank you for your comment. Additional information has been added to the EIS.
101	102	Ogden Sierra Club, et al	General	Many of the new routes in the preferred Alternative. lie within important elk habitat.	Thank you for your comment. The EIS displays a range of Alternatives which addresses elk habitat.
101	103	Ogden Sierra Club, et al	General	The DEIS does not identify the species requirements in terms of route density nor apply this analysis as part of this DEIS.	Road density was assessed within 6th order watersheds (Appendix B). See section 4.6.3.1 Gray Wolf and section 4.6.3.4 Wolverine for discussion involving road densities. For elk, the analysis is based on patch sizes which provide a better analysis of effects than miles of road per square mile density analysis.

101	104	Ogden Sierra Club, et al	General	The Preferred Alternative. would increase the amount of roads/trails in conifer habitat and will impact goshawk.	Section 4.6.3.2 displays the effects of the Alternatives on northern goshawk.
101	105	Ogden Sierra Club, et al	General	The Preferred Alternative. is deficient in terms of seasonal closures for goshawk.	Thank you for your comment. The preferred Alternative meets US Forest Service guidelines for the goshawk.
101	106	Ogden Sierra Club, et al	General	We recommend that the Forest Service use all goshawk nest that have been occupied in the last 7 years in their habitat analysis.	Additional information regarding the analysis for goshawks has been added to the EIS and within the project record.
101	107	Ogden Sierra Club, et al	General	The FEIS should explain how the Forest Service defined PFA and provide a map that shows routes that cross the PFAs.	Additional information regarding the analysis for goshawks has been added to the EIS and within the project record. Maps have been produced and are located within the project record.
101	108	Ogden Sierra Club, et al	General	Goshawk analysis should follow the guidelines established by the FWS.	Additional information regarding the analysis for goshawks has been added to the EIS and within the project record.
101	109	Ogden Sierra Club, et al	Clay Valley	The sharp-tail grouse in Clay Valley would be directly impacted by Alternative 3a.	Additional information has been added to the FEIS with regards to sharp-tailed grouse and the effects of the Alternatives on the sharp-tailed grouse and their habitats.
101	110	Ogden Sierra Club, et al	Route 26012	The Sink Hole Loop would result in a thoroughfare and prevent opportunities to enhance Clay Valley.	Thank you for your comment
101	111	Ogden Sierra Club, et al	General	Current roads may be reducing the quality of sage grouse habitat by introducing weeds.	See Chapter 4 for discussion on the impacts of the current road system (Alternative 4) on weeds and sage grouse habitat.
101	112	Ogden Sierra Club, et al	General	We recommend that the Forest Service apply guidelines proposed by Call and Maser (1985), and Connelly et al. (2000).	Additional information has been added to the FEIS with regards to sharp-tailed and sage grouse and the effects of the Alternatives on the sharp-tailed and sage grouse and their habitats.
101	113	Ogden Sierra Club, et al	General	Because sage grouse leks are used year after year it is crucial to protect these areas from impacts.	Additional information has been added to the FEIS with regards to sage grouse and the effects of the Alternatives on the sage grouse and their habitats. Information regarding the location of leks is contained within the planning record.
101	114	Ogden Sierra Club, et al	General	Areas within 3 miles of a sage grouse lek should be put under year-round stipulations preventing habitat alterations..	Guidelines or recommendations for the management of Sage Grouse populations and their habitats primarily focus on the alteration of vegetation or habitat. For sage grouse, Connelly et al (2000) recommended that “Human activities within view of or <0.5 km (0.31 miles) from leks should be minimized during early morning and late evening when birds are near or on leks.” None of the Alternatives have roads or motorized trails which would be managed by the US Forest Service within 0.31 miles of an active lek site.

101	115	Ogden Sierra Club, et al	Public Grove	This plan should ensure the viability and reestablishment of sage grouse in these areas.	Chapter 3 and Chapter 4, Wildlife, Sage Grouse displays information regarding the sage grouse, their habitat, and the effects of the Alternatives.
101	116	Ogden Sierra Club, et al	General	Provide maps that were used to generate tables.	Numerous maps are provided within the FEIS for wildlife (Maps 3.6.1 thru 3.6.6 and Map 4.6.1) species, such as elk, deer, and lynx. A vegetation map has been added for the FEIS. Due to the sensitive nature involving goshawk nest sites, these maps have been produced and are located within the project record
101	117	Ogden Sierra Club, et al	General	The DEIS fails to propose or consider appropriate and needed scientific research.	The EIS has utilized much of the most recent available scientific literature with regards to the effects on wildlife. The US Forest Service welcomes new research and participation in new studies but, proposing new research is beyond the scope of this project. See response to comment 101-83.
101	118	Ogden Sierra Club, et al	General	The Forest Service needs to research the impacts of ORV's	The EIS has utilized much of the most recent available scientific literature with regards to the effects on wildlife. The US Forest Service welcomes new research and participation in new studies but, proposing new research is beyond the scope of this project. See response to comment 101-83.
101	119	Ogden Sierra Club, et al	General	Wildlife habitat analysis shouldn't be limited to Forest Service lands only.	The Ogden Travel Plan EIS section 4.6 primarily addresses motorized routes within the Ogden Ranger District. See Section 4.14.6 Cumulative Effects on Wildlife for the effects of these activities within adjacent areas.
101	120	Ogden Sierra Club, et al	General	Cumulative effects are incomplete in regard to the two new timber sales.	See response to comment 101-85.
101	121	Ogden Sierra Club, et al	General	Cumulative effects are incomplete in regard to future illegal routes.	Unauthorized use of roads and trails and creation of illegal trails by OHV's is acknowledged in the EIS and the effects are incorporated into the analysis. The EIS states that "all unauthorized roads or trails will continue to be closed and rehabilitated."
101	122	Ogden Sierra Club, et al	General	Cumulative effects are incomplete in regard to grazing	Livestock grazing is acknowledged in the EIS as a past, present, and on-going activity on the Ogden District and is incorporated into the cumulative effects analysis in Section 4.14.2. Decisions regarding grazing and grazing management are beyond the scope of this analysis.

101	123	Ogden Sierra Club, et al	General	The DEIS doesn't address the cumulative effects of ORV use and hunting on wildlife populations.	A thorough discussion of the effects of all the Alternatives as related to roads and road densities is provided in the Wildlife Section 4.6 and Cumulative Effects Wildlife Section 4.14.6. Although use of OHV's for hunting is included in the estimated effects, a specific study of the effects of hunting has not been done.
101	124	Ogden Sierra Club, et al	General	The DEIS should include definitions of habitat characteristics that are required for all key species, measures of habitat, population goals, and monitoring.	Providing much of this information within a EIS is beyond the scope of this project. The Ogden Travel Plan EIS primarily addresses motorized routes, thus the emphasis is the effects of motorized activities. The EIS provides information in sections 3.6 and 4.6 regarding numerous species and their habitats.
101	125	Ogden Sierra Club, et al	General	We suggest that Alternative 3a be modified to coincide with the Conservation Alternative.	See response to comment 101-12.
101	56-A	Ogden Sierra Club, et al	General	The EIS should include the actual ROS maps used to calculate ROS acreages for each Alternative and the information should be accurately and consistently applied.	ROS maps are available in the Revised Forest Plan. A new map for each Alternative ROS was not created during this analysis. GIS was used to calculate changes by alternative.
101	56-B	Ogden Sierra Club, et al	General	Besides ROS, a second indicator for recreation impacts should be the number of miles of non-motorized trails of various types available, including a map of these trails.	The types of non-motorized trails are outside the scope of the Ogden Travel Plan EIS. For information on the types of trails available to the public see the Forest Plan FEIS-Table recreation 7 pg. 3-239.
101	56-C	Ogden Sierra Club, et al	General	A third indicator should be the number of dispersed campsites in each Alternative.	Dispersed camping is outside the scope of this document. See section 2.3 Alternatives Considered and Eliminated from Details Analysis item 6.
101	58-A	Ogden Sierra Club, et al	SMS	Sec 3.8 should list areas where scenery is currently impaired compared to desired objectives.	An inventory of the integrity in comparison to the managed for Scenic Integrity Objective (SIO), and Landscape Character Theme (LCT) of the existing travel routes was not done because it was beyond the scope of the travel plan. Only proposed constructed travel routes were analysis see section 4.8 Effects on Scenery.
101	58-B	Ogden Sierra Club, et al	SMS	The EIS should include a discussion about the visual impacts on vegetation, especially wildflowers, from motorized use on roads and trails during dry summer conditions.	Dust on vegetation is a short term effect on the viewed landscape and is beyond the scope of the analysis.
102	1	ATK Thiokol Motorcycle/ATV Club	Willard Mountain Road (#20084)	Should remain open (as an established trail??)	Thank you for your comment. A range of alternatives was considered for this road. The proposed closure would be seasonal only and the road will remain open.

102	2	ATK Thiokol Motorcycle/ATV Club	Skyline Trail #6001	Feel that the Skyline trail from Willard Mountain to North Ogden should be open to all motorized uses. Note the trail is only open to motorcycles	The FEIS describes a range of Alternatives for the Willard Peak area trails and the Skyline trail. Section 2.4 - Alternatives Considered in Detail include open or closed roads and trails as well as seasonal restrictions for the Skyline Trail.
102	3	ATK Thiokol Motorcycle/ATV Club	Box Elder Creek Trail #26010	Would like to see this trail "motorcycle only".	Thank you for your comment. This trail was not considered as a motorcycle only trail.
102	4	ATK Thiokol Motorcycle/ATV Club	Pete's Hollow (#26022) to Box Elder Creek Trail	Believes this trail should be opened to single track users.	The analysis describes a range of Alternatives for the Petes Hollow trails in section 2.7.2 and in the FEIS.
102	5	ATK Thiokol Motorcycle/ATV Club	Grizzly Peak (#20091) Trail	Concerned that this trail should remain open to motorcycles	Opportunities to keep this route open were analyzed in Alternative 2 and Alternative 4. Further clarification of motorcycle only trail opportunities will be discussed in the Final EIS.
102	6	ATK Thiokol Motorcycle/ATV Club	Three Mile Trail #20113	Supports road being open to all motorized uses.	Thank you for your comment. A range of alternatives was considered for this road. The proposed closure would be seasonal only and the road will remain open.
102	7	ATK Thiokol Motorcycle/ATV Club	Public Grove 4x4	Supports road being open to all motorized uses.	Thank you for your comment. This road would be open under several Alternatives.
102	8	ATK Thiokol Motorcycle/ATV Club	City View Trail #6040	Agree this trail should remain open. Note this trail is not open to all motorized uses -- motorcycles only	Thank you for your comment. This trail would be open to motorized use under several Alternatives and would continue to be managed as a motorcycle single-track trail.
102	9	ATK Thiokol Motorcycle/ATV Club	Coldwater Peak Trail #6087	Agree this trail should remain open. Note this trail is not open to all motorized uses -- motorcycles only	Thank you for your comment. This trail would be open to motorized use under several Alternatives.
102	10	ATK Thiokol Motorcycle/ATV Club	Lewis Peak Trail #6041	Agree this trail should remain open. Note this trail is not open to all motorized uses -- motorcycles only	Thank you for your comment. This trail would be open to motorized use under several Alternatives and would continue to be managed as a motorcycle single-track trail..
102	11	ATK Thiokol Motorcycle/ATV Club	Monte Cristo and Wheatgrass Analysis Areas	Supports Alternative 3A but would like to see trail access from this area to the Curtis Creek/Tilda Springs area	Thank you for your comment.
102	12	ATK Thiokol Motorcycle/ATV Club	Curtis Creek Analysis Area	Supports Alternative 3A but would like to see more trails connecting to larger loop trails	Thank you for your comment.
102	13	ATK Thiokol Motorcycle/ATV Club	South Fork Analysis Area	Supports Alternative 3A but would like to eventually see a single-track connector trail from this area to the Willard Peak area.	Thank you for your comment.

103	1	Edward Rich	Skyline Trail	Does not support any closure on the Skyline Trail to motorcycles. Believes the issue of the mountain goats is weak and that the herd is doing well despite the presence of an occasional motorcycle. Rides the trail on mountain bike and rarely sees goats or motorcycles.	FEIS sections 3.6.2.1 and 4.6.3.1 discusses Mountain Goats. Additional information has been added to the FEIS with regards to the effects of disturbance.
104	1	Eric Ewert	General	Prefers Alternative that places the most emphasis on wildlife	Thank you for your comment. Alternative 3 was developed with an emphasis on wildlife.
104	2	Eric Ewert	General	Motorized trails should not be placed in roadless areas	Roadless is an inventory of lands that meet certain characteristics (See process for determining roadless characteristics is Appendix C-1 of the WCNF Forest Plan FEIS). The presence of motorized trails is not a characteristic used in determining if an area is Roadless. Section 4.10 disclosed the effects to roadless areas.
104	3	Eric Ewert	General	Motorized trails should not be placed where they eliminate opportunities for quiet recreation	The FEIS describes a range of Alternatives that address your concern, i.e.. See Chapter 2, Alternative , also see Chapter 4, 4.7 Effects on recreation.
104	4	Eric Ewert	General	Forest Service does not have the resources to enforce anymore motorized routes	The FEIS discloses this Issue in section 1.6.5 but as a comment not specifically addressed in this analysis. The non-significant issue of the US Forest Service not enforcing travel plan restrictions because of funding limitations.
104	5	Eric Ewert	General	Motorized trails should not be placed where they damage the watershed	FEIS section 4.3.2 frames the analysis of watershed protection in terms of the potential of roads and trails to impact water quality based upon their proximity to streams. FEIS section 3.4.3 analyzes how soil erosion from District roads and trails might affect water quality and riparian dependent resources. FEIS section 4.4.4 discloses the effects of soil erosion and rutting from the both the illegal user developed trails and designated system trails associated with the proposed action and its Alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be located to Forest Service standards that allow for properly drained trail surfaces and minimize the potential for trail rutting, erosion, and widening. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.

104	6	Eric Ewert	General	Disturbed ground along roads and trails provides an avenue for noxious weed invasion. No new ground disturbance should occur in areas where invasive plants are present.	Section 4.5.4.6 outlines mitigation that provides for early detection and eradication of Noxious Weeds. The Wasatch Cache NF Noxious Weed Strategy and Forest Service Manual 2080 provide further direction on identification and treatment of noxious weeds. While it is uncommon that weeds are mapped away from a trail or road - with windborn seed it is possible that such an infestation exist. In this case - pre trail construction surveys (also outlined in Sec. 4.5.6) would identify the infestation and allow for treatment and appropriate mitigation of the proposed route.
104	7	Eric Ewert	General	The Forest Service should not reward illegal activities by opening more routes	Thank you for your comment. Section 1.3.1 Purpose and Need for the Proposed Project describes the public need for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation. It also indicates the need to address the dramatic increase in demand for motorized recreational experiences. Section 2.4 - Alternatives Considered in Detail describes a range of Alternatives reducing motorized trails.
104	8	Eric Ewert	General	The Forest Service should not open Public Grove, Box Elder Creek, or the Mollens Hollow area.	Thank you for your comment.
105	2	Allen Keller	General	Believes that more hiking trails need to be established in Box Elder Creek and Perry Canyon.	Thank you for your comment. Non-motorized routes were not analyzed in this EIS.
105	3	Allen Keller	Willard Lake Trail #6090	Supports closure of this area to motorized use.	Thank you for your comment. Willard lake trail was considered to be converted to a non-motorized trail in various alternatives.
105	4	Allen Keller	Box Elder Peak area	Does not support rewarding poor behavior on the part of ATV users by making more trails in this area legal.	Thank you for your comment. Section 1.3.1 Purpose and Need for the Proposed Project describes the public need for a safe and reliable system of roads and trails that provide for quality motorized and non-motorized recreation. It also indicates the need to address the dramatic increase in demand for motorized recreational experiences. Section 2.4 - Alternatives Considered in Detail describes a range of Alternatives reducing motorized trails.
105	5	Allen Keller	Dock Flat	Supports the proposal for Dock Flat to provide dispersed camping	Thank you for your comment.

105	6	Allen Keller	Devils Hole Trail #xx30	Supports proposal if trail can be maintained, signed and seasonal closure can be enforced.	Appendix D and Section 2.8 Mitigation and Monitoring describe a functional signing program as necessary to reduce the impacts from inappropriate and illegal public uses. Section 4.3.4 Effects Analysis Methods and Assumptions states that all authorized trails and roads will be maintained to Forest Service standards and that Law enforcement and trail patrols are a District priority.
105	7	Allen Keller	Pete's Hollow (#26022) to Box Elder Creek Trail	Agrees that the trail needs to be realigned before it should be opened to motorized use	Thank you for your comment. A full range of Alternatives was analyzed. The Record of Decision specifically addresses the issues of this trail.
105	8	Allen Keller	Willard Road area	Feels there should be no motorized use around Perry Res., Grizzly Peak, Box Elder Creek, Willard Lake, West Fork of Willard Canyon.	Thank you for your comment. A full range of Alternatives was analyzed for roads and trails in the Willard area.
105	9	Allen Keller	Project Scope	Believes the Forest Service is incorrectly limiting the scope of the project to motorized travel when the P&N states otherwise.	Clarifying language was added to Section 1.3.1 to better articulate the purpose and need for the project.
105	9	Allen Keller	Public Grove/Devils Gate	Road should not be opened if the private land owners do not support it.	See comment 17 - 1.
105	10	Allen Keller	Mollens Hollow	Area should not be opened to motorized because of its scenic beauty.	Thank you for your comment. A range of alternatives was considered for this area.
106	1	Richard Waldo	General	Does not want to see any more motorized trails. Feels that the Forest Service should put emphasis on wildlife and protecting wilderness	Thank you for your comment. Alternative 3 was developed with an emphasis on wildlife and Alternative 1 protected roadless values which are important to wilderness designation.
107	1	Kurt Chaffin	DEIS Table 2.7.1	States that there is a disconnect between Alternative 4 and Alternative 3a as it relates to "miles of new open motorized trails". Actual difference is 2.8 miles v. 12.53. This observation is based on definition found in 2.5.14 -- a trail is a route 50" or less in width. This equates to 9.73 miles of road being added to trail total which is inconsistent with the definition of motorized trail	The calculations for miles of road or trails by categories will be clarified in the FEIS. See comment 87 - 109.
107	2	Kurt Chaffin	DEIS Table 2.7.1	Alternative descriptions (2.4.1 to 2.4.5) indicate 531 miles of resources in contrast to Table 2.7.1 which shows 476.93 miles. Looks like there is 60 miles of non-motorized trail that cannot be accounted for. Believes this is a significant factor and shows an even greater imbalance between motorized and non-motorized opportunities.	The calculations for miles of road or trails by categories will be corrected in the FEIS. This relates to the conflict of GIS miles and INFRA miles in our records.
107	3	Kurt Chaffin	NVUM Study	Concerned that the Forest Service should not be over-emphasizing what the data indicates. Decisions should not be based on what this data shows.	National Visitor Use Monitoring (NVUM) is a Forest wide study and was used to show use Forest wide and is not the only study sited in the FEIS.

107	4	Kurt Chaffin	Project Proposal v. Alternative 3a	I think this point is a question as to why the Proposed Action in scoping is so different from the preferred Alternative --	The best information available at the time was included in the Scoping Document sent out on July 18, 2003. Following GIS updates and a roads analysis during 2003-2004, a Notice of Intent to produce an EIS was published in the Federal Register (March 31, 2004) with the best available information at that time. Additional road management actions were included in the Alternatives based on information provided from the roads analysis as explained in Section 2-1.
107	5	Kurt Chaffin	General	Support selection of Alternative 2. Alternative 3a offers only marginal improvements over the existing condition	Thank you for your comment.
107	6	Kurt Chaffin	Tilda Springs Loops	Feels that trail going to the overlook should be built because it would provide a good view	Thank you for your comment. Davenport Hollow motorized travel was analyzed in Alternative 2.
107	7	Kurt Chaffin	Red Spur	Feels road to the overview should be opened so ATV's can enjoy the view. Electronic facilities can be fenced.	Thank you for your comment. The analysis describes a range of Alternatives for the Petes Hollow trails in section 2.7.2 and in the FEIS.
107	8	Kurt Chaffin	Running Water Trail #xxx9	Feels this trail should be built because it would provide variability and challenge. It would also help get traffic off the road	Thank you for your comment. This trail was analyzed in Alternatives 1 &2.
107	9	Kurt Chaffin	Spencer Basin	Feels this area should be opened to provide more ground and loop potential	Thank you for your comment. A full range of Alternatives was analyzed.
107	10	Kurt Chaffin	Curtis Ridge Trail #3309	Feels this trail should be open to motorized because it would provide a good challenge, scenic views and possible connections for future loops	Thank you for your comment. This trail would be open to motorized use under several Alternatives.
107	11	Kurt Chaffin	Baxter Sawmill 2	Supports this trail because it provides good views	Thank you for your comment. A full range of Alternatives was analyzed for this road.
107	12	Kurt Chaffin	#20186 TO #26980	Would like to see a connector built between these two (green fork gated to longhurst spring)	Thank you for comment. This was not analyzed in this document but will be considered in future environmental assessments.
107	13	Kurt Chaffin	Box Elder Creek Trail #26010	Supports this trail because it would provide an Alternative to the road.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	14	Kurt Chaffin	Pete's Hollow Trail #26022	Should be kept open as a single track motorized trail	Keeping Pete's Hollow Trail #26022 as a single track motorized trail will we be considered in the analysis of the FEIS.
107	15	Kurt Chaffin	Public Grove 4x4	Supports opening this road to provide access to Devils Gate	The FEIS describes a range of Alternatives for the Public Grove Road in section 2.7.2 - Relative Changes to Transportation System by Alternative.
107	16	Kurt Chaffin	Devils Hole Trail #xx30	Supports as it provides a needed Alternative to the Willard Road	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	17	Kurt Chaffin	Skyline Trail	Supports keeping this trail open with no seasonal restrictions. Goat population has thrived.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative. Section 4.6.3.1 indicated the effects to the mountain goats.

107	18	Kurt Chaffin	Dip Hollow - Public Grove	Should be opened to provide an Alternate access in the Public Grove area.	The FEIS describes a range of Alternatives for the Public Grove Road in section 2.7.2 - Relative Changes to Transportation System by Alternative.
107	19	Kurt Chaffin	Grizzly Peak Rd	Feels this road should remain open to all motorized	The FEIS describes a range of Alternatives for the Grizzly Peak Road in section 2.7.2.
107	20	Kurt Chaffin	Middle Ridge Power line and Silvia Hollow	Believes this road should be open to motorized use as it provides additional loop possibilities	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	21	Kurt Chaffin	Dry Bread Upper and xx11 ATV Trail	Supports this new motorize trail in the vicinity of this popular dispersed camping area.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	22	Kurt Chaffin	Dry Mitchell	Supports this new motorize trail in the vicinity of this popular dispersed camping area.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	23	Kurt Chaffin	Dairy Wash ATV #xx14 to Dairy Ridge Road	Supports this new motorize trail in the vicinity of this popular dispersed camping area.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	24	Kurt Chaffin	Lewis Peak Trail #6041	Supports keeping this outstanding single track motorized trail open	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	25	Kurt Chaffin	Coldwater Peak Trail #6087	Supports keep this single track motorized trail open	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
107	26	Kurt Chaffin	City View Trail #6040	Supports keep this single track motorized trail open	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
108	1	Al Herring	General	Feels that Alternative 3 would better protect wildlife from disruption and dispersion.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each Alternative.
108	2	Al Herring	Mollens Hollow/Box Elder Creek/Public Grove	Concerned that Alternative 3a would open these roadless areas to motorized use and does not feel that illegal behavior should be rewarded.	The FEIS describes a range of alternatives and the effects, including roadless areas, that address your concern.
109	1	Robert Stewart, U.S. Fish and Wildlife Service	General	The USFWS believes the DEIS provides an adequate range of Alternatives and it provides adequate disclosure of likely impacts to fish and wildlife resources.	Thank you for your comment.
109	2	Robert Stewart, U.S. Fish and Wildlife Service	General	All roads should be assumed closed unless posted otherwise to reduce habitat degradation and wildlife disturbance.	The FEIS on page 3-3 described the methods roads will be signed. This policy may change based on implementation of a new national policy on motorized recreation. The FEIS discloses the current signing techniques for the Wasatch-Cache National Forest.
109	3	Robert Stewart, U.S. Fish and Wildlife Service	General	The USFWS recommends that opportunities be pursued to protect as much critical deer winter range from disturbance as possible.	A wildlife emphasis Alternative was developed in the FEIS. One of the criteria used was protecting high value deer winter range. In addition, the effect of motorized roads and trails on winter range habitat is mostly limited since weather conditions usually preclude use by wheeled vehicles.

109	4	Robert Stewart, U.S. Fish and Wildlife Service	Public Grove	It is not clear within the DEIS (Alternative 3A) the timeframe for the seasonal closure on road 20220 Public grove 4x4.	In the FEIS will define seasonal closures and their dates.
109	5	Robert Stewart, U.S. Fish and Wildlife Service	Public Grove	The USFWS recommends that Alternative 3a remove the Public Grove 4x4 route from consideration and close the road to vehicular traffic due to effects on mule deer, elk, and sage grouse.	Thank you for your comment.
109	6	Robert Stewart, U.S. Fish and Wildlife Service	Public Grove	Removing motorized access to Public Grove would provide a large area that can be enjoyed by those who value secluded areas, undisturbed wildlife viewing, and "backcountry" hiking and hunting opportunities; the area is easily accessible by foot and other 4x4 opportunities exist nearby.	Thank you for your comment.
110	1	Vernon Warner	Devils Gate	Is opposed to the effort on the part of the Forest Service and Box Elder County to classify private roads as public roads. Feels that the TPR infringes on the rights of private land owners.	See response to comment to 17-1.
111	1	Warner Family Trustees	Devils Gate	The Warner family is 100% against the Forest Service plan because is infringes on private property rights, increases their liability, adds to water, noise and land pollution, affects wildlife habitat, water erosion, and land and water conservation. Attached to the cover letter are a number of bullet statements regarding history of the Devils Gate area, issues related to the controversy and ownership facts.	See response to comment 17-1.
112	1			Same letter as #110	
113	1	Stuart Scott	Law Enforcement	Feels that the best solution is to enforce the rules that already exist. Supports the concept of increasing registration fees and using some of the money to improve signing and enforcement.	Section 1.3.1 Purpose and Need for the Proposed Need discusses the function of the FEIS in regards to providing clear direction 'on which roads or trails are legally available…" Increasing registration fees is outside the scope of the analysis and is a State of Utah issue.
114	1	BlueRibbon	Lack of an adequate route inventory	Feels that the lack of a complete route inventory of all existing roads violates the spirit if not the letter of NEPA.	Appendix A provides a table of the current roads on the Ogden Ranger District, complete with road name and number, length, description, and location code for maps accompanying the EIS.

114	2	BlueRibbon	Inventory of all past, present, and future OHV routes	Feels that the FEIS must include a complete narrative of past, current and reasonably foreseeable OHV routes.	Using the best information available (inventories and the INFRA database), all current and reasonably foreseeable future motorized routes are included in the cumulative effects sections in Chapter 4. Once this plan is implemented, it is likely that additional changes will be made but these are unknown at this time. New route proposals would be analyzed in another assessment.
114	3	BlueRibbon	Proposed Action	The DEIS fails to explain changes from the proposed action. Concerned that there were several features in the proposed action that were not included in any of the Alternatives in the DEIS.	See comment 87 - 3 concerning the difference between the scoping proposed action and the EIS.
114	4	BlueRibbon	Roadless	Concerned that the DEIS substantially changes the management of certain roadless areas. The ROD cannot make substantial changes to management decisions that were properly made in the Forest Plan revision process. The ROD must be limited to changes in route designation and travel management.	The FEIS follows the NEPA process and analyzes a range of alternatives with varying effects on all resources including Roadless areas.
114	5	BlueRibbon	ROS	Concerned that the DEIS substantially changes the ROS classifications for certain roadless areas. The ROD cannot make substantial changes to management decisions that were properly made in the Forest Plan revision process. The ROD must be limited to changes in route designation and travel management.	The FEIS describes a range of alternatives that address your concern.
114	6	BlueRibbon	Scoping Process	Concerned that the DEIS is making management decisions concerning resources that were not identified in the scoping process including wildlife habitat, hunting preferences, ROS, and providing opportunity for non-motorized recreation. If the Forest Service identifies a need to provide additional non-motorized recreation in the context of a motorized travel plan then this issue must be identified in the scoping process.	Clarifying language was added to the purpose and need in Section 1.3.1. See comment 87 - 3 for the difference in the scoping proposal.
114	7	BlueRibbon	Effects	Concerned about the approach used in analyzing and disclosing effects. The DEIS is preoccupied with documenting impacts on various resources from motorized vehicles. Impacts should be evaluated and disclosed in a fair and unbiased manner.	Thank you for your comment. However, we feel the analysis was conducted and the environmental effects were disclosed in a scientific, unbiased and comprehensive manner.

114	8	BlueRibbon	Range of Alternatives	Concerned that the Forest Service has improperly attempted to exclude motorized use from roadless areas. The DEIS has no mandate to enhance the roadless character of roadless areas. The management of roadless areas was decided in the Forest Plan Revision.	The FEIS describes a range of alternatives that address your concern. We agree that the Revised Forest plan direction will be followed in our treatment of roadless areas.
114	9	BlueRibbon	Economics	Concerned that socio-economic impacts were not properly or adequately addressed in the DEIS. The DEIS has not disclosed the economic impact to visitors that are required or choose to use motorized vehicles. Nor has the DEIS disclosed the economic benefits to nearby communities like Woodruff, Randolph, Lake town, Mantua, etc.	See comment 87 - 60.
114	10	BlueRibbon	Vehicle Classification	Concerned that the Forest Service has arbitrarily limited vehicle widths to 50" or less for motorized trails in roadless areas.	Forest Service Manual 2353.05 defines a "trail" as "a commonly used term denoting a pathway for purposes of travel by foot, stock, or trail vehicles." It also defines "trail vehicles" as "vehicles designed for trail use, such as bicycles, snowmobiles, trail bikes, trail scooters, and all terrain vehicles (ATV)." In contrast, it defines "a four wheel drive way" as a "a National Forest System road included in the Forest Transportation Atlas and commonly used by four-wheel drive, high-clearance vehicles with a width greater than 50 inches unless designated and managed as a trail." Also, see response to comment #38.
115	1	UEC	MP 2.6	The proposed changes in the DEIS appear to avoid new roads or trails in this prescription.	Table 2.7.2, Summary of the Proposed Activities by Alternative, shows routes to be included under each of the Alternatives. There are some new open routes under each of the Alternatives (except the no action).
115	2	UEC	MP 2.6	Opening roads or trails near MP 2.6 will degrade their value.	No new routes will be opened within MP 2.6 (undeveloped areas). Routes opened in MPs nearby MP 2.6 will not affect the qualities for which the area was classified. The primary emphasis for MP 2.6 is on protection, to assure the values and unique qualities associated with undeveloped areas will be maintained.
115	3	UEC	Trail #25	Trail #25 would go through MP 3.1W.	The Box Elder Creek Trail is considered under Alternative. 2 and 3a. Road and trail densities were considered in the sections on wolverine and wolf (3.6.3.1), and in appendix B.
115	4	UEC	MP 3.1W	Consider trail densities in MP 3.1W.	Road and trail densities were considered in the sections on wolverine and wolf (Section 4.6.3.1), and in appendix B.

115	5	UEC	MP 3.2U	Consider trail densities in MP 3.2U	Road and trail densities were considered in the sections on wolverine and wolf (Section 4.6.3.1), and in appendix B.
115	6	UEC	Roadless Areas	Most of the proposed changes outlined in the scoping document either involve or are near IRAs.	Discussions in Section 3.10 and 4.10 describe the existing inventoried roadless areas and the degree to which proposed routes would affect each of them. It is not correct to assume most of the proposed routes would directly affect IRAs (see Table 2.7.1). Table 3.10.1 lists acres for IRAs and shows that a significant portion of this ranger district in or near a roadless area.
115	7	UEC	Curtis Creek	Expanded recreation in the Curtis Creek area may impact possible karst in the area.	FEIS section 4.3.5 analyzes how sediment from District roads and trails might affect water quality and riparian dependent resources, presumably including possible karst resources. FEIS sections 3.3.2.3, 4.3.5.1, 4.3.5.2 and table 4.3.5.6 disclose where these effects are currently happening, and how they will change under the various Travel Management plan alternatives. FEIS section 4.4.4 discloses the effects of soil erosion and rutting from the both illegal user developed trails and designated system trails associated with the proposed action and its alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be located and managed to Forest Service standards that allow for properly drained trail surfaces and mitigate the potential for trail rutting, erosion, and widening. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.
115	8	UEC	Hardware Ranch	The impacts of additional motorized activity on lynx and wolf must be considered.	The Ogden Ranger District followed the guidelines established in the Lynx Conservation Strategy (Section 4.6.3.3). Effects are displayed in Sections 4.6.3.3 and 4.6.3.1.
115	9	UEC	IRA	Any future analysis must justify the addition of 8.61 miles of new routes by showing a demand for these proposed roads and trails.	Thank you for your comment. Demand for new motorized routes is an assumption made based on the increased ownership of ATVs in northern Utah. See this reference in the Purpose and Need section.
115	10	UEC	General	Illegal activity shouldn't be rewarded.	Thank you for your comment.
115	11	UEC	General	Future NEPA should document the level of user-created routes, disclose road/trail density, and describe future enforcement.	Thank you for your comment. Monitoring in the future will include documentation of additional information on motorized uses.

115	12	UEC	Lewis Peak	The addition of more than 3 miles of motorized trail in the Lewis Peak area will increase the area's popularity and threaten water quality and potentially increase erosion.	FEIS section 4.3.5 analyzes how soil erosion from District roads and trails might affect water quality and riparian dependent resources. FEIS sections 3.3.2.3, 4.3.5.1, 4.3.5.2 and table 4.3.5.6 disclose where these effects are currently happening, and how they will change under the various Travel Management plan alternatives. The Skyline motorized trail near Lewis Peak was not specifically noted to have potential sediment impacts on water quality or riparian dependent resources. FEIS section 4.4.4 discloses the effects of soil erosion and rutting from the both illegal user developed trails and designated system trails associated with the proposed action and its alternatives. FEIS section 4.4.3 assumes that all system roads and trails will be located and managed to Forest Service standards that allow for properly drained trail surfaces and mitigate the potential for trail rutting, erosion, and widening. FEIS section 1.3.2.3 further defines the Forest Service standards that roads and trails will be managed to.
115	13	UEC	General	Increased risk of fire should be considered.	The potential for increased risk of fire, although possible, is somewhat speculative. It would be very difficult to predict and quantify and is beyond the scope of this analysis.
115	14	UEC	Lewis Peak	The Lewis Peak area should be considered for Wilderness.	Thank you for your comment. The Forest Plan documented the potential for the Lewis Peak roadless area.
115	15	UEC	Public Grove	Any additional routes in the Public Grove area need to be considered carefully in this IRA.	The Public Grove area received much consideration in the analysis and the effects of opening and closing routes in this area are fully disclosed (See in particular, Table 2.7.2, FEIS maps, and Chapter 4). The Revised Forest Plan dropped Public Grove Hollow for consideration as an IRA.
115	16	UEC	General	Impacts to migratory birds must be considered.	Impacts to migratory birds are displayed in Section 4.6.3.5.
115	17	UEC	General	Please consider closing the following additional routes (Highlighted in letter).	Thank you for your comments.
115	18	UEC	EIS	Include Forest Plan Amendments that would occur due to the Travel Plan decision.	Section 1.4 discloses that no Forest Plan Amendment would be required by any of the Alternatives.

115	19	UEC	General	Classification of unclassified road constitutes road construction.	We will follow Forest Service policy in classifying routes that currently exist without an inventory number. If a route is identified in an alternative be added, it is analyzed as if it was a new construction.
115	20	UEC	Shoshone Trail	We incorporate the entire 2005 WO appeal decision as well as our Forest Plan appeal. The DEIS fails to identify this as a significant issue.	The determination of significant and non-significant issues is described in section 1.6.3 and 1.6.4 of the FEIS.
115	21	UEC	General	The range of alternatives in the DEIS is not adequate.	We feel that the range of alternatives in this FEIS is adequate for an analysis.
115	22	UEC	Alternatives	We suggest that you develop alternatives that close significantly more miles of trail and road. This would allow alternative comparisons to work.	Thank you for your comment.
115	23	UEC	Wilderness	Forest Plan roadless inventory does not fully disclose effects on potential wilderness.	Thank you for your comment. The roadless inventory done in the Forest Plan FEIS is a separate document from this analysis and addresses roadless and wilderness potential.
115	24	UEC	Alternatives	Please modify alternative 3a to close motorized routes inside UEC's proposed wilderness areas.	Thank you for your comment. The Forest Plan documented the potential for each roadless area.
115	25	UEC	MIS	MIS population trend data must be gathered and analyzed.	Population and trend data on MIS is included in the Project Record.
115	26	UEC	MIS	MIS population trend data needs to be collected at the project level.	Population and trend data on MIS is included in the Project Record.
115	27	UEC	TES	The alternative selected should minimize both disturbance and habitat for lynx and wolves.	A range of alternatives is addressed within the EIS.
115	28	UEC	Sensitive Species	The WCNF is failing to conduct the sensitive animal and plant species monitoring that is necessary to determine distribution, status, and trend (eight species).	The EIS provides information in sections 3.6.2.4 and 4.6.3.4 regarding numerous sensitive species and their habitats and also displays the effects of the alternatives.
115	29	UEC	Cumulative Effects	The cumulative effects analysis to roadless, undeveloped areas, IRA, lynx, wolf, Forest Service sensitive species and wildlife in general is not meaningful and lacks quantified or detailed information.	Addition information has been added to the Cumulative Effects section of the FEIS.
116	1	Kyle Potter	Devils Gate/Rocky Dugway	Opposed to the proposed ATV trail in Mantua area. Area in which the trail is located passes through sensitive sharp-tailed grouse habitat and fears that ATV activity would force the grouse off of their traditional leks.	Additional information has been added to the FEIS with regards to sharp-tailed grouse and the effects of the alternatives on the sharp-tailed grouse and their habitats.
116	2	Kyle Potter	Private Land	As a private property owner does not feel it is wise to have ATV trails pass thru private property to access National Forest System lands.	See response to comment 17-1.
117	1	Matthew and Kimberly New	Negligence Law Suits	Concerned that public travel across private land will increase their liability for negligence lawsuits.	See response to comment 17-1.

117	2	Matthew and Kimberly New	User Fees	Can private landowners charge a fee to those passing across their land? Owners have never been offered any compensation. How can this be legal?	See response to comment 17-1.
117	3	Matthew and Kimberly New	Trespass Hunting	Concerned that public access across their private property will lead to trespassing and vandalism. Can someone post signs for the private landowners?	It is the responsibility of the landowner to post private property.
117	4	Matthew and Kimberly New	Human Caused Fire	Concerned that public use of their private property could increase their exposure to human caused fires. How will the Forest Service limit the risk of these types of fires occurring on their property.	It is the responsibility of the landowner to post private property.
118	1	John and Betty Mayer	Mollens Hollow/Box Elder Creek	Opposed to motorized trails in these areas.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative.
119	1	Douglas Dickson	Skyline Trail	Concerned that the seasonal protection of the kidding area for the mountain goats is part of an agenda to close motorized access.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative. The Purpose and Need for this analysis discusses the need for motorized access.
120	1	K.C. Robinson, Western Wildlife Conservancy	General	The DEIS is inadequate with respect to the discussion of lynx.	Sections 3.6.2.3 and 4.6.3.3 discusses the lynx and its habitat. Additional information has been added to the FEIS.
120	2	K.C. Robinson, Western Wildlife Conservancy	General	Much of the land contained within the Ogden Ranger District is identified as potential, if not actual, lynx and/or snowshoe hare habitat.	Snowshoe hare habitat is abundant within the Ogden Ranger District (See Snowshoe hare section) and for lynx, the area is considered linkage area habitat. The Ogden Ranger District "potential" on page 4-27 of the DEIS has been eliminated from the FEIS.
120	3	K.C. Robinson, Western Wildlife Conservancy	General	Proliferation and use of roads and trails for motorized recreation generally has negative impacts on wildlife species, including lynx and snowshoe hare (referring to two publications: one by Reed Noss and the other by Barrie Gilbert).	Section 4.6.3 summarizes the general effects roads have on wildlife. Sections 4.6.3.2 and 4.6.3.3 describe the effects of the alternatives on snowshoe hare and the lynx, respectively. Neither Noss nor Gilbert specifies specific protection for snowshoe hare or lynx in regard to forest roads.
120	4	K.C. Robinson, Western Wildlife Conservancy	General	The DEIS concludes that the alternatives will not negatively impact the lynx.	Impacts to lynx are displayed in Section 4.6.3.3. A determination will be made in the Biological Assessment based on the effects of the selected alternative. Concurrence regarding this finding from USFWS will be obtained prior to the release of the Record of Decision.

120	5	K.C. Robinson, Western Wildlife Conservancy	General	The EIS shows that the Ogden RD is not important to the conservation of the lynx; the RD may be extremely important for maintaining genetic viability of lynx populations to the north, south, and east (middle and southern Rockies).	We agree that the Ogden Ranger District may be important to the lynx.
120	6	K.C. Robinson, Western Wildlife Conservancy	General	The US Forest Service is required by law to show that the preferred alternative combined with the Shoshone ATV trail system will not negatively impact the prospects for lynx conservation between the Greater Yellowstone and Southern Rockies Ecoregions.	The US Forest Service is required to display the effects of the different alternatives on lynx. In addition the US Forest Service has followed the guidelines within the lynx conservation strategy with regards to linkage habitat (Section 4.6.3.3).
120	7	K.C. Robinson, Western Wildlife Conservancy	General	There is not enough hard data on the effects motorized forest travel routes to draw a conclusion one way or another about their effects on lynx.	The USDI has determined that Forest roads are not a threat to lynx, however, roads and trails may reduce the value of some lynx habitat by removal of vegetation and forested cover (Section 4.6.3.3).
120	8	K.C. Robinson, Western Wildlife Conservancy	General	Only a fraction of mileage will be added to primary lynx habitat within the alternatives, but this has no significance at all from the perspective of the importance of the area as a lynx travel corridor; primary and secondary habitat is inapplicable to the corridor.	Primary and secondary habitats possess many qualities preferred by lynx and support higher numbers of snowshoe hares, thus it is applicable. Section 4.6.3.3 displays the effects of the alternatives on lynx.
120	9	K.C. Robinson, Western Wildlife Conservancy	General	The US Forest Service needs to do more work analyzing the impact of the expected dramatic increase of motorized traffic on lynx dispersion through the area and thus conservation of the lynx.	Section 4.6.3.3 and Section 4.14.6 Cumulative Effects displays the effects of the alternatives on lynx.
120	10	K.C. Robinson, Western Wildlife Conservancy	General	I urge the US Forest Service to pay close attention to CFR 1502.22 (a) & (b) (Incomplete or unavailable information) and CFR 1502.24 (methodology and scientific accuracy). (Context of the paragraph is in relationship to the lynx).	With regards to the lynx, Section 3.6.2.3 and Section 4.6.3.3 utilizes many sources of literature and information. The most applicable information is contained within the Lynx Conservation Strategy (Ruediger et al 2000) and the USDI (2003).
121	1	Larry Svoboda representing EPA		N/A	N/A
122	1	Phil Hartorgsen	Willard Lake Trail #6090	If the area around this pond has been damaged then motorized access should be restricted.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative. The Record of Decision directs the closure of unauthorized routes around Willard Lake.
122	2	Phil Hartorgsen	Skyline Trail	Concerned that there should be no restrictions on this trail. The goat herd is doing very well and has heard that they are being used in a re-location program. There are very few single track opportunities in the area and does not want to see any restrictions particularly if the herd is being used for a breed and relocate program	Mountain goats have not been moved from this area to other locations since they were initially transplanted; though this could occur in the future. FEIS sections 3.6.2.1 and 4.6.3.1 discusses Mountain Goats. Additional information has been added to the FEIS with regards to the effects of disturbance.

122	3	Phil Hartorgsen	General	Would like to see more two wheeled motorized only opportunities. Feels that 4-wheelers cause more damage to the environment than motorcycles.	Further discussion on motorcycle only or single-track recreation opportunities will occur in the FEIS.
123	1	Lou Ann Christensen representing Brigham City	Pete's Hollow Trail	Brigham City feels it is important to the interest of its citizens that a motorized trail link be established between the City and the National Forest. The City also recognizes that such a trail link will require coordination with the Ogden Ranger District and partnership with an number of groups and agencies to make the trail safe for a variety of users.	The FEIS describes a range of alternatives for the Petes Hollow trails.
123	2	Lou Ann Christensen representing Brigham City	General	In general, Brigham City supports Alternative 2	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative.
123	3	Lou Ann Christensen representing Brigham City	Devils Gate/Public Grove	Supports the link through the Devil's Gate Valley to Public Grove as a motorized trail.	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative.
123	4	Lou Ann Christensen representing Brigham City	Rocky Dugway	Supports maintaining the Sink Hole--Three Mile road for motorized access	See Section 2.4 Alternatives Considered in Detail discusses a range of actions for each alternative.
124	1	S. Bruce Jones	General	Please follow the plan which will allow for the greatest 4-wheeler opportunities	The FEIS described a range of alternatives for motorized and non-motorized recreation.

Glossary

Sources for the terms used in this glossary are provided following each term.

The Forest Service published a final rule on Travel Management and Designated Routes and Areas for Motor Vehicle Use in the Federal Register (Vol. 70, No. 216, 11/09/05, pp. 68264-91). Among the rule's proposals are a set of consistent definitions for terms including many of those below. The terms below are used in the Environmental Impact Statement as defined here. Consistancy with the final rule is manditory but in order to clarify the implementation of the final rule on this Ranger District, some re-phrasing occurred. This is indicated where necessary.

Administrative unit. A National Forest, a National Grassland, a purchase unit, a land utilization project, Columbia River Gorge National Scenic Area, Land Between the Lakes, Lake Tahoe Basin Management Unit, Midewin National Tallgrass Prairie, or other comparable unit of the National Forest System. (Such as a Ranger District)

Administrative Use. Motorized use of a road, trail, or area for limited administrative use by the Forest Service; Use of any fire, military, emergency, or law enforcement vehicle for emergency purposes; Authorized use of any combat or combat support vehicle for national defense purposes; Law enforcement response to violations of law, including pursuit; and, Permitted Use and occupancy of National Forest System lands. (USDA-Forest Service. 2004. 36 CFR Part 212, 251, 261, and 295. Travel Management; Designated Routes and Areas for Motor Vehicle Use.)

All Terrain Vehicle (ATV) - Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low-pressure tires with a seat designed to be straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer (FSH 2309.18). In this document the term ***ATV trail*** is often used to discuss a motorized trail that can be used for motorcycles also.

The Forest Service does not classify as ATVs the new "golf cart" sized light off-road utility vehicles as they usually have a wider track and overall length than ATVs. "Utility" vehicles that exceed the size definitions of ATV above would not be allowed to use motorized trails on the Wasatch-Cache National Forest but may use some Forest roads.

Annual Maintenance. Work performed to maintain serviceability, or repair failures during the year in which they occur. Includes preventive and/or cyclic maintenance performed in the year in which it is scheduled to occur. Unscheduled or catastrophic failures of components or assets may need to be repaired as a part of annual maintenance. (Financial Health - Common Definitions for Maintenance and Construction Terms, July 22, 1998)

Area. A discrete, specifically delineated space that is smaller, and in most cases much smaller, than a Ranger District.

Cherry Stem. A section of road that projects into and terminates in an inventoried roadless area, but around which a thin buffer has been drawn so that the road is not identified as within the roadless area. Rather, the road is outside the defined inventoried roadless area boundary, but on a map appears as a line projecting into the roadless area with a thin buffer between the road and the roadless area boundary. In the Wasatch-Cache roadless inventory for forest planning road buffers on NFS roads were drawn 33 feet on either side of the road centerline, while on state highways the buffer was extended to 66 feet on either side of the centerline. This mapping convention was defined by an Intermountain Region protocol for conducting roadless area inventories. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Classified Road. Road wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service that is designated for motor vehicle use pursuant to 36 CFR 212.51 on a Motor Vehicle Use Map (MVUM). (36 CFR 212.1, FSM 7705 - Transportation System). A road under Forest Service jurisdiction..

Closed Road. Roads on the Forest Transportation system available for motorized administrative or emergency use,

but not open to public motorized use. Also called long-term intermittent and is classified as a Level 1 maintenance road. . (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Concentrated Use Area. An area identified by the Forest Service characterized by recurring frequent and relatively dense dispersed recreation and where some continuing site impacts have been recorded. Concentrated Use Areas are inventoried and monitored by the Wasatch-Cache National Forest. Sites of this type may need specific site management plans, law enforcement patrolling, or some site-hardening (gravel, pavement, site management signing, or trash removal) to keep sites within acceptable standards. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Decommission. Demolition, dismantling, removal, obliteration and/or disposal of a deteriorated or otherwise unneeded asset or component, including necessary cleanup work. This action eliminates the deferred maintenance needs for the fixed asset. Portions of an asset or component may remain if they do not cause problems nor require maintenance. (Financial Health - Common Definitions for Maintenance and Construction Terms, July 22, 1998)

Designated road, trail, or area. A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to § 212.51 on a motor vehicle use map.

Dispersed Recreation. Recreation with few developed amenities such as structures, developed campsites, or toilets. Dispersed recreation is generally less directly constrained by management controls on movement or by enforcement activities, but must comply with posted orders or restrictions for areas under management. Dispersed campers, for instance, can choose to camp in places that are undeveloped, so long as they meet general posted rules for site protection. The term dispersed recreation usually implies lower visitor use densities. Dispersed recreation may be motorized or non-motorized. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Forest Development Trails. Those trails wholly or partially within, or adjacent to and serving, the National Forests and other areas administered by the Forest Service that have been included in the forest development transportation plan. (36 CFR 212.1 and 261.2 (FSM 1013.4)

Forest Road or trail. A road or trail wholly or partly within, or adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. (FSM 7705 - Transportation System; Final Rule)

Forest Highway. A forest road under the jurisdiction of, and maintained by, a public authority and open to public travel. (USC: Title 23, Section 101(a)).

Forest transportation atlas. A display of the system of roads, trails, and airfields of an administrative unit.

Forest transportation facility. A forest road or trail or an airfield that is displayed in a forest transportation atlas, including bridges, culverts, parking lots, marine access facilities, safety devices, and other improvements appurtenant to the forest transportation system.

Forest transportation system. The system of National Forest System roads, National Forest System trails, and airfields on National Forest System lands.

Forest Transportation System Management. The planning, inventory, analysis, classification, record keeping, scheduling, construction, reconstruction, maintenance, decommissioning, and other operations undertaken to achieve environmentally sound, safe, cost-effective, access for use, protection, administration, and management of National Forest System lands. This inclues documentation with a Forest Transportation Atlas to display the system of roads and trails within the Wasatch-Cache National Forest. (FSM 7705 - Transportation System)

Geographical Information System (GIS) GIS is a computer technology that uses a geographic information system as an analytic framework for managing and integrating data; solving a problem; or understanding a past, present, or future situation. (http://www.gis.com/whatisgis/index.html, 2006)

High Clearance Vehicle. Generally a truck, pickup truck, SUV or ATV with a road clearance that allows travel on low standard roads without vehicle damage and greater than the clearance of a standard passenger vehicle. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

INFRA. The INFRA database (ORACLE) used by the U.S. Forest Service. This database records attributes for every system road, trail, and other Forest Service infrastructure. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Jurisdiction. The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership. The authority to construct or maintain a road may be derived from fee title, an easement, or some other similar method. (FSM 7705 - Transportation System)

Low Standard Road. A road intended for travel by high clearance vehicles or ATVs, not standard passenger vehicles. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Maintenance. The act of keeping fixed assets in acceptable condition. It includes preventive maintenance normal repairs; replacement of parts and structural components, and other activities needed to preserve a fixed asset so that it continues to provide acceptable service and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. Maintenance includes work needed to meet laws, regulations, codes, and other legal direction as long as the original intent or purpose of the fixed asset is not changed. (Financial Health - Common Definitions for Maintenance and Construction Terms, July 22, 1998)

Maintenance Level. Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria. (FSH 7709.58, Sec 12.3 - Transportation System Maintenance Handbook)

Maintenance Level 1: Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resource to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate". Roads receiving level 1 maintenance may be of any type, class or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.

Maintenance Level 2: Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Maintenance Level 3: Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

Maintenance Level 4: Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

Maintenance Level 5: Assigned to roads that provide a high degree of user comfort and convenience. Normally, roads are double-lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

Mixed Use Analysis. An evaluation done by the Forest Service to consider the probabilities and consequences of accidents associated with the use of licensed street legal vehicles and operators with vehicles and operators that are not licensed. use, whether it be mixed use or sole use. (See FS Handbook 7709.52).

Motorized Trail. A Forest development trail intended for use by motorized vehicles 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low-pressure tires with a seat designed for straddling by the operator. These trails may also be used by motorcycles and are open for use to non-motorized trail users. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Motor vehicle. Any vehicle which is self-propelled, other than: (1) A vehicle operated on rails; and (2) Any wheelchair or mobility device, including one that is batterypowered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

Motor vehicle use map. A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the National Forest System.

National Forest System Road. A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority. A classified forest road under the jurisdiction of the Forest Service. The term "National Forest System roads" is synonymous with the term "forest development roads" as used in 23 U.S.C. 205. (FSM 7705 - Transportation System)

National Forest System trail. A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority.

Non-motorized Trail. A Forest development trail intended for non-motorized users. These trails are also open to bicycles, except in areas recommended for Wilderness designation by the revised forest plan. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Objective Maintenance Level. The maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. (FSH 7709.58, Sec12.3 - Transportation System Maintenance Handbook)

Off Highway Vehicle (OHV). Any motor vehicle designed for or capable of cross country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain. **"**OHVs include any snowmobile, ATV, motorcycle, or other off-highway vehicles capable of travel over unimproved terrain." (www.stateparks.utah.gov/ohv/faq.htm, 2004).

Open for Public Travel. The road section is available and passable by four-wheeled standard vehicles, and open to the general public for use without restrictive gates, prohibitive signs, or regulation other than restrictions based on size, weight or class of registration, except during scheduled periods, extreme weather or emergency conditions. (23 CFR 460.2(c)). (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Operational Maintenance Level. The maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is currently being maintained. (FSH 7709.58, Sec 12.3 - Transportation System Maintenance Handbook)

Private Road. A road under private ownership authorized by easement to a private party, or a road which provides access pursuant to a reserved or private right. (FS-643, Roads Analysis; Informing Decisions About Managing the National Forest Transportation System, August 1999.).

Public Road. Any road or street under the jurisdiction of and maintained by a public authority and open to public travel. (23 U.S.C. 101(a), 23 CFR 460.2(a), FSM 7705 - Transportation System)

Recreation Opportunities Spectrum (ROS). – A planning device used to describe and allocate (map) outdoor

recreation settings. ROS identifies a number of classes of outdoor recreation settings along a spectrum ranging from Primitive (with almost no development or modification of natural settings - P) to Urban (with the highest possible developed character - U.) Other Classes in ROS from less to more developed include: Semi-Primitive Non-Motorized (SPNM), Semi-Primitive Motorized (SPM) Roaded Natural (RN) and Rural(R). (More detail on ROS can be found in the Wasatch-Cache National Forest Plan (2003) which has applied ROS in its planning.)

Road. A motor vehicle route over 50 inches wide, unless identified and managed as a trail. A road may be classified, unclassified, or temporary. (36 CFR 212.1, FSM 7705 - Transportation System)

Road Management Objectives (RMO). Defines the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria. (FSH 7709.55, Sec 33 - Transportation Planning Handbook)

Road Reroute or Realignment. Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway. (FSM 7705 - Transportation System)

Road Construction or Reconstruction. Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road. Activity that results in a Road Improvement or Road Realignment of an existing classified road. (FSM 7700 - Transportation System)

Roadless Area (or inventoried roadless areas) – Areas of land on the Wasatch-Cache National Forest that have been inventoried and described and ared presented in Appendix C of the FEIS for Wasatch-Cache National Forest Plan Revision (2003). Inventoried roadless areas have a number of recognized values and are generally over 5,000 acres in extent. There is an absence of constructed roads or other imposing man-made features or structures in these areas.

Roads Analysis. A Forest Service evaluation of a roads system for transportation planning used to inform management decisions about the benefits and risks inherent in National Forest road systems. Roads analysis does not make decisions about building, decommissioning , closing or opening roads, but creates information for decision makers to provide a more knowledgeable context on roads for decisionmaking. The objective of roads analysis is to provide line officers with information to develop road systems that are safe,r esponsive to public needs and desires, affordable and efficiently managed, have minimal ecological impacts, and are in balance with available funding. Roads Analysis: Informing Decisions aobut Managing the National Forest Transportation System. FS-643, August 1999.)

Single-track Motorized Trail. A Forest development trail intended for use by motorized vehicles that produce a single track on the ground 18 inches or less in width, essentially motorcycles. These vehicles have a dry weight of 600 pounds or less with a seat designed for straddling by the operator. These trails are also open for use to non-motorized trail users. (USDA-Forest Service. 2004. 36 CFR Part 212, 251, 261, and 295. Travel Management; Designated Routes and Areas for Motor Vehicle Use.)

Temporary road or trail. A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas.

Trail. A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail. A trail may be a forest trail, a temporary trail, or an unauthorized or unclassified trail. (Derived from FS Manual 2353.05, 2004 and FS Handbok 2309.18 – Trails Management, 1991.)

Travel management atlas. An atlas that consists of a forest transportation atlas and a motor vehicle use map or maps. (USDA-Forest Service. 2004. 36 CFR Part 212, 251, 261, and 295. Travel Management; Designated Routes and Areas for Motor Vehicle Use.)

Travelways. Term used to describe a variety of routes, trails, roads, and driveways. The term is generally used for motorized routes. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Unauthorized road or trail. A road or trail that is not a forest road or trail or a temporary road or trail and that is

not included in a forest transportation atlas. (USDA-Forest Service. 2004. 36 CFR Part 212, 251, 261, and 295. Travel Management; Designated Routes and Areas for Motor Vehicle Use.) Also known as an unclassified road or trail. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)

Use map. A use map would reflect designated roads, trails, and areas on an administrative unit or a ranger district of the National Forest System. This may be in the form of a **Travel Map** as used in the past. (Local definition by Ogden Ranger District used for clarity in communication with this analysis.)