

# **Chapter 1 – Purpose and Need**

## **1.1 Introduction**

This Draft Environmental Impact Statement (DEIS) documents the analysis and discloses the potential temporary, short and long-term, direct, indirect, cumulative, irretrievable and irreversible environmental effects of the proposed action and alternatives for the Lost Creek-Boulder Creek Landscape Restoration Project (Lost Creek-Boulder Creek Project), on the New Meadows Ranger District of the Payette National Forest, in Adams County, Idaho. The Lost-Creek Boulder Creek Project was initiated in 2012 by an interdisciplinary (ID) team of resource specialists (see Chapter 4). The ID team analyzed conditions in the Lost Creek-Boulder Creek Project area and developed the proposed action based on that assessment. Proposed restoration activities include commercial and non-commercial vegetation treatments, prescribed burning, road closure and decommissioning, fish passage barrier improvements, and recreation improvements. These actions are described in detail of Chapter 2 of this DEIS.

## **1.2 Document Structure**

This document was prepared using direction from the Council on Environmental Quality's (CEQ) regulations at 40 CFR 1500-1508, the Forest Service National Environmental Policy Act (NEPA) Regulations at 36 CFR 220, and other relevant laws and regulations. Additional documentation, including more detailed analyses of project-area resources, may be found in the project record.

Format for this DEIS follows the CEQ recommended format (40 CFR 1502.10). The format is as follows:

- **Cover Sheet:** The cover sheet details the agencies involved in the development of the statement, contact information, a brief abstract describing the contents of the document, and name and title of the responsible official. For a DEIS it includes the deadline date by which comments must be received.
- **Table of Contents:** A list of chapters, sections, appendices, and a listing of tables in the EIS.
- **Chapter 1 – Introduction:** This section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need.
- **Chapter 2 - Proposed Action and Alternatives:** This section provides a more detailed description of the proposed action and alternatives (based on issues raised by the public and other agencies) and potential project design features and mitigation measures needed. This section also provides a summary table of the environmental consequences associated with both alternatives.
- **Chapter 3 – Affected Environment and Environmental Consequences:** This section describes the affected environment and the environmental effects of the proposed action and alternatives. This analysis is organized by resources. Within each resource section, the

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affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison with the proposed alternatives.

- **Chapter 4 – Consultation and Coordination:** Contains a list of those who helped prepare this document, and a list of agencies, organizations, and individuals and groups who responded during scoping.
- **Appendices:** The appendices provide more detailed information to support the analyses presented in the environmental assessment. These include:

Appendix A - RCA Treatments

Appendix B - NIDGS Vegetation Treatments

Appendix C - Cumulative Effects

Appendix D - Road Management and Special Uses

Appendix E - Monitoring/Computer Modeling

Appendix F - Legal Requirements

Appendix G - References

Appendix H - Glossary

### **1.3 Project Area**

This project encompasses approximately 80,000 acres on the New Meadows Ranger District of the Payette National Forest. The project area is located approximately 10 miles north and west of New Meadows, Idaho in Boulder Creek, a tributary to the Little Salmon, and in the headwaters of the Weiser River and the West Fork of the Weiser River. The project area includes the Pony Creek Research Natural Area (RNA) and part of the Rapid River Inventoried Roadless Area (IRA). The project area consists of National Forest System lands located in the western portion of the New Meadows Ranger District in T18N, R1W; T19N, R2W; T20N, R1W; T20N, R2W; T21N, R1W, Boise Meridian surveyed (Figure 1-1).

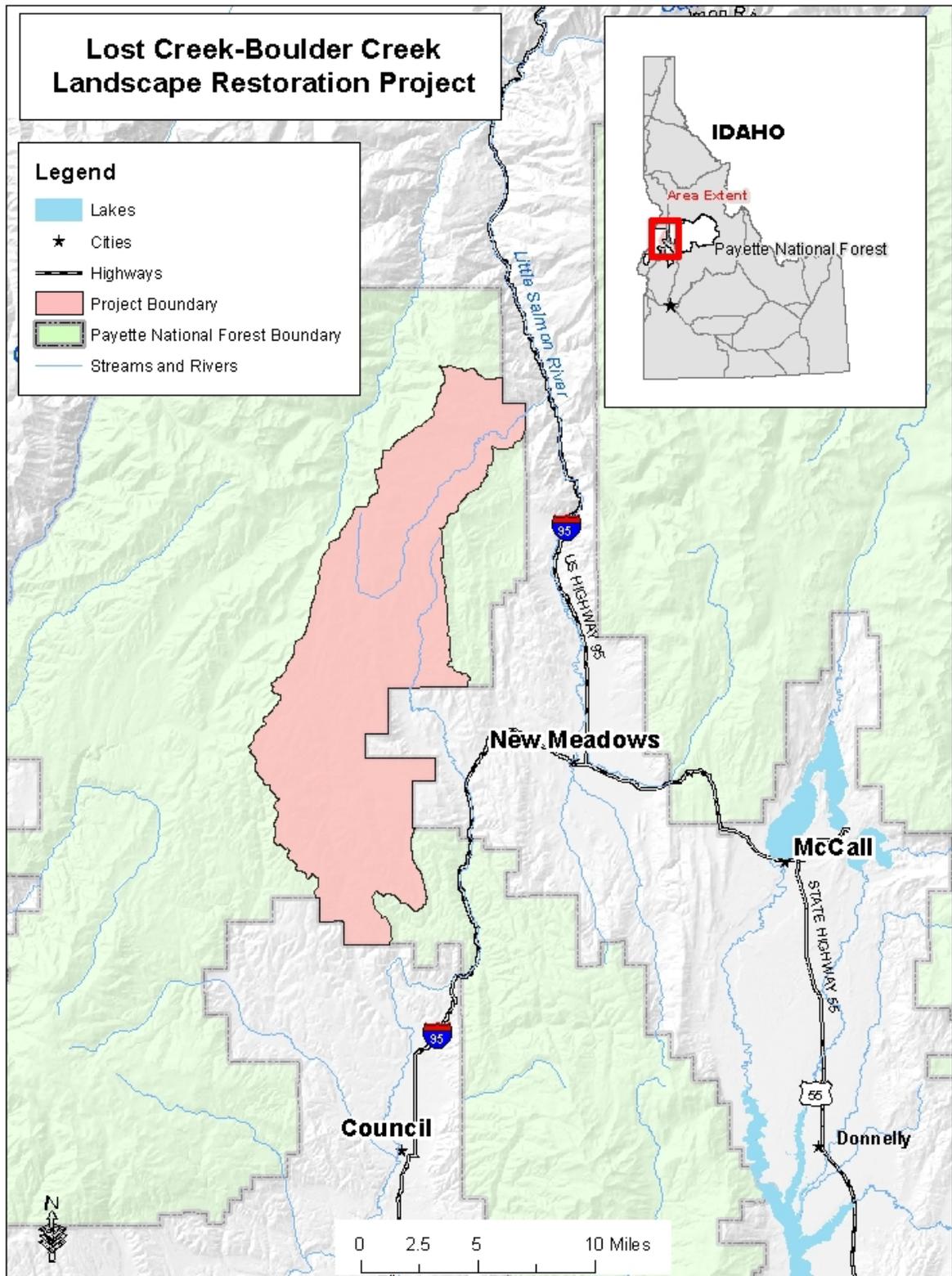
### **1.4 Summary of the Proposed Action**

A brief summary of the proposed action is as follows. A more complete description of the proposed action can be found in Chapter 2, section 2.5.

Proposed landscape restoration treatments activities that would occur under this project include:

- Vegetation treatments on approximately 40,000 acres, including commercial (22,000 acres) and non-commercial (18,000 acres) treatments. Associated actions include road maintenance and temporary road construction.
- Prescribed fire on approximately 45,000 acres.

- Watershed improvements including new long term road closures, road decommissioning, and 40 fish passage barrier improvements.
- Recreation improvements, including new trail developments, rerouting of existing trails, installing trail signs and information kiosks, improving and constructing trailhead parking, decommissioning outhouses and installing vault toilets, improving dispersed camping sites by designating sites and adding fire rings, and graveling campsites and campground access roads.



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Figure 1-1. Lost Creek-Boulder Creek Project Area and Vicinity Map

## 1.5 Existing and Desired Condition of the Project Area

### 1.5.1 Forested Vegetation, Fire and Fuels

Vegetation within the project area is composed of both forested and non-forested vegetation types. Historically, wildfire disturbances helped shape forested landscapes across the project area. Decades of fire exclusion, forest management, insect outbreaks, and other factors have substantially altered forest structures, especially in the low- to-mid-elevation ponderosa pine forest that comprise about 65 percent of the forested acres in the project area. The differences between the current and desired forested vegetative conditions include:

- Less large tree size class than desired in drier forest types that historically supported relatively open ponderosa pine forest;
- More canopy cover than desired;
- Less early seral species (*i.e.* - ponderosa pine, western larch, and aspen) than desired.

These differences can generally be attributed to past fire exclusion and timber management practices and are similar to the trends identified in the analysis at the Forest-wide scale completed for the draft Wildlife Conservation Strategy (see Section 1.6.2 for more information on the Wildlife Conservation Strategy).

Decades of commercial timber harvests have removed the larger and more fire-resilient tree species (such as ponderosa pine and western larch), favoring species that are less fire-resilient (grand fir). Fire suppression has led to a buildup of ground, surface, and canopy fuels and favored the maturation of less fire-resilient species. Recurrent commercial harvests, fire suppression, and livestock grazing have led to:

- An increase in canopy densities;
- A decrease in canopy base heights (height to live crown);
- A change in species composition from a majority of more fire-resilient to less fire-resilient tree species;
- An increase in ground and surface fuels.

As a result, vegetation and fuel conditions are outside the range of natural conditions. Historically, the drier forest types (PVGs 1, 2, and 5<sup>1</sup>) of the project area consisted of a diverse understory of grasses, forbs, and low shrubs with a large-diameter fire-resilient overstory. This condition was maintained over time by frequent, low-intensity fires. The moister, mixed severity fire regimes of PVGs 3, 4, 6, 7, and 11 occurred in the Douglas-fir, grand fir, subalpine fir, and whitebark pine communities. Table 1-1 identifies the acres of different groups of vegetation in the project area.

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<sup>1</sup> The classification system utilized in the Forest Plan is Potential Vegetation Groups (PVGs). An explanation and definitions of PVG can be found in Appendix A of the Forest Plan and in the draft Wildlife Conservation Strategy (USDA Forest Service 2011).

**Table 1-1. Project Area Potential Vegetation Groups and Associated Historic Fire Regimes**

Historic Fire Regimes	Potential Vegetation Groups*	Acres within Project Area	Percent of Project Area
Non-Lethal	1—Dry Ponderosa Pine/ Xeric Douglas Fir	1,705	2%
	2—Warm, Dry Doug. Fir/ Moist Ponderosa Pine	14,174	18%
	5—Dry Grand Fir	12,765	16%
	Non-forest (Grass/Shrub)	13,223	17%
Mixed Severity I	3—Cool, Moist Douglas Fir	14	0%
	4—Cool, Dry Douglas Fir	0	0%
	6—Cool, Moist Grand Fir	26,224	33%
Mixed Severity II	7—Warm, Dry Subalpine Fir	7,334	9%
	11—High Elevation Subalpine Fir	8	0%
Stand Replacement	8—Warm, Moist Subalpine Fir	686	1%
	9—Hydric Subalpine Fir	785	1%
	10—Persistent lodgepole pine	883	1%
Other (water, rock, or barren)		715	1%
Project Area Total		78,516	100%

\* PVGs were classified into fire regimes according to the draft Wildlife Conservation Strategy.

Note: Non-forest (Grass/Shrub) has been added to the Non-Lethal Fire Regime

Due to fire suppression efforts, the project area has not experienced many significant wildfire events in the last century. Records show that the project area experienced 364 fire starts from 1956 to 2009, an average of seven fire starts per year. These fires were a tenth of an acre or less. The Wesley Fire is the largest wildfire on record in the Lost Creek-Boulder Creek Project area. The Wesley Fire occurred in 2012 and grew to 16,405 acres; of which 5,522 acres are within the project area. The 2004 North Star Butte Fire grew to 1,330 acres, of which 1,030 acres were within the project area. Two other larger fires, the Rock Jack Fire in 1996 (117 acres), and Sale Fire in 1989 (28 acres) also occurred in the project area.

Approximately 86 percent of the vegetated acres in the project area have missed two or more fire return intervals. Many of the Non-lethal and Mixed-Severity I Fire Regimes acres have transitioned to Mixed-Severity II and Stand Replacement Regimes in the project area. This is consistent with the fire regime research on the Payette National Forest by Sanders (1997), and Barrett (1987, 1994, 2000). This shift in fire regimes indicates that a higher percentage of the project area acres would likely burn at higher severities as well as larger patch sizes given a wildfire event. The extent to which an ecosystem has departed from historic conditions influences the extent to which key ecosystem components, critical to the integrity of the ecosystem, are altered. Uncharacteristic fire effects threaten desirable plant communities, ecological processes and the ability to protect life, investments, and other valuable resources.

### 1.5.2 Riparian Conservation Areas

Initial analysis in the project area indicates approximately 12,600 acres of vegetative treatments (*i.e.*, thinning and prescribed burning) in the Riparian Conservation Areas (RCAs) would be needed to maintain or move towards the desired vegetative conditions as specified in Appendix A of the Payette National

Forest Land and Resource Management Plan (USDA Forest Service 2003, hereafter referred to as the Forest Plan). This initial review indicates that approximately 6,100 acres of thinning treatments in RCAs would aid in improving or maintaining the desired vegetative conditions. The remaining 6,500 acres may need prescribed fire applied to maintain the desired conditions. Based on Forest Plan management direction and other resource concerns a detailed approach has been applied to develop an RCA treatment proposal that is consistent with management direction, including Appendix B of the Forest Plan and the Aquatic Conservation Strategy (ACS) (see section 1.6.3 for details on the ACS).

Field reconnaissance and stand exam data has indicated that PVG 2, 5, and 6 are the dominant PVGs in forested areas within the proposed activity units in the project area. RCA widths in forested areas will be based on the PVG 2 and PVG 6 site-potential tree height of 120 feet (Forest Plan page B-36). RCA widths that will be used for this project are displayed in the following table:

**Table 1-2. Types of Water Sources and Associated RCA Widths**

<b>Water Source</b>	<b>RCA Width</b>
<i>Perennial Forested Streams (and intermittent streams providing seasonal rearing and spawning habitat)</i>	240 feet (two site-potential tree heights) from the ordinary high water mark
<i>Intermittent Forested Streams</i>	120 feet (one site-potential tree height) from the ordinary high water mark
<i>Ponds, Lakes, Reservoirs, and Wetlands</i>	120 feet (one site-potential tree height) from the ordinary high water mark
<i>Non Forested Streams (perennial and intermittent)</i>	The extent of the flood prone width, or riparian vegetation, whichever is greater.

The current model identifies 16,250 acres within RCAs in the project area using the RCA delineation criteria above. Based on implementation of other projects, unmapped streams and other water sources are typically discovered during layout and implementation, generally increasing acres of RCAs by an additional 15 to 30 percent.

### **1.5.3 Soil, Water, and Aquatics**

The desired condition within the project area for soil, water, riparian, and aquatic resources is to improve overall watershed functionality and integrity. This would include reducing sediment and other ecological effects from roads, improving stream bank stability and resiliency, improving aquatic organism and fish passage at road-stream crossings, improving long-term soil productivity, and improving riparian vegetation and floodplain function.

The Watershed Condition Framework (WCF) (detailed in section 1.6.4) identifies the desired condition for Watershed Condition Indicators (WCIs) at the subwatershed scale. All of the subwatersheds within the project area are identified as Class 3 - Impaired Function, except for the Lower West Fork of the Weiser which is Class 2 - Functioning at Risk (see Table 1-3).

Many subwatersheds have road densities that are contributing to reductions in long-term soil productivity, road-related sediment contributing to stream channels, negative effects to floodplains and RCAs, and changes to hillslope hydrology due to the intersection of subsurface water by cutslopes. Channel stability,

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peak flows, and stream channel resiliency have likely been affected by past harvest, livestock grazing, and roads.

**Table 1-3. Subwatershed WCI Rating and Restoration Priority**

<b>Subwatershed or drainage (as identified by 2003 Forest Plan)</b>	<b>2003 Payette Forest Plan Restoration Type/Priority</b>	<b>Watershed Condition Framework Rating<sup>1</sup> (as identified by subwatershed)</b>
Upper West Fork Weiser River	Active/Moderate	Impaired (Class 3)
Lower West Fork River	Active/Moderate	Functioning at Risk (Class 2)
Upper Lost Creek	Active/Low	Impaired (Class 3)
Lower Lost Creek	Active/Moderate	
Upper Weiser River (East and West Branches)	Active/Low	Impaired (Class 3)
Boulder Creek	Active/High Identified Priority Watershed	Impaired Identified Priority Watershed (Class 3)

Opportunities for removing fish passage barriers, especially in the Boulder Creek subwatershed, (which is an ACS priority watershed), have been surveyed and important passage barriers have been identified. Sixteen road-stream crossings have been identified in the Boulder Creek subwatershed which is occupied by Endangered Species Act (ESA) listed fishes or is listed as Designated Critical Habitat (DCH). Outside of the Boulder Creek subwatershed, an additional 24 road-stream crossings have been identified as not meeting requirements for fish passage - the Lost Creek, Upper West Fork Weiser River and Upper Weiser River subwatersheds.

**1.6 Management Direction**

**1.6.1 Payette National Forest Land and Resource Management Plan**

The Payette National Forest Land and Resource Management Plan (Forest Plan) allocates emphasis to different areas of the Forest, based on the land’s capabilities. The Forest Plan is divided into 14 Management Areas (MAs). The Lost Creek-Boulder Creek Project lies within three MAs:

- MA-3: Weiser River
- MA-4: Rapid River
- MA-5: Middle Little Salmon River

In addition to MAs, the Forest Plan delineates Management Prescription Categories (MPCs) that further define management emphasis in each of the MAs (which are fully described in the Forest Plan pp. III-78 through III-88). The Lost Creek-Boulder Creek Project area contains the following MPCs:

- **5.1-Restoration and Maintenance Emphasis within Forested Landscapes:** Emphasis is on restoring or maintaining vegetation within desired conditions in order to provide a diversity of habitats, reduced risk from disturbance events, and sustainable resources for human use.
- **5.2-Commodity Production Emphasis within Forested Landscapes:** The draft Wildlife Conservation Strategy (see section 1.6.2 below), proposes all acres of MPC 5.2 to be converted to MPC 5.1 based on the need to conserve habitat for the species of greatest concern. *In order to aid in conserving habitat, this project will use desired conditions for MPC 5.1 in place of desired conditions for MPC 5.2* (USDA Forest Service 2003, p. A-3 to A-9). The majority of management actions proposed with this project fall within MPC 5.1 as recommended by the draft Wildlife Conservation Strategy.
- **6.1-Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes:** Emphasis is on restoring or maintaining vegetation within desired conditions in order to provide a diversity of habitats, reduced risk from disturbance events, and sustainable resources for human use.
- **3.1-Passive Restoration and Maintenance of Aquatic, Terrestrial and Hydrologic Resources:** Emphasis on minimizing temporary-term risks, and avoiding short and long-term risks from management actions to soil/hydrologic conditions and aquatic and terrestrial habitats.
- **2.2-Research Natural Areas:** These areas provide unique opportunities for research and are managed to protect the unique values for which they were established.
- **4.1c-Undeveloped Recreation; Maintain Unroaded Character with Allowance for Restoration Activities:** Emphasis is on providing dispersed recreation opportunities in an unroaded landscape.

Additional management direction can be found on pages III-29 to III-31, III-41 to III-43, and III-38 to III-40 of the Forest Plan. Specific management direction is also described within each resource section of Chapter 3 of this document.

### **1.6.2 Wildlife Conservation Strategy**

On January 13, 2011, the Payette National Forest released a Draft Environmental Impact Statement (DEIS) that proposes to amend the 2003 Forest Plan to include a Wildlife Conservation Strategy (WCS) for the Forested Biological Community (USDA Forest Service 2011). The draft WCS would prioritize the types of activities that should be undertaken to help maintain or restore habitat for wildlife species in greatest need of conservation. The draft WCS also would identify where these actions are most needed.

The draft WCS was developed in the context of the Interior Columbia Basin Ecosystem Management Project (ICBEMP) and complements the Idaho State Comprehensive Wildlife Conservation Strategy (ISCWCS) (IDFG 2005). The ISCWCS and assessments supporting the ICBEMP found that, in comparison to historic conditions, some specific habitats for wildlife species have declined substantially in geographic extent. As a result, conservation of many of the wildlife species dependent on these habitats is a concern. The underlying philosophy of the science and related conservation concepts supporting the ICBEMP and the draft WCS is that restoration of historic vegetative conditions and emulation of their inherent disturbance processes would conserve the vast majority of these species (Haufler et al. 1996; Hunter et al. 1988; Noss 1987; Raphael *et al.* 2000; McComb and Duncan 2007; Wisdom et al. 2000). The

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goal of the draft WCS is to maintain or restore forested habitats that provide for a diversity of terrestrial wildlife species, consistent with overall multiple-use objectives. The short-term emphasis is on restoring habitats associated with species of greatest concern, such as low- to mid-elevation ponderosa pine forests.

### **1.6.3 Aquatic Conservation Strategy**

The Aquatic Conservation Strategy (ACS) is a long-term strategy to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within lands administered by the Forest. The 2003 Forest Plan developed the ACS to provide direction to maintain and restore characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats. Priority subwatersheds across the Forest were identified as having the highest priority for active restoration. Within the project area, the Boulder Creek subwatershed was identified as an ACS priority.

### **1.6.4 Watershed Condition Framework**

In 2011, the Watershed Condition Framework (WCF) defined a classification categorization process that was completed on the Payette National Forest as part of a national effort (Potyondy and Geier 2010). The intent of the National direction is to, first and foremost, protect high-value watersheds already in good condition, maintain the condition of watersheds to keep them from becoming threatened and, then, improve those in an impaired condition. Three watershed condition classes were recognized directly related to the degree or level of watershed functionality or integrity: Class 1 = Functioning Properly; Class 2 = Functioning at Risk; and Class 3 = Impaired Function. A Class 1 watershed has minimal undesirable human impact on natural, physical, or biological processes and is resilient and able to recover to the desired condition when disturbed by large natural disturbances or land management activities (Potyondy and Geier 2010). Conversely, a Class 3 watershed has exceeded some physical, hydrological, or biological threshold. Substantial changes to the factors that caused the degraded state are commonly needed to set them on a trend or trajectory of improving conditions that sustains physical, hydrological, and biological integrity. All of the subwatersheds within the project area are identified as Class 3 - Impaired Function, except for the Lower West Fork of the Weiser which is Class 2 - Functioning at Risk (see Table 1-3).

## **1.7 Purpose and Need**

### **1.7.1 Purpose**

The purpose of the Lost Creek-Boulder Creek Restoration Project is to:

- 1) Move vegetation toward the desired conditions defined in the Forest Plan and consistent with the science in the Forest's draft Wildlife Conservation Strategy (WCS), with an emphasis on:
  - a) Improving habitat for specific wildlife species of concern such as the ESA-listed northern Idaho ground squirrel and species dependent on dry coniferous forests (for example white-headed woodpecker), while maintaining habitat for other sensitive and listed species;
  - b) Maintaining and promoting large tree forest structure, early seral species composition (for example aspen, western larch, ponderosa pine, and Douglas-fir) and forest resiliency;
  - c) Reducing the risk of uncharacteristic and undesirable wildland fire, with an emphasis on restoring and maintaining desirable plant community attributes including fuel levels, fire regimes, and other ecological processes.

- 2) Move all subwatersheds within the project area toward the desired condition for soil, water, riparian, and aquatic resources and improve the Boulder Creek subwatershed from the “Impaired” category to the “Functioning at Risk” category as described in the Watershed Condition Framework, with an emphasis on:
  - a) Restoring habitat connectivity, especially in streams occupied by Endangered Species Act (ESA) - Listed fishes (Chinook salmon, steelhead and bull trout) and in their respective Designated Critical Habitat;
  - b) Reducing road-related accelerated sediment and other road related impacts;
- 3) Manage recreation use in Boulder Creek and in the vicinity of Lost Creek with an emphasis on providing sanitation facilities, identifying and hardening dispersed recreation areas, and developing new trail opportunities.
- 4) Contribute to the economic vitality of the communities adjacent to the Payette National Forest.

### **1.7.2 Need**

The **need** for the project is based on the difference between the existing and desired conditions. These differences include:

- 1) Less large tree size class than desired in drier forest types, and higher canopy cover;
- 2) Less early seral species (*i.e.* ponderosa pine and western larch);
- 3) Less fire resilient species than desired;
- 4) Increase in ground and surface fuels;
- 5) Less than desired watershed function and integrity.

The desired conditions for this project are based upon the Forest Plan (USDA Forest Service 2003) the Watershed Condition Framework (USDA Forest Service 2011) and science in the draft Wildlife Conservation Strategy.

## **1.8 Project Objectives**

Project objectives are elements of the purpose and need that the project is designed to address. The ID team developed quantifiable measurements for each objective.

### **1.8.1 Forested Vegetation**

**Objective 1:** *Move vegetation toward the desired conditions defined in the Forest Plan, with an emphasis on promoting large tree forest structure, early seral species composition and forest resiliency.*

#### **Measurements:**

The following measurements will be evaluated post-treatment.

- Tree Size Class
  - Acres treated to promote or maintain the large tree size class.
  - Percentage of area (acres) in each tree size class.

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- Canopy Cover
  - Percentage of area (acres) in each canopy cover class within the large tree size class.
- Species Composition
  - Acres treated to maintain and promote desired species composition.
- Spatial Patterns
  - Percent departure from reference conditions per Potential Vegetation Group.

### **1.8.2 Fire and Fuels**

**Objective 2:** *Restore and maintain desirable fuel levels, fire regimes, and ecological processes.*

**Measurement:**

- Amount of departure from historic fire regimes.

### **1.8.3 Soil, Water, Riparian, and Aquatic (SWRA) Resources**

**Objective 3:** *Move all subwatersheds within the project area toward the desired condition for SWRA resources and improve the Boulder Creek subwatershed from the “Impaired” category to the “Functioning at Risk” category as described in the Watershed Condition Framework, with an emphasis on:*

1. *Restoring fish habitat connectivity, especially in streams occupied by ES)-listed fishes and in designated critical habitat (DCH).*
2. *Reducing road-related accelerated sediment and other road related impacts*

**Measurements:**

- The number of crossings removed or replaced to specifically improve fish passage.
- Road density/location by subwatershed.
- Stream miles improved-includes miles of fish habitat re-connected and miles of stream enhanced through road decommissioning and other road treatments.
- Number of road/stream crossings improved.

### **1.8.4 Wildlife**

**Objective 4:** *Improve habitat<sup>2</sup> for ESA-listed northern Idaho ground squirrel (NIDGS) and Family I wildlife species, as represented by the white-headed woodpecker, a Region 4 Sensitive Species (USDA Forest Service 2011) and Forest Management Indicator Species (MIS), by restoring forest conditions that contribute to source habitat for these species. Forested stands providing these source habitats should be restored to conditions within the Historical Range of Variability (HRV).*

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<sup>2</sup> NIDGS source habitat is described in Appendix B - Background and Direction for Northern Idaho Ground Squirrel Treatments.

**Measurements:**

- Quantity and quality of Family 1 - white-headed woodpecker habitat restored to conditions within HRV. Quantity is measured by acres of PVGs 2, 5, and portions of PVG 6 in the Large Tree Size Class and Low (but not less than 25 percent) Canopy Closure Class. Quality is measured by the old forest and snags, patch size and distribution as described in Appendix E of the WCS.
- Acres treated adjacent to occupied NIDGS sites to expand suitable habitat in the most key areas

### **1.8.5 Recreation**

**Objective 5:** *Manage recreation use in Boulder Creek and Lost Creek with an emphasis on providing sanitation facilities, identifying and hardening dispersed recreation areas, and developing new trail opportunities.*

**Measurements:**

- Miles of open motorized trail by vehicle class (per MVUM) for motorized trails, and miles of open and managed non-motorized trails. Miles of open road.
- Change to dispersed recreation sites measured by number of sites provided and recreation facilities provided in the sites.

### **1.8.6 Economics**

**Objective 6:** *Contribute to the economic vitality of local communities.*

**Measurements:**

- Employment contribution (number of jobs on annual average)
- Income contribution

## **1.9 Decisions to Be Made**

The Responsible Official for this project is the Payette National Forest Supervisor. Based on the analysis presented in this document, the Forest Supervisor will make the following decisions and document them in a Record of Decision (ROD) accompanying or following the Final Environmental Impact Statement (FEIS).

Should the Forest Service implement this project, including commercial and non-commercial vegetation treatments, fuels reduction, road management, watershed and fish habitat restoration, and recreation improvements at this time?

If so:

- What and how many acres should be treated and by what means?
- Which and how many recreation facilities, trails, and dispersed recreation sites should be approved, and by what means?

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- Which, if any, trails, dispersed recreation facilities, and/or sites should be closed and rehabilitated?
- What road management, watershed restoration, and fish habitat improvements should be implemented?
- What project design features or mitigation measures are necessary to assure compliance with the Forest Plan?
- What monitoring requirements are appropriate to evaluate project implementation and effectiveness?

### **1.10 Collaborative Efforts, Scoping, and Public Involvement**

This project is based in part on recommendations provided by the Payette Forest Coalition (PFC) to the Forest Supervisor on January 25, 2013. The PFC is a collaborative group formed under the Omnibus Public Land Management Act of 2009 (PL 111-11) and whose recommendations are structured to meet the intent of the Collaborative Forest Landscape Restoration Act (CFLRA). The purpose of the Collaborative Forest Landscape Program is to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes. The PFC members represent stakeholders from a broad range of interests, including the environmental community, timber industry, recreational groups, and state and county government.

Initial scoping for this project occurred on February 22, 2013. Letters requesting comments were sent to approximately 312 local, state, and federal agencies, individuals and organizations. The complete mailing list is in the project record. Legal notices were published in the Idaho Statesman (the legal paper of record) on February 27, 2013, the Adams County Record on February 27, 2013, and the McCall Star-News on March 7, 2013. A Notice of Intent (NOI) was published in the Federal Register on February 25, 2013. In addition the New Meadows Ranger District hosted a public meeting to gather input on the project on March 20, 2013. This Project was first listed on the Payette National Forest's Schedule of Proposed Actions (SOPA) in July, 2012, and scoping letters, project description and other project information were posted on the Payette National Forest public website at <http://www.fs.usda.gov/land/payette/landmanagement>. Twenty-two responses were received during scoping. The comments were reviewed and the Forest Service's responses are summarized project record.

### **1.11 Tribal Consultation**

Tribal governments have a special and unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties, statutes, court decisions, executive orders, and memoranda. This relationship imparts a duty on all federal agencies to consult, coordinate, and communicate with American Indian Tribes on a government-to-government basis. Because Indian Tribes can be affected by the policies and actions of the Forest Service in managing the lands and resources under its jurisdiction, the Forest Service has a duty to consult with them on matters affecting their interests. Because of this government-to-government relationship, efforts were made to involve local tribal governments and to solicit their input regarding the proposed action.

The Forest Service introduced this project to the Shoshone-Paiute leaders during Wings and Roots Program meeting (government to government consultation) on April 12, 2012. Updates were provided to the

Shoshone-Paiute leaders during Wings and Roots Program meetings on December 13, 2012, February 14, 2013, April 11, 2013, June 14, 2013, and August 14, 2013.

The Forest Service presented the proposed action to the Nez Perce Staff on March 6, 2013. Updates were provided to the Nez Perce Staff on June 5, 2013 and September 4, 2013.

The proposed action was presented to the Shoshone-Bannock Tribe on September 11, 2013.

## **1.12 Issues and Indicators**

Issues are used to develop alternatives and/or appropriate mitigation measures or project design features to address the effects of proposed activities. Indicators were developed for each issue, and are used to compare the effects of proposed activities by alternative.

### **1.12.1. Forested Vegetation**

**Issue 1:** *The intensity of the vegetation treatments will affect how well the desired conditions for vegetation and wildlife are achieved.*

**Background:** The condition of forested vegetation has changed since European settlement, as described in section 1.5.1, above. Comments received during scoping identified concern over the intensity of vegetative treatments and the effects this would have on meeting the purpose and need of the project. Concerns regarding the attainment of canopy cover and species compositions objectives as well as concerns regarding the attainment of wildlife habitat were raised. Therefore, additional alternatives that propose different intensities and amounts of treatments were developed based on these concerns. Although the indicators for this issue are identical to the measurements identified for forested vegetation in section 1.8.1, above, the ID team felt it was important to acknowledge concerns raised and explain the rationale for the development of Alternatives C and D, which are described in Chapter 2 of this document. Issues regarding the intensity of vegetation treatments on wildlife are discussed in section 1.12.4, below.

**Indicators:** The following indicators will be evaluated after treatment.

- Tree Size Class
  - Acres treated to promote or maintain the large tree size class.
  - Percentage of area (acres) in each tree size class.
- Canopy Cover
  - Percentage of area (acres) in each canopy cover class within the large tree size class.
- Species Composition
  - Acres treated to maintain and promote desired species composition.
- Spatial Patterns
  - Percent departure from reference conditions per Potential Vegetation Group.

### **1.12.2 Watershed Resources and Fish Habitat**

**Issue 2:** *Watershed conditions and sediment rates may be altered due to the proposed activities for roads, vegetative treatments, and prescribed fire within the analysis area.*

**Background:** Roads can have a major effect on watershed integrity due to increased sediment delivery to streams, decreased drainage efficiency, and interruption of subsurface flow (King 1989). Roads located adjacent to stream channels have the most opportunity to deliver sediment directly into stream channels and also to intercept subsurface flow if a cut slope is constructed.

The BOISED sediment yield model calculates predicted sediment delivered to streams based on past harvest, roads, and fire events and is used to compare alternatives. The measure "percent over natural" is the predicted amount of sediment from management activities above the natural level that would be expected without such activities.

**Indicators** by subwatershed:

- Maximum percent over natural sediment yield (Boulder Creek only BOISED Model output)
- Cumulative net difference in sediment yield over 10 years (Boulder Creek only BOISED Model output)
- Total miles of system road decommissioning that achieve long-term soil productivity and hydrologic function (obliteration)
- Total miles of unauthorized route treatments that achieve long-term soil productivity and hydrologic function (obliteration)
- Miles of system road decommissioning that achieve long-term soil productivity and hydrologic function (obliteration) within RCAs

**Issue 3:** *The number of roads selected for the Minimum Road System (MRS) and their maintenance level and location could affect sediment rates and long term watershed functionality.*

**Background:** In 2005, the Travel Rule (36 CFR 212) was changed to and included a requirement for Forests to identify the MRS and to identify roads that are no longer needed and should be considered for decommissioning or other uses, such as conversion to trails (36 CFR 212.5(b)). The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, and ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.” This project level NEPA analysis is the final step required to identify the Minimum Road System within the project area.

**Indicators:**

- Total road miles (system and unauthorized routes) by subwatershed and maintenance level
- Total road density (system and unauthorized routes) by subwatershed
- Long-term annual percent over natural sediment yield (Boulder Creek only BOISED Model output)

**Issue 4:** *Proposed activities may change timing and duration of peak runoff and increase bank instability in sensitive stream channels.*

**Background:** Equivalent Clearcut Area (ECA) is a general index of the disturbance in a watershed from harvest activities over time. It broadly describes the vegetation condition in forested watersheds and correlates it to potential increases in water yield and changes in the timing of peak flows. Channel Risk is determined by evaluating the ECA together with the field inventoried channel stability and the sensitivity to disturbance assigned by Rosgen Stream Type (Rosgen 1996). Streams with finer substrate such as cobble or finer particles have more vulnerability to bank instability. These variables combine to determine a Channel Risk Rating for each drainage within the analysis area.

**Indicators:**

- Number of drainages where there is an increase in the Channel Condition Risk
- Number of drainages that are over 25 percent ECA (High Category)

**Issue 5:** *Treatments that propose thinning of vegetation in RCAs may negatively affect sediment delivery, stream temperatures and large woody debris (LWD).*

**Background:** The Payette Forest Plan states that “trees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions” (pg. III-22); and that “activities within RCAs that disturb or compact soils, destroy organic litter, remove large down wood, or otherwise reduce the effectiveness of RCAs as sediment filters should be avoided (pg. B-39). The analysis will describe the activities proposed in RCAs with respect to these Forest Plan requirements to determine effects by alternative.

Ground disturbing activities have the potential to increase sediment in streams, which can have many deleterious effects to salmonids and their habitats (particularly fine particles <6mm). Sediment can reduce the quality of fish habitat by filling in pools and interstices in the substrate that provide cover and refugia from streamflow. As a higher amount of fines occurs in the substrate, salmonid populations can be negatively affected (Reiser and Bjornn 1979).

Stream temperatures are the result of physical factors including insolation, air temperature, relative humidity, groundwater input, substrate composition, discharge rate and reach length (Cross 2002, Betscha et al. (1987). Chamberlin et al. (1991) and Johnson (2004) cite direct solar radiation as the primary factor affecting summer stream temperatures. Proposed project activities that could include the removal of streamside and overhanging vegetation, including the forest canopy, can increase insolation during summer months, resulting in elevated water temperatures. Conversely, the removal of insulating vegetation can result in colder winter temperatures in the winter. A TMDL (Total Maximum Daily Load) for temperature was approved by the EPA in 2007 for the West Fork of the Weiser River. Although shade is generally adequate for the on-forest portion of this waterbody, retaining existing shade for perennial streams in this watershed is a high priority to achieve the water quality goals.

Proposed project activities in RCAs can affect LWD which is an important biological and physical component in forested stream ecosystems (McDade et al. 1989). Large woody debris is an important source of cover and habitat for fish in streams and influences stream channel formation, pool formation,

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and sediment transport and deposition (Sullivan et al. 1987, MacDonald et al. 1991). Pool frequency and formation is highly correlated to LWD (Quigley and Arbelbide 1997).

### **Indicators:**

- Acres of RCA vegetation treatments
- Acres of treatment within one site potential tree height

### **1.12.3 Soil Productivity**

**Issue 6:** *Proposed activities may decrease long-term soil productivity and impair soil-hydrologic function.*

**Background:** Proposed project and associated activities (such as road construction) can commit areas to non-productive uses for long periods of time. Soil productivity that is reduced for the long-term is defined as total soil resource commitment (TSRC). Forest Plan standard SWST03 (Forest Plan p. III-21) directs that in an activity area where existing conditions of TSRC exceed 5 percent, resource management (project) activities shall include project design features and restoration so that TSRC levels are moved back toward 5 percent or less following completion of the activities. In areas where existing conditions of TSRC are below 5 percent, TSRC must remain below 5 percent following the completion of project activities.

Movement of heavy equipment, site preparation, prescribed burning, and slash disposal activities may alter soil properties by compacting, displacing, puddling, or severely burning soils, potentially reducing their productivity. These conditions are not as severe or as long lasting as TSRC effects and are referred to as detrimental disturbance (DD). The Forest Plan standard SWST02 (Forest Plan p. III-21) directs that in an activity area where existing conditions of detrimental disturbance are above 15 percent, management activities shall maintain the area in a condition of 15 percent or less following completion. In areas where existing conditions of DD are already below 15 percent, DD must remain below 15 percent following the completion of project activities.

### **Indicators:**

- Amount of Detrimental Disturbance (DD) within activity areas meets Forest Plan requirement
- Amount of Total Soil Resource Commitment (TSRC) within the project area meets Forest Plan requirement

### **1.12.4 Wildlife**

**Issue 7:** *Restoration treatments, while a benefit to white-headed woodpeckers, may adversely affect source habitat for other wildlife species, such as pileated woodpecker, northern goshawk, elk, and lynx, which are dependent on denser mixed-conifer forests with multi-layer structural characteristics.*

### **Indicator:**

- Quantity (acres) and quality (old forest and snags, patch and pattern) of habitat for wildlife species that require moderate to dense, mixed-conifer forests (pileated woodpecker (MIS) flammulated owl, elk, and lynx)

- Quantity (acres) and quality of low density ponderosa pine that serve as habitat for Family 1 wildlife species such as the white-headed woodpecker (MIS)

**Issue 8:** *Road densities affect wildlife (i.e., elk) security and can lead to the removal of important habitat components (snags) for cavity dependent wildlife.*

**Indicator:**

- Change in security areas (Hillis *et al.* 1991) and miles of NFS roads and unauthorized roads decommissioned by either physical closure, or by obliteration, and estimated effectiveness of decommissioning and resulting effects to elk and snags and wildlife species of concern.

**Issue 9:** *Project activities (logging, log haul, prescribed burning, and temporary road construction) may affect other wildlife species of concern, such as northern Idaho ground squirrel (NIDGS) and Canada lynx.*

**Indicators:**

- Quantity (acres) and quality of existing NIDGS habitat and acres treated to improve forage and population expansion.
- Quantity and quality of existing Canada lynx habitat.

**Background:** Changes in forested conditions, fire regimes, and the presence of roads have altered wildlife habitats. Some modifications to habitat have led to the federal listing of terrestrial wildlife species such as NIDGS. Project vegetation management may affect wildlife habitat through modification of vegetation characteristics or habitat composition. Prescribed burning and reduced ground cover could reduce habitat quality for some species and increase wildlife vulnerability.

A primary need Forest-wide and in the project area is to maintain and promote dry, lower elevation, large tree and old forest habitats for the associated wildlife species and reduce road densities and fragmentation that negatively affect elk and other Forest species of concern. The processes, function, patch size and diversity of forested habitats must all be considered in order to properly address wildlife habitat needs.

### **1.12.5 Transportation**

**Issue 10:** *Proposed activities to the road system (i.e. road closures and decommissioning) may reduce the amount of access to the areas identified in the Forest Plan for active management. Road access is needed for economical active management activities, including timber and biomass harvest, thinning, and fuels treatments.*

**Background:** Roads are needed to transport goods and services to and from the Forest. Economical harvest of sawlogs and biomass requires roads within a reasonable distance for ground based and skyline logging. Helicopter logging requires much less road but is usually uneconomical especially for thinning and biomass removal. Open roads are needed for access for thinning, fuels treatments, firewood gathering, controlled burning, and fire suppression. Generally the closer these activities are to drivable road the less they cost.

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### **Indicators:**

- Acreage within suited timber base within ¼ mile from an existing system road.
- Acreage within suited timber base within ¼ mile from a drivable existing system road.

### **1.12.6 Recreation**

**Issue 11:** *Project may change the existing recreational road and trail access in the Lost Creek/Boulder Creek watersheds.*

#### **Indicator:**

- Miles of open motorized trail by vehicle class (per MVUM) for motorized trails, and miles of open and managed non-motorized trails. Miles of open road.

**Issue 12:** *Project activities may change the existing recreational dispersed camping opportunities in the Lost Creek and Boulder Creek subwatersheds.*

#### **Indicator:**

- Change to dispersed recreation sites measured by number of sites provided and recreation facilities provided in the sites.

**Background:** The proposed project and associated activities (such as road decommissioning, prescribed fire, mechanized harvesting, dispersed recreation site closure and/or development) may affect the miles of road and trail available for use by the recreating public, and can affect access to the dispersed camping opportunities available to the public. There is a primary need in the project area to improve both motorized and non-motorized trail opportunities.

The existing dispersed camping use surrounding the Lost Valley Reservoir has grown and has become a resource concern because of steep, unauthorized routes pioneered in to access the dispersed sites; unmanaged growth of the sites; and the unhealthy sanitation conditions that have developed in the area because of the lack of restroom facilities. A primary dispersed recreation need in the project area is to improve the existing poor sanitation conditions surrounding the Lost Valley Reservoir due to the lack of restroom facilities, to improve road access into the dispersed camping sites.

### **1.12.7 Economics**

**Issue 13:** *Costs associated with restoration activities under the proposed action are anticipated to exceed potential revenue generated over the life of the project. Although the proposed action would improve ecological health and function within the project area, the project may be perceived as economically inefficient from an accounting standpoint.*

**Background:** While the cost of forest restoration projects can easily be measured in monetary terms through the expenditures on treatment and other restoration activities, many of the benefits of forest restoration projects are not captured in traditional market transactions. To gain a more accurate

understanding of the benefits and costs of proposed actions, treatment costs must be analyzed alongside potential revenues and benefits realized from improved ecological conditions and reduced fire risk.

**Indicators:**

- Present value of treatment costs
- Benefits from reduced fire risk
- Non-market benefits of improved ecological conditions

## **1.13 Other Concerns Evaluated**

The ID team evaluated other concerns that helped frame the scope of the analysis during the scoping process. These concerns were not considered issues because they could be resolved through project design, and therefore were not used to develop the alternatives analyzed in detail. These concerns are not addressed within the effects analysis by resource in Chapter 3 of this document because there were no effects to resources.

### **1.13.1 Cultural Resources**

Since 1972, there have been over 50 federal actions providing Payette National Forest Heritage Program staff with the opportunity to conduct cultural resource site inventories on a variety of projects throughout the project area (see Appendix C, Cumulative Effects for a list of past projects). During the course of this work, heritage staff have identified and evaluated 36 archaeological sites using criteria established by the National Register of Historic Places. Nineteen of the previously identified Historic Properties met National Register of Historic Places criteria for eligibility.

During the summers of 2012 and 2013, approximately 230 acres of new survey in high probability areas as determined by the Forest's predictive model were conducted. Locations where proposed vault toilets are to be placed, and in areas where the road system would be altered were surveyed for archaeological sites. In addition, heritage staff monitored the 19 eligible historic properties potentially affected by the project, and updated fifteen site forms for Idaho SHPO submission; two previously eligible properties were determined to be ineligible.

In compliance with the requirements of the National Historic Preservation Act, section 106, the Forest will consult with the Idaho State Historic Preservation Office (SHPO), Heritage File PY2012-2605, with the following stipulations:

- All historic properties that are eligible to the National Register of Historic Places will be avoided from impacts during project implementation.
- Log and biomass landings would be determined in the field. If existing surveys are determined to be inadequate, a follow up consultation with Idaho SHPO would be required before these areas will be constructed.
- Fire line construction for Prescribed Fire treatment will have a cultural resource site survey to determine potential effects to historic properties. If existing surveys are determined to be inadequate, a secondary Idaho SHPO consultation would be required.

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- Roads added to the Forest Service System, decommissioned, or newly constructed temporary roads would have a cultural resource review to determine potential effects to historic properties. If existing surveys are determined to be inadequate, a secondary Idaho SHPO consultation would be required.
- Proposed recreation actions would be required to be reviewed by heritage staff. If existing surveys are determined to be inadequate, a secondary Idaho SHPO consultation would be required prior to implementation.
- Site specific fish barrier restoration and road rehabilitation work will be required to be reviewed by heritage staff. If existing surveys are determined to be inadequate, a follow up consultation with Idaho SHPO will be required before these areas will be constructed.

The Forest will request a "No Adverse Effect" determination from Idaho SHPO.

Additional secondary consultations with the Idaho SHPO would occur as needed. As the project is implemented, the 19 eligible historic properties will be monitored and flagged for avoidance. Project staff will be informed as to the locations of the historic properties so as to avoid potential impacts to them.

### **1.13.2 Threatened, Endangered, and Sensitive Plants**

No populations of any threatened, endangered or proposed federally listed plants occur within the project area; however habitat and populations for five rare plants do occur within the project area. The Forest Sensitive and Federal candidate species, whitebark pine, (*Pinus albicaulis*), the Forest sensitive plants Tolmie's onion (*Allium tolmiei* var. *persimile*), Bankmonkey flower (*Mimulus clivicola*), and Puzzling halimolobus (*Halimolobos perplexa* var. *perplexa*) and the Forest watch species, Sierra sanicle (*Sanicula graveolens*) were found during botanical surveys of the project area from 2011-2013. A Biological Evaluation (BE) covering Listed, Proposed, Candidate, Sensitive, Proposed Sensitive, and Forest Watch Species for the project is found in the Project Record and is hereby incorporated by reference. Key findings based on past botanical surveys and communications with US Fish and Wildlife Service follow:

- No Listed or Proposed Listed plant species or habitat is known to occur on the Payette National Forest. There would be "no effect" (NE) to habitat for any FWS Listed or Proposed Listed plant species. There would be no cumulative effects to any populations or potential habitat for any Listed or Proposed Listed species due to this project.
- This project *may impact individuals or habitat of whitebark pine, Tolmie's onion, Bankmonkey flower, Puzzling halimolobus, and Sierra Sanicula but would not likely contribute to a trend towards Federal Listing or cause a loss of viability to the population or species.* No impacts to populations or potential habitat for any other Candidate, Sensitive or Proposed Sensitive plant species would occur.

### **1.13.3 Noxious Weeds**

Noxious weeds are defined as State-designated plants that cause negative ecological and economic impacts to both agricultural and other lands within the State (Forest Plan p. GL-26). Forest Service policy defines noxious weeds as those plant species designated as noxious weeds by the Secretary of Agriculture or by the responsible State official.

Noxious weeds generally possess one or more of the following characteristics: they are aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier host of serious insects or disease, and they are non-native or new to, or not common to, the United States or parts thereof (Forest Service Manual 2080). This definition encompasses invasive, aggressive, or harmful non-indigenous or exotic plant species (USDA Forest Service 1998). This analysis hereafter uses the term “noxious weeds” to include all variations included in the policy definition.

Noxious weeds within the project area have been managed with an Integrated Pest Management (IPM) approach, using mechanical, biological, and chemical methods. Current infestations include rush skeletonweed (*Chondrilla juncea*), Canada thistle (*Cirsium arvense*), perennial pepperweed (*Lepidium latifolium*), oxeye daisy (*Leucanthemum vulgare*), spotted knapweed (*Centaurea stoebe*), yellow toadflax (*Linaria vulgaris*), and St. Johnswort (*Hypericum perforatum*).

Broadcast burning and pile burning may increase the rate of spread of noxious weeds. Road decommissioning may also limit access to treat noxious weed infestations within the project area. The Fire and Range Resource personnel would need to work together when burning around noxious weeds to determine what effect a light burn would have on the noxious weed spread. A concern when using prescribed fire around noxious weed sites is bare ground caused by burning. If bare ground exists the noxious weeds may out-compete the native vegetation in those areas.

Forest management activities can increase the potential for establishment and spread of noxious weed species. Seeds can be brought in on equipment and then fall off while working. Ground-disturbing activities such as road reconstruction and decommissioning can create conditions for the introduction, germination, and establishment of weed seeds. Activities that disturb soil and remove competitive, desirable vegetation create an ideal seedbed for weeds. Source sites of crushed rock or gravel can become infested with noxious weeds. Forest Plan standard NPST07 requires that source sites for gravel and borrow materials shall be inspected for noxious weeds prior to processing, use or transport. Seeds produced by infestations on the stockpile can be transported with the aggregate when it is hauled and placed on roads. Seed and straw for rehabilitation and reclamation work can transport weed seeds as well.

Continued noxious weed surveys and treatment work are required to reduce the risk of growing and new noxious weed infestations. Noxious weed treatments are addressed by management requirements and project design features derived from Forest Plan standards and guidelines (Forest Plan p. III-36 and III-37).

### **1.13.4 Rangeland Resources**

#### ***Road Obliteration Impacts to Livestock Permittees***

Livestock permittees use some project area roads for a variety of livestock management practices, including transporting salt and supplements to salting grounds, moving and distributing livestock throughout the allotment, and accessing range improvement projects for maintenance. Several of these roads have partially revegetated over time and only provide a trail for moving livestock by foot or horseback. Many of the roads are either Forest Service (FS) System roads closed to the public or, in some cases, unauthorized roads. Some roads are still navigated by all-terrain vehicles (ATVs), and permittees are given access for administrative purposes only on a case-by-case basis. Some of the roads used by the permittees for these activities are proposed for decommissioning (obliteration) and could impact livestock operations. All road decommissioning will provide for range access if needed. Range improvements would be identified and protected during project implementation (see Table 2-6 Project Design Features).

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These concerns will be addressed through permit administration and on-going coordination with permittees. Section 2.10 contains project design features that address this concern.

### ***Prescribed Fire Impacts to Livestock Permittees***

Permittees have expressed concerns that the proposed landscape burns would negatively affect their grazing practices and require fencing or resting pastures. The proposed prescribed burning projects would be conducted over a multi-year period and be spread out over many units, varying in size and location. Prescribed burning typically occurs in the spring or late fall when temperatures, fuel moisture, and humidity are conducive to slow, cooler burns. Prescribed burns are not like wildfires, which usually burn under extreme summer conditions and can lead to highly altered landscapes that require as much as two growing seasons of rest from grazing. Depending on the time of year prescribed burning occurs, seasonal rest may be required, but under normal circumstances, prescribed fires would not require fencing and/or two growing seasons of rest from grazing. The proposed prescribed fires would stimulate growth of existing and new plants, which would eventually lead to increased livestock forage quality and quantity.

Grazing management would continue as currently permitted under the Term Grazing Permits, Allotment Management Plan (AMP), and Annual Operating Instructions (AOIs). Through continued coordination between Forest Service employees and permittees, the following measures would be taken before prescribed burning:

- The timing and location of prescribed burns would be coordinated between the permittees, Range Specialist, and Fuels Specialist with respect to annual grazing rotations on the allotment (see also Table 2-6, section 2.10).
- Range improvement projects would be inventoried and protected from prescribed fires (see Table 2-6, section 2.10). Any damage to fence lines, water tanks, or other range improvements by prescribed fire activities would be repaired.

### **1.13.5 Air Quality**

Prescribed burning would be subject to approval from the Montana/Idaho State Airshed Group. This regional airshed group restricts burning to conditions when smoke dispersal is optimal and in compliance with national and state air quality regulations. The Hells Canyon Class I Airshed is located approximately six miles west of the project area. Due to the dominant transport wind direction and smoke monitoring efforts, smoke is not expected to adversely affect this airshed. No non-attainment areas occur within 14 miles of the proposed burn areas. Residents of potentially affected areas would be notified prior to burning. Smoke conditions are evaluated before, during, and after burning to minimize air quality impacts to the public. Additionally, under the proposed action managers would seek opportunities to divert fuels for biomass utilization. This would further reduce total emissions, as available biomass capable of producing emissions would decline.

### **1.13.6 Scenic Environment and the Recreation Opportunity Spectrum (ROS)**

The proposed action has the potential to create changes in the scenic environment that may not meet public expectations or the visual objectives for the visually sensitive viewshed in the project area.

However, this project has been designed to maintain a natural-appearing setting for visitors traveling through or near the Forest. Forest Plan Visual Quality Objectives and visual concerns were addressed

when designing alternatives and project design features. The Recreation and Visual Quality Specialist Report (project record) provides additional detail regarding this issue.

The ROS will not change with the implementation of any alternative.

### **1.13.7 Climate Change**

Recent rapid climate change has raised concern over the ability of some species to adapt to landscape changes associated with this phenomenon. Diaz and Eischeid (2007) found an average increase of approximately 1.0 degree Fahrenheit (°F) over the last 20 years in the western United States with the greatest increases at high elevations. Diaz and Eischeid (2007) contend that changes in annual shrub phenology (earlier flowering), increases in significant forest pest infestations, earlier spring runoff, intensified wildfires, and the disappearance of alpine and tundra ecosystems illustrate rapid changes in the hydrological, phenological, and biological indicators of western ecosystems that are a result of climate warming. Research findings (Gedaloff et al. 2005, Westerling et al. 2006) document increases in large western wildfires beginning in the mid-1980s and correlated climate variables, including increased spring and summer temperatures and early spring snow melt.

Climate data for the last 55 years (1951-2006) reveal that on average, temperatures in Idaho have increased 0.031 percent per year (Figure 1-2), and precipitation has increased 0.085 percent per year (Figure 1-3) (The Nature Conservancy 2011). Consistent with findings by Diaz and Eischeid (2007), the temperature increases have been more severe at higher elevations.

Restoration ecologists acknowledge that future climatic regimes may be different than the climatic regimes that developed historical representations of landscapes. However, Fule et al. (2009) argue that historical reference conditions remain useful in light of climate change evidence because historical forests were likely more resilient and resistant to drought, insect pathogens, and severe wildfire. Noss (2001) supports this approach and advocates that resilience and resistance are created by (1) maintaining a diversity of functional groups; (2) maintaining species richness and redundancy within functional groups; (3) identifying keystone species; and (4) maintaining keystone species at optimal, not just minimally viable, populations. This approach provides the best opportunity for species to adapt to changes. Noss (2001) also states that climate change is not the greatest threat to today's forests but is an additional stressor and suggests that restoring vegetative conditions will result in more adaptable forests.

The Lost Creek Boulder-Creek Project is designed to enhance resiliency to climate-related stressors such as drought, wildfire, insects, and disease. Moving vegetation toward desired conditions as described in Forest Plan, Appendix A (USDA Forest Service 2003) would decrease vulnerability of the vegetation and wildlife to climate change impacts and increase the adaptive capacity of the ecosystem elements.

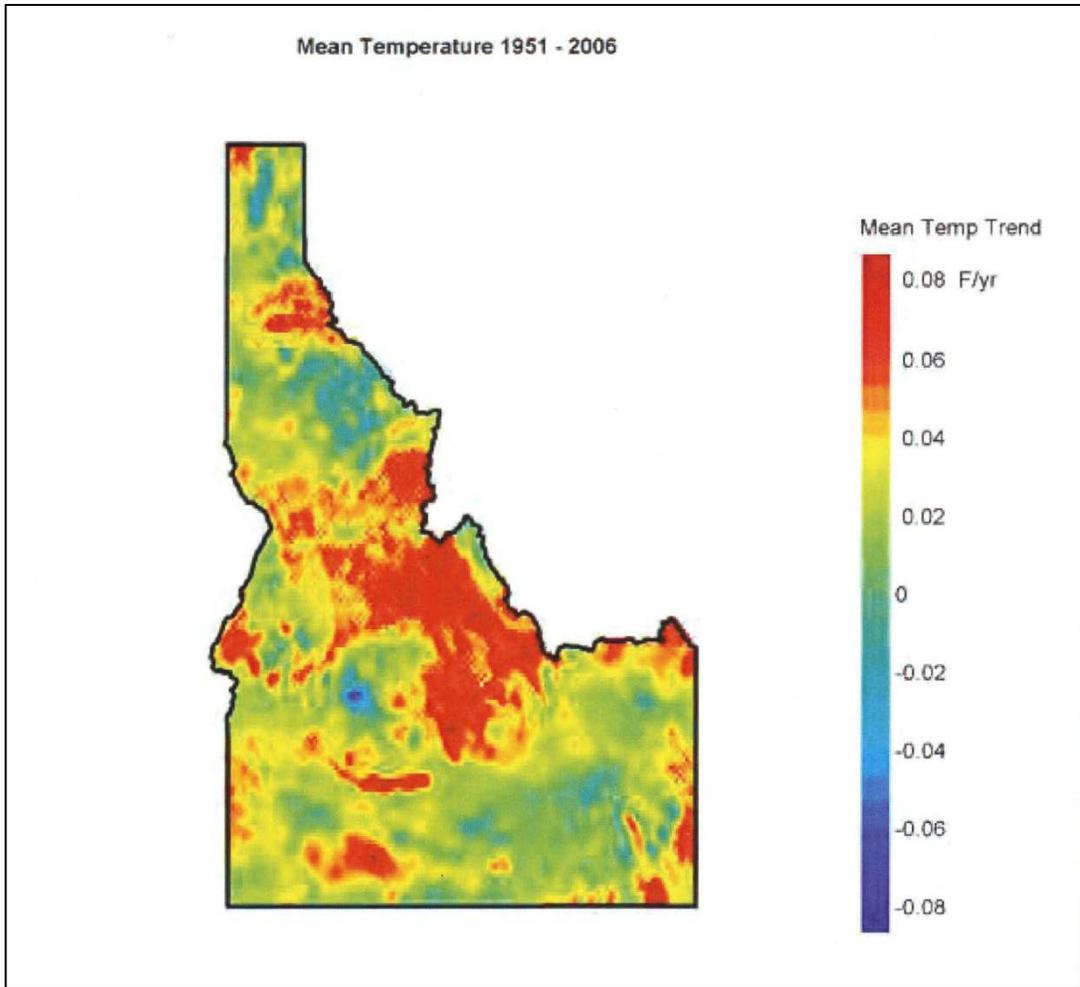


Figure 1-2. Average Temperature Changes for Idaho from 1951-2006

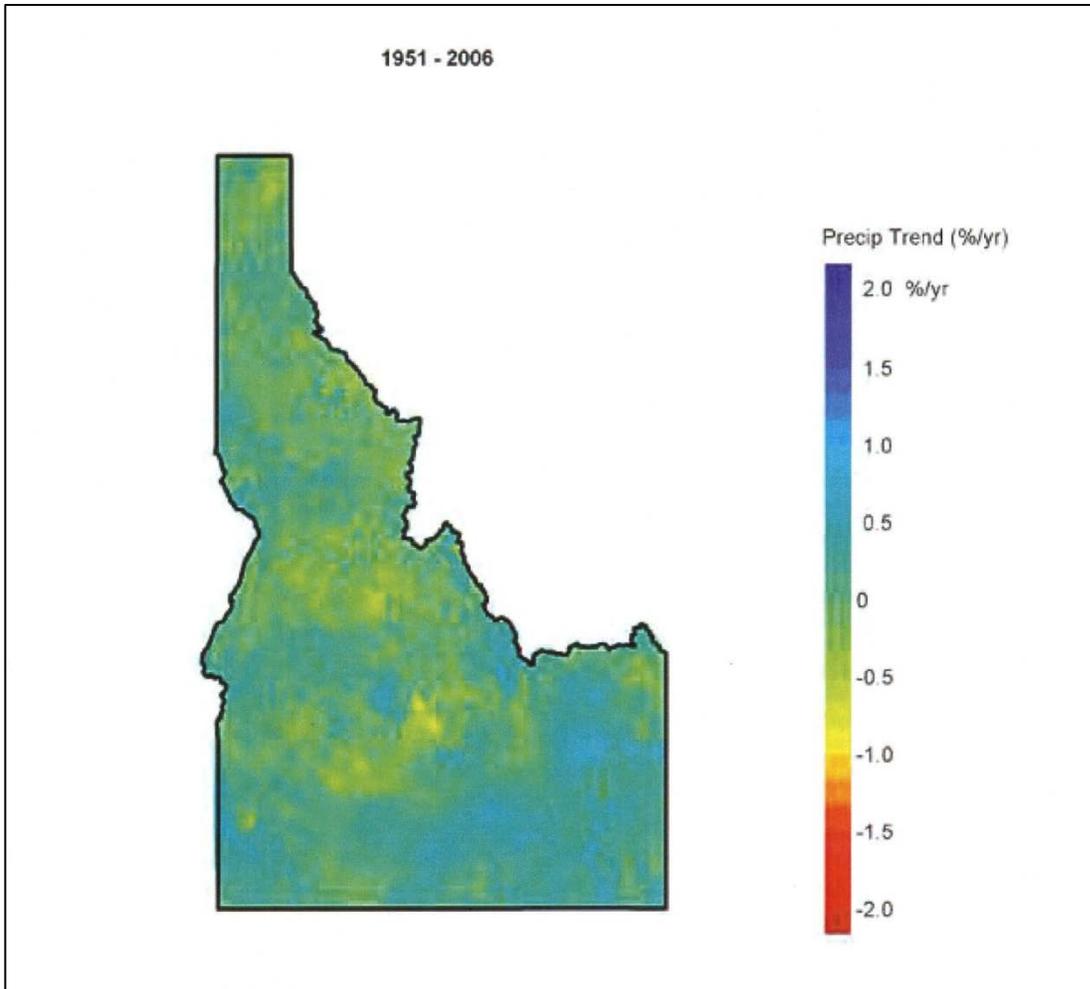


Figure 1-3. Average Precipitation Changes For Idaho from 1951-2006

## 1.14 Permits and Licenses

All proposed project activities would occur on National Forest System lands. Existing permitted uses of National Forest System lands would be protected during project implementation to the extent possible. The timber harvest portion of the project can be implemented through Forest Service timber sale contracts with project-specific provisions. Any work involving activities within a stream channel with live water, such as culvert installation as part of road improvements, would require a stream alteration permit (404 Permit) from the Idaho Department of Water Resources.

## 1.15 Legal and Regulatory Requirements

Legal and regulatory requirements associated with this project are located in Appendix F of this document.

## **1.16 Project Record and Specialist Reports**

This DEIS incorporates by reference the project record (40 CFR 1502.21). The project record contains draft specialist reports and other draft technical documentation used to support the analyses and conclusions in this DEIS.

Incorporating by reference the specialist reports and the project record responds to the CEQ regulations implementing NEPA directing that agencies should reduce NEPA paperwork (40 CFR 1500.4), and that NEPA documents should be analytic rather than encyclopedic, kept concise, and no longer than absolutely necessary (40 CFR 1502.2). The objective is to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental impacts of the alternatives and how these impacts can be mitigated, without repeating detailed analysis and background information available elsewhere.