

**MOUNT SPOKANE STATE PARK
AND
MOUNT SPOKANE SKI AND SNOWBOARD PARK**

**COMBINED FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
CLASSIFICATION OF LAND AND SKI AREA EXPANSION**



NOVEMBER 2014
WASHINGTON STATE PARKS AND RECREATION COMMISSION

**SECTION I.
INTRODUCTION TO THE COMBINED
FINAL ENVIRONMENTAL IMPACT STATEMENT**

SECTION I – TABLE OF CONTENTS

1. INTRODUCTION.....I-1

2. BACKGROUNDI-3

3. SEPA PROCESSI-4

4. PUBLIC SCOPING PROCESSI-5

5. SCOPE OF THE LAND CLASSIFICATION FEIS AND THE SKI AREA EXPANSION FEISI-6

1. INTRODUCTION

Mount Spokane State Park is an approximately 13,000-acre park located approximately 22 miles northeast of Spokane in Spokane County, Washington (see Section III, Figure EIS-1).¹ The area was the first state park east of the Cascades, and the Civilian Conservation Corps accomplished the initial development. The park provides a wide range of year-round recreation opportunities to a diverse community of user groups. Existing recreational facilities include 85 picnic sites, 3 picnic shelters, a group camping area for 90 people, 8 standard camp sites, parking for approximately 1,588 vehicles, 2 horse feeding stations, 2 comfort stations, 16 vault toilets, 100 miles of hiking/equestrian trails, 90 miles of bike trails, 31 miles of Nordic ski trails, 50 miles of roads, extensive opportunities for snowmobiling and snowshoeing, 3 cabins and the historic Vista House. An existing concessionaire, *Mount Spokane 2000* (MS 2000), operates the *Mount Spokane Ski and Snowboard Park* within a 1,425-acre portion of the park. The predominant land use of adjoining property outside of the park is commercial forestry.

This Combined Final Environmental Impact Statement (FEIS) analyzes both a nonproject and project action proposal including:

- A Washington State Parks and Recreation Commission (Commission) nonproject proposal to classify approximately 800 acres of land commonly referred to as the Potential Alpine Ski Expansion Area (PASEA), to potentially reclassify approximately 20 acres of land from Resource Recreation to Recreation and to potentially reclassify approximately 1 acre of land adjacent to the Vista House currently classified as Heritage to Recreation for purposes of accommodating proposed recreational facilities.²
- A project proposal (e.g., tree clearing, facility construction) by Mount Spokane Ski and Snowboard Park to extend alpine ski facilities into a 279-acre expansion area within and adjacent to the PASEA by constructing one new chairlift and seven associated ski trails.³

For ease of reference and to inform the land classification decision that will be made by the Commission, the nonproject FEIS for land classification (see Section II) and the project level FEIS (see Section III) for ski area expansion into the PASEA have been included in a single document along with this introductory section. Although both the nonproject land classification and the project proposal are included within the same document, this FEIS analyzes two distinct and separate actions to be considered by the Commission: (1) analysis of the impacts associated with the nonproject action and the land

¹ In previous analyses Mount Spokane State Park has been described as nearly 14,000 acres. Based on current GIS information, 13,000 acres more accurately describes the size of the Park when taking into account recent land exchanges and surplusings that has occurred over the last ten years.

² Although the PASEA is frequently described as being 850 acres in size, recent GIS analysis has concluded that the actual acreage of the PASEA is slightly smaller and approximately 800 acres in size. This is primarily due to the technology available now to determine the exact acreage of the area in question compared to what was available to State Parks during the 1999 CAMP process. Subsequent planning documents have used a range of 800 to 850 acres.

³ While the PASEA boundary and acreage has changed (see footnote 1), the 279-acre expansion area/study area has not changed.

Section I. Introduction to the Combined Draft Environmental Impact Statement

classification/reclassification decision and (2) analysis of the project level impacts associated with ski area expansion.

The Commission uses a land classification system (Washington Administrative Code 352-16) to provide direction regarding the appropriate use of state park managed lands. The classification system evaluates state park lands and places them into one of six land classifications. These classification categories include Recreation, Resource Recreation, Heritage, Natural, Natural Forest, and Natural Area Preserves. In October 1999, Washington State Parks completed a Classification and Management Planning (CAMP) process that classified all lands within the park except for an approximately 800-acre area known as the PASEA.

Land classification for the PASEA will be considered and ultimately adopted by the Commission. The classification categories under consideration for the PASEA include Recreation, Resource Recreation, and Natural Forest (see Section I, section 2.2 – Alternatives Considered). In addition, Alternative 4, as outlined in Section II, will consider reclassifying approximately 20 acres adjacent to the PASEA and reclassifying approximately 1 acre of land adjacent to the Vista House currently classified as Heritage to Recreation for purposes of accommodating proposed recreational facilities (see Section II, Figure II-4).⁴

⁴ Due to the evolution of mapping technologies from 1999 to present, the PASEA's GIS boundary includes approximately 20 acres to the south of the PASEA that was previously classified by the Commission as Resource Recreation. Without this adjustment to existing land classification boundaries, Alternative 4 would potentially site recreational facilities in a Resource Recreation classification. In addition, Alternative 4 would potentially site recreational facilities within less than 1 acre of the existing Heritage land classification adjacent to the Vista House. This action seeks to address this issue and adjust the boundaries of previously classified lands to be more consistent with the potential placement of developed recreation facilities.

A full listing of opportunities and use limitations imposed by specific classifications is detailed in the *Land Classification Management Guidelines and Land Classification Compatibility Matrix for Facilities and Activities* (see Section II, Appendix 2). Examples of types of facilities and activities that are permitted dependent on land classification include:

- Alpine ski facilities
- Campgrounds
- Cross-country skiing trails
- Day use facilities
- Equestrian trails
- Hiking trails
- Interpretive facilities
- Mountain biking trails
- Nordic track skiing trails
- Snowmobile trails

This document also contains a project action FEIS that considers State Parks approval for various aspects of a proposal from Mt. Spokane 2000 to construct a new chairlift together with seven new ski trails and accompanying infrastructure in a 279-acre area within and adjacent to the PASEA. Consideration of the alpine ski facility proposal from MS 2000 is contingent upon a land classification decision by the Commission that allows alpine ski facility development. In this document (Section II), Land Classification Alternative 4 is the single alternative that would allow new alpine ski facilities. The land classification alternatives are discussed in Section II, which includes the nonproject EIS.

2. BACKGROUND

The PASEA is located within the existing ski area concession boundary (approximately 2,233 acres) and comprises approximately 800 acres on the northwest or “backside” of Mount Spokane. The PASEA is largely undeveloped. Current recreational facilities within the PASEA include the Chair 4 Road which is used for snowmobiling in the winter season, the Summit Road and a portion of Trail #140 which is a multi-use (i.e., hiking, mountain biking, horseback riding) single-track trail. Current recreational activities occurring within the PASEA include, but are not limited to, snowmobile use on Chair 4 Road, back-country alpine skiing, cross-country skiing, snowshoeing, hiking, mountain biking and equestrian use.

The PASEA was noted as a potential expansion area in the 1997 Concession Agreement between MS 2000 and State Parks. As part of its October 1999 classification action for Mount Spokane State Park, the Commission left the PASEA as an unclassified area within the 13,000-acre Park in order to further study what the eventual classification should be, particularly within the context of a potential expansion of Mount Spokane Ski and Snowboard Park. MS 2000 approached the Commission with a conceptual proposal to expand skiing into 279 acres of the PASEA.

The agency engaged in a master facilities planning process with the community that culminated in the adoption of the Mount Spokane State Park Master Facilities Plan and Final Environmental Impact Statement (FEIS) in August 2010. The Master Facilities Plan explicitly excluded the PASEA from the planning effort. At that time, the Commission called for the PASEA to be studied separately after

Section I. Introduction to the Combined Final Environmental Impact Statement

completion of the Mount Spokane State Park Master Facilities Plan to determine if, and when, the PASEA would be classified to allow for lift-served downhill skiing and snowboarding.

On May 19th, 2011, the Commission approved “Amended Option 3,” which classified the lands within the PASEA as a combination of the following land classifications: Recreation, Resource Recreation and Natural Forest Area (NFA). This action by the Commission further provided for a more in-depth evaluation of the MS 2000 proposal under SEPA.

Following the Commission’s decision, State Parks prepared a Supplemental Environmental Impact Statement (SEIS) on the “project action” or the impacts of the construction of a chairlift and seven ski trails within the 279-acre project area. The SEIS built on the Mount Spokane State Park Master Facilities Plan and FEIS that was issued in August 2010. A Final SEIS was released in October, 2012 and Alternative 3 was selected by the Director of Washington State Parks. Alternative 3 would have allowed for the expansion of ski area facilities (i.e., one chairlift and seven ski trails) into the 279-acre portion of the PASEA that the Commission had classified as a combination of Recreation and Resource Recreation in its earlier decision.

However, while the SEIS was being prepared and approved a separate legal appeal was ongoing related to the decision by the Commission to classify the lands (i.e., the nonproject action) within the PASEA without conducting an Environmental Impact Statement. Specifically, on September 17, 2013 the Washington State Court of Appeals ruled that an EIS should have been performed on the land classification decision prior to any decision related to an expansion of the ski area, leading to the preparation of the nonproject land classification FEIS (Section II). As such, Section III of the FEIS updates and builds upon the previously completed Final SEIS from 2012, providing more detail on the affected environment and potential environmental consequences, where necessary, informed by project level biological surveys that were undertaken following the original Commission decision. For some resources analyzed in the project FEIS (Section III), the impacts will be described nearly verbatim from the 2012 document because the project scope and impacts did not substantively change from what was initially presented to the public.

3. SEPA PROCESS

Although combining a nonproject EIS and project proposed action EIS into one document is not a common practice, the Washington State Environmental Policy Act allows the combination of any and all SEPA and non-SEPA documents in order to “reduce duplication and paperwork and improve decision-making” (see WAC 197-11-640 – Combining Documents). Normally, an analysis of a project specific proposed action tiers to a prior decision regarding a nonproject action. However, due to the absence of a land classification in the PASEA and the status of the proposal on the part of MS 2000 to construct new ski facilities within the PASEA, the Commission is combining the nonproject EIS for land classification in the same document as the project level EIS for MS 2000s proposal for a new chairlift and seven new ski trails.

The decision to combine both the nonproject EIS and project EIS into one document is intended to avoid improper piecemealing or segmenting of the proposal and avoid understating the combined environmental impacts associated with the actual project being contemplated by the Commission. If the EIS for the nonproject, land classification decision were decided separately from the ski lift and trails project EIS, the decision maker would have only the relatively general and superficial information typical of a nonproject EIS (see WAC 197-11-442 – Contents of EIS on Nonproject Proposals). Such an EIS contains only a very general analysis of all of the broad categories of projects that might be proposed in the future (e.g., horseback trails, developed recreational facilities) and includes potential mitigation measures only at a high level of generality. In this case, by combining the nonproject land classification EIS and the EIS for the ski lift and trails project that has been proposed, the Commission will have the most detailed and accurate information available on the probable environmental impacts resulting from a classification decision.

This document is separated into three sections. The first section provides a general overview of the history, background and process to date, as well as a description of how the analysis complies with SEPA. The second section consists of the nonproject EIS, which analyzes at a general level all of the broad categories of development (e.g., hiking trails, parking lots, equestrian facilities) that may result under each land classification alternative (e.g., Natural Forest Area, Resource Recreation, Recreation) considered, as well as the No Action Alternative, which would leave the entire PASEA unclassified. The third section contains a project level EIS that analyzes at a specific level the direct, indirect and cumulative impacts associated with the 279-acre proposed ski area expansion project, which would be applicable only if the Commission classified the area as Recreation (see Section II, Alternative 4).

4. PUBLIC SCOPING PROCESS

Scoping occurred for the nonproject land classification EIS and for the project action ski area expansion proposal pursuant to Washington Administrative Code (WAC) 197-11-408 (see Section II, Appendix 1). On November 12, 2013 the Washington State Parks and Recreation Commission issued a formal scoping notice and 600 scoping comments were received. The scoping notice originally contemplated two land classification alternatives in addition to the required no-action alternative. These were:

- An alternative that would classify the area within the PASEA above the Chair 4 Road as Resource Recreation and the area below the road as Natural Forest Area. Within the Resource Recreation area, alpine backcountry skiing would be allowed as a conditional use, but no lift or formal ski run facilities would be allowed to be constructed. This alternative is included in this document as Land Classification Alternative 3.
- An alternative that included three land classifications within the PASEA. This alternative is included in this document as Land Classification Alternative 4 (see Section II):
 - i A Recreation classification in the 279-acre area where MS 2000 has proposed expanding its developed ski area that would allow for the ski expansion.

Section I. Introduction to the Combined Final Environmental Impact Statement

- i A Resource Recreation classification that conditionally permits alpine “backcountry” skiing in an area that buffers the developed ski area and provides management direction for existing facilities within the PASEA (e.g., Chair 4 Road, portion of Summit Road, Trail #140); and
- i A Natural Forest Area classification in the area below the Chair 4 Road.

Based on comments received during the scoping process a third alternative in addition to the no-action alternative was included for analysis in the DEIS which was released to inform the public; local, state and federal agencies; and tribal entities on August 15, 2014. This new alternative proposes classifying the PASEA as Natural Forest Area with the exception of the Chair 4 Road, a portion of the Summit Road, and an existing multi-use trail (a portion of Trail #140), which would be classified as Resource Recreation. The classification of these existing facilities as Resource Recreation is necessary because their existence in the PASEA would not be permitted under a classification of Natural Forest Area. Alpine “backcountry” skiing would not be a permitted use in the Natural Forest Area classification. However, other existing uses such as snowmobiling, equestrian uses, and mountain biking could continue to be allowed in designated Resource Recreation areas (e.g., Chair 4 Road, portion of the Summit Road, the existing Trail #140). This alternative is included as Land Classification Alternative 2 in Section II of this document.

The comment period for the DEIS closed on September 30, 2014. In response to the DEIS, a total of 444 comment letters were received from individuals, organizations (e.g., The Lands Council, Mount Spokane Ski and Snowboard Park), public agencies (e.g., The Washington Department of Fish and Wildlife) and tribal entities. Pursuant to Washington Administrative Code (WAC) 197-11-560, Section III – Appendix H summarizes and responds to comments received during the August 15, 2014 to September 30, 2014 comment period for the Draft EIS. Comments have been grouped based on subject area.

5. SCOPE OF THE LAND CLASSIFICATION FEIS AND THE SKI AREA EXPANSION DEIS

Consistent with WAC 197-11-442, this FEIS considers: (1) a proposal that will provide land classification for the PASEA, and (2) a proposal that would allow for ski area expansion within a 279-acre portion of the PASEA. Pursuant to WAC 197-11-704, land classification is a nonproject action under SEPA. Nonproject actions under SEPA include decisions on policies, plans, or programs rather than site specific development proposals. Examples of nonproject actions include the adoption of comprehensive plans and zoning ordinances. Consideration of the ski area expansion proposal is a project action under SEPA.

Pursuant to WAC 197-11-402(1), EISs need analyze only the reasonable alternatives and probable adverse environmental impacts that are significant. Based on the scoping process, State Parks has identified the following elements of the environment that may be significantly impacted by the facilities and activities that could occur under formal land classification and as a result of the proposed ski area expansion:

Section I. Introduction to the Combined Final Environmental Impact Statement

- Wildlife habitat supporting populations and occurrences of resident wildlife species within the PASEA and transiting through it;
- Wildlife habitat connectivity to intra-park and regional wildlife corridors;
- Natural forest and native plant associations and communities;
- Soils and slope stability;
- Water quality;
- Introduction of non-native plant species; and
- Scenic resources including viewsheds.

**SECTION II:
PROPOSED LAND CLASSIFICATION
FOR THE AREA KNOWN AS THE
POTENTIAL ALPINE SKI EXPANSION AREA
FINAL ENVIRONMENTAL IMPACT STATEMENT**

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

FACT SHEET

Proposal/Title:	Mount Spokane State Park: Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area (PASEA) Final Environmental Impact Statement.
Description of Proposal:	Formal land classification and potential reclassification pursuant to Washington Administrative Code (WAC) 352-16 for the area in and adjacent to the PASEA.
Description of Alternatives:	Four alternatives are analyzed: the required No Action Alternative and three land classification alternatives.
Location:	Mount Spokane State Park is located approximately 22 miles northeast of the City of Spokane in Spokane County. Access to the park is almost exclusively by State Highway SR 206. The highway at the park entrance is Mount Spokane State Park Drive.
Project Proponent:	Washington State Parks and Recreation Commission
Tentative Date of Implementation:	November 2014
Name and Address of Lead Agency and Contact:	Washington State Parks and Recreation Commission 1111 Israel Road Southwest; PO Box 42650 Olympia, WA 98054-2650
Responsible Official:	Randy Kline, Environmental Program Manager; 360.902.8632 randy.kline@parks.wa.gov
Required Approvals:	Approval by the Washington State Parks and Recreation Commission
Project Manager and Principal Contributors to Final EIS:	Project Manager: Lisa Lantz, Stewardship Program Washington State Parks and Recreation Commission 1111 Israel Road Southwest Olympia, WA 98504-2650 Principal Contributors: Randy Kline, Environmental Program Manager
Date of Issuance of Final EIS:	October 31, 2014
Scheduled Date of Final Action:	November 2014
Location of Copies of Final EIS for Public Review:	Washington State Parks and Recreation Commission 1111 Israel Road Southwest Olympia, WA 98504-2650 360.902.8638 Mount Spokane State Park N. 26107 Mount Spokane Park Dr. Mead, WA 99021 Washington State Parks and Recreation web page http://www.parks.wa.gov/856/Mount-Spokane-PASEA-Land-Classification and http://www.parks.wa.gov/335/Mount-Spokane
Location of Copies of Final EIS	Washington State Parks and Recreation Commission

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

for Purchase and Cost of Copy to Public:	1111 Israel Road Southwest Olympia, WA 98504-2650 360.902.8638
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SECTION II – TABLE OF CONTENTS

1. PURPOSE AND NEED	II-1
2. LAND CLASSIFICATION ALTERNATIVES CONSIDERED	II-1
2.1 ALTERNATIVE 1 – NO ACTION	II-1
2.2 ALTERNATIVE 2 – NATURAL FOREST AREA.....	II-2
2.3 ALTERNATIVE 3 – RESOURCE RECREATION AND NATURAL FOREST AREA.....	II-3
2.4 ALTERNATIVE 4 – RECREATION, RESOURCE RECREATION, AND NATURAL FOREST AREA	II-4
2.5 MITIGATION MEASURES	II-6
2.5.1 <i>General Mitigation Measures</i>	II-6
2.5.2 <i>Mitigation Measures Specific to Invasive Species</i>	II-7
2.5.3 <i>Mitigation Measures Specific to Trail Construction</i>	II-8
2.5.4 <i>Mitigation Measures Specific to Trail Use</i>	II-8
2.6 PERMITS AND APPROVALS REQUIRED FOR IMPLEMENTATION	II-9
3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	II-9
3.1 SOILS AND GEOLOGY	II-9
3.1.1 <i>Affected Environment</i>	II-9
3.1.2 <i>Environmental Consequences</i>	II-9
3.1.3 <i>Mitigation Measures</i>	II-10
3.1.4 <i>Cumulative Effects</i>	II-10
3.2 WATERSHED RESOURCES	II-10
3.2.1 <i>Affected Environment</i>	II-10
3.2.2 <i>Environmental Consequences</i>	II-12
3.2.3 <i>Mitigation Measures</i>	II-12
3.2.4 <i>Cumulative Effects</i>	II-12
3.3 VEGETATION.....	II-13
3.3.1 <i>Affected Environment</i>	II-13
3.3.2 <i>Environmental Consequences</i>	II-15
3.3.3 <i>Mitigation Measures</i>	II-15
3.3.4 <i>Cumulative Effects</i>	II-15
3.4 WILDLIFE.....	II-16
3.4.1 <i>Affected Environment</i>	II-16
3.4.2 <i>Environmental Consequences</i>	II-19
3.4.3 <i>Mitigation Measures</i>	II-20
3.4.4 <i>Cumulative Effects</i>	II-20
3.5 VISUAL RESOURCES.....	II-21
3.5.1 <i>Affected Environment</i>	II-21
3.5.2 <i>Environmental Consequences</i>	II-21
3.5.3 <i>Mitigation Measures</i>	II-22
3.5.4 <i>Cumulative Effects</i>	II-22
3.6 RECREATION	II-22
3.6.1 <i>Affected Environment</i>	II-22
3.6.2 <i>Environmental Consequences</i>	II-23
3.6.3 <i>Mitigation Measures</i>	II-23
3.6.4 <i>Cumulative Effects</i>	II-23
3.7 RESOURCES NOT ANALYZED IN DETAIL.....	II-24
3.7.1 <i>Historic, Cultural and Archaeological Resources</i>	II-24

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

3.7.2 *Air Quality*II-27
3.7.3 *Noise*II-28
3.7.4 *Land Use*.....II-30
3.7.5 *Transportation and Parking*II-31
3.7.6 *Public Services*.....II-32
3.7.7 *Environmental Health*.....II-34
3.7.8 *Utilities*II-35

LIST OF TABLES

TABLE II-1: COMPARISON OF ALTERNATIVESII-5
TABLE II-2: TWENTY-ONE FOCAL WILDLIFE SPECIES OF MOUNT SPOKANE STATE PARKII-16

LIST OF FIGURES

FIGURE II-1: PASEA LAND CLASSIFICATION ALTERNATIVE 1 – NO ACTIONII-37
FIGURE II-2: PASEA LAND CLASSIFICATION ALTERNATIVE 2 – NATURAL FOREST AREAII-38
FIGURE II-3: PASEA LAND CLASSIFICATION ALTERNATIVE 3 – RESOURCE RECREATION AND
NATURAL FOREST AREA.....II-39
FIGURE II-4: PASEA LAND CLASSIFICATION ALTERNATIVE 4 – RECREATION, RESOURCE RECREATION AND
NATURAL FOREST AREA.....II-40

APPENDICES

APPENDIX 1: NOVEMBER 13, 2013 PASEA LAND CLASSIFICATION SCOPING NOTICE
APPENDIX 2: LAND CLASSIFICATION MANAGEMENT GUIDELINES AND LAND CLASSIFICATION
COMPATIBILITY MATRIX FOR FACILITIES AND ACTIVITIES (WAC 352-16)
APPENDIX 3: RECREATION AND TRAIL IMPACTS ON WILDLIFE SPECIES OF INTEREST IN
MOUNT SPOKANE STATE PARK
APPENDIX 4: HABITAT ELEMENTS AND LIFE STAGE MATRIX FOR WILDLIFE SPECIES OF INTEREST IN
MOUNT SPOKANE STATE PARK
APPENDIX 5: DOCUMENTS INCORPORATED BY REFERENCE

1. PURPOSE AND NEED

In October 1999, the Washington State Parks and Recreation Commission completed a Classification and Management Planning (CAMP) process that classified all lands within Mount Spokane State Park except for an approximately 800-acre area known as the PASEA. This nonproject action, which will be considered and ultimately adopted by the Commission, is intended to provide a land classification for future management of the PASEA. Alternative 4 of this nonproject action also considers potential reclassification of approximately 20 acres south of the PASEA from Resource Recreation to Recreation as well as reclassification of approximately 1 acre from Heritage to Recreation in the vicinity of the Vista House.⁵

This FEIS has been prepared in accordance with the Washington State Environmental Policy Act (SEPA, RCW 43.21C). This FEIS is not a decision document. The primary purpose of this FEIS is to disclose the potential environmental impacts of implementing any of the land classification alternatives under consideration. The Purpose and Need for the proposed land classification is to provide management direction for park staff and the public regarding the type of facilities and activities that will be permitted to occur within the PASEA.

2. LAND CLASSIFICATION ALTERNATIVES CONSIDERED

This section identifies and compares a reasonable range of alternatives related to the proposed land classification. There are three “action alternatives” and a “No Action Alternative” included in this range of alternatives. Items that are common to all three action alternatives include:

- All lands in the PASEA below (west) of Chair 4 Road (approximately 170 acres) would be designated as Natural Forest Area;
- Continued operational impacts related to existing and on-going activities and facilities in the PASEA, including use of the Summit Road, Trail #140, and snowmobile and summer recreation use on the Chair 4 Road.

2.1 ALTERNATIVE 1 – NO ACTION

The No Action Alternative (see Section II, Figure II-1 and Table II-1) provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices and activities without applying a land classification. Up to this point, staff has generally managed the area as a de facto Natural Forest Area. However, backcountry alpine skiing has

⁵ Due to the evolution of mapping technologies from 1999 to present, the PASEA’s GIS boundary includes approximately 20 acres to the south of the PASEA that was previously classified by the Commission as Resource Recreation. Without this adjustment to existing land classification boundaries, Alternative 4 would potentially site recreational facilities in a Resource Recreation classification. In addition Alternative 4 would potentially site recreational facilities within less than 1 acre of the existing Heritage land classification adjacent to the Vista House. This action seeks to address this issue and adjust the boundaries of previously classified lands to be more consistent with the potential placement of developed recreation facilities.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

been informally allowed to continue, even though this use is not otherwise permitted in Natural Forest Areas. Continuing to leave the area unclassified would mean no clear direction from the Commission with regard to management and future development of the area.

2.2 ALTERNATIVE 2 – NATURAL FOREST AREA

This alternative proposes classifying the PASEA as Natural Forest Area with the exception of the Chair 4 Road, a portion of the Summit Road, and Trail #140, which would be classified as Resource Recreation (see Section II, Figure II-2, and Table II-1). The classification of these existing facilities as Resource Recreation is necessary under Alternative 2 because their existence in the PASEA would not otherwise be permitted under a classification of Natural Forest Area. Existing activities such as snowmobiling, equestrian use, and mountain biking could continue to be allowed in certain circumstances in the portions of the PASEA designated as Resource Recreation. Lift-served “backcountry” or “side-country” alpine skiing that occurs on ungroomed terrain either within or outside of the ski area boundary would not be permitted under Alternative 2. Pursuant to the *Land Use and Land Classification Compatibility Matrix*, any type of lift-served skiing is considered “Alpine Skiing” and is not permitted within the NFA classification. Backcountry skiing which is not lift-served and involves human-powered hiking, snowshoeing or use of cross-country skis to reach an elevation that allows for downhill skiing is considered “Off-trail Cross-Country Skiing” which is a permitted use in the NFA classification consistent with State Park’s Land Use and Land Classification Compatibility Matrix.

Lands classified as Natural Forest Area are designated for preservation, restoration, and interpretation of natural forest processes while providing for low-intensity outdoor recreation activities as subordinate uses. Under all classification alternatives, all land within the PASEA below (west) of the Chair 4 Road would be classified as Natural Forest Area.

Examples of permitted facilities and activities in Natural Forest Areas include: interpretive trails, hiking trails, cross-country ski trails, off-trail hiking, off-trail cross-country skiing (discussed above) and snowshoeing (see Appendix 2). These permitted facilities and activities require agency design review but do not require additional Commission approval within the land classification and can be undertaken provided they comply with local, state and federal regulations.

Conditional use facilities can be further conditioned within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use facilities in Natural Forest Area include interpretive kiosks, composting and vault toilets, and paved non-motorized trails.

Conditional use activities can be further conditioned and require specific Commission concurrence within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use activities in Natural Forest Areas include filming/special events and technical rock climbing.

In 1992/93, the Washington Natural Heritage Program (WNHP) inventoried forests statewide to identify those eligible for classification as Natural Forest Area and Natural Area Preserve. The WNHP determined that areas within the park, including the PASEA, have considerable natural resource value and were eligible for classification as a Natural Forest Area (Washington Department of Natural Resources 1992).

The Natural Forest Area classification proposed in this option would limit development and promote use in the PASEA for preservation, interpretation and enjoyment of natural processes. As per the Commission's land classification system (WAC 352-16 and Appendix 2), the principal function of this area would be to "assist in maintaining the state's bio-diversity while expanding human understanding and appreciation of natural values."

2.3 ALTERNATIVE 3 – RESOURCE RECREATION AND NATURAL FOREST AREA

This alternative would classify the approximately 630 acres of area within the PASEA including and above the Chair 4 Road as Resource Recreation and the approximately 170 acres below the Chair 4 Road as Natural Forest Area (see Figure II-3 and Table II-1). Within the Resource Recreation area, lift-served backcountry skiing would be allowed as a conditional use, but no lift or formal ski trails would be allowed to be constructed. Essentially, Alternative 3 would conditionally allow for the continued use of the PASEA for lift-served backcountry skiing as in Alternative 1 – No Action. Some clearing of downed, tipped, or damaged trees could be allowed to reduce hazards for backcountry skiers, improve access for search and rescue, and otherwise enhance the backcountry skiing experience. Snowmobiling, mountain bike and equestrian trails could be allowed within the Resource Recreation designation. This option preserves the current use of the PASEA for undeveloped alpine skiing while affording natural resource protection by classifying the area as a mix of Resource Recreation and Natural Forest Area.

Areas classified as Resource Recreation are suited and/or developed for natural and/or cultural resource-based medium-intensity and low-intensity outdoor recreational use. Examples of permitted facilities and activities in Resource Recreation Areas include primitive camping, interpretive trails and kiosks, hiking trails, cross-country ski trails, technical rock climbing, off-trail hiking, off-trail snowmobiling, off-trail cross-country skiing and snowshoeing (see Appendix 2).

Conditional use facilities can be further conditioned within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use facilities in Resource Recreation Areas include horse-oriented camping, equestrian facilities, alpine ski facilities, equestrian trails, mountain biking trails, snowmobile trails and paved non-motorized trails. Although alpine ski facilities may be permitted conditionally within the Resource Recreation classification, in this alternative alpine ski facilities (e.g., chairlifts) would not be an allowed conditional use in the area of the PASEA contemplated for designation as Resource Recreation; only backcountry alpine skiing as an activity would be allowed.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

Conditional use activities can be further conditioned and require specific Commission concurrence within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use activities in Resource Recreation Areas include lift-served alpine skiing, off-trail equestrian use, off-trail biking and mushing/sled dogs.

2.4 ALTERNATIVE 4 – RECREATION, RESOURCE RECREATION, AND NATURAL FOREST AREA

This alternative includes three land classifications within the PASEA, the reclassification of approximately 20 acres adjacent to the PASEA as well approximately 1 acre of Heritage adjacent to the Vista House (see Figure II-4 and Table II-1):

- A Recreation classification in the 279-acre area where MS 2000 has proposed expanding its developed ski area.⁶ This area includes approximately 20 acres of land adjacent to the PASEA that is currently classified as Resource Recreation that would be reclassified as Recreation, as well as approximately 1 acre of Heritage adjacent to the Vista House that would be reclassified as Recreation. A detailed discussion of the potential impacts related to the introduction of developed ski area facilities into the 279-acre area is included in Section III of this combined EIS document;
- A Resource Recreation classification that conditionally permits lift-served “backcountry” skiing in an approximately 351-acre area that buffers the developed ski area and provides management direction for existing facilities within the PASEA (e.g., Chair 4 Road); and
- A Natural Forest Area classification in the approximately 170-acre area below the Chair 4 Road.

⁶ Commission direction regarding the management of natural resources within areas classified as “Recreation” is discussed in *Commission Policy 73-04-1 Protecting Washington State Parks Natural Resources*. Subsection A(1) states that “State Parks will maintain native plants and animals (biodiversity) that occur, or seek to re-establish them where they historically occurred, within those park lands classified by the Commission as Resource Recreation Areas, Natural Areas, Natural Forest Areas, or Natural Area Preserves. When consistent with recreational use, cultural resources integrity, and other agency objectives, native plants and animals will also be preserved in lands classified as Recreation and Heritage Areas.”

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

**Table II-1:
Comparison of Alternatives***

Land Classification	Alt. 1 No-Action (acres)	Alt. 2 (acres)	Alt. 3 (acres)	Alt. 4 (acres)
Natural Forest Area	0	705	170	170
Resource Recreation	0	95	630	351
Recreation	0	0	0	279
Recreation – Reclassification of Resource Recreation Land Adjacent to the PASEA**	0	0	0	20
Recreation – Reclassification of Heritage Land Adjacent to the PASEA**				<1

* See Section I, footnote 1. Acreage numbers in this table are approximate.

** This reclassification of lands is only contemplated by Alternative 4.

Within the area designated as Recreation, a ski lift and alpine ski trail pod could be permitted. Similar to the operation and maintenance of the current ski area which is classified as Recreation, more vegetation could be cleared within the area designated Recreation. The area designated as Resource Recreation would offer a higher level of resource conservation due to the forest management practices required in that classification. The area below the Chair 4 Road is not being considered for alpine skiing due to habitat and terrain and would be classified as Natural Forest Area.

Areas classified as Recreation are suited and/or developed for high-intensity outdoor recreational use, conference, cultural and/or educational centers, or other uses serving large numbers of people. Permitted facilities and activities require agency design review but do not require additional Commission approval within the land classification and can be undertaken provided they comply with local, state and federal regulations. Examples of permitted facilities and activities in Recreation Areas include camping, day use picnic areas, informal play fields, snowmobile trails, mountain bike trails, cross-country ski trails, technical rock climbing, off-trail snowmobiling, off-trail cross-country skiing and snowshoeing.

Conditional use facilities can be further conditioned within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use facilities in Recreation Areas include horse-oriented camping, environmental learning centers, equestrian facilities, alpine ski facilities and equestrian trails.

Conditional use activities can be further conditioned and require specific Commission concurrence within the land classification and then can be undertaken provided they comply with local, state and federal regulations. Examples of conditional use activities in Recreation Areas include alpine skiing, off-trail equestrian use, off-trail biking and mushing/sled dogs. Under this alternative, alpine ski facilities and the activity of alpine skiing would be permitted within the Recreation classification.

2.5 MITIGATION MEASURES

Mitigation is intended to avoid completely or to minimize the potential environmental impacts related to the action alternatives that are proposed. Although this proposal is a non-project action that does not include site-specific development, the general mitigation measures below are provided for any future trail and facility development regardless of land classification. In addition to these mitigation measures, any conditions of approval from Spokane County and other jurisdictional agencies (e.g., Washington Department of Ecology, Washington Department of Fish and Wildlife, federal government) would be applied. For purposes of this analysis the definition of mitigation under SEPA can be found in WAC 197-11-768 where:

“Mitigation” means:

- (1) Avoiding the impact altogether by not taking a certain action or parts of an action;*
- (2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*
- (3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
- (4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;*
- (5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or*
- (6) Monitoring the impact and taking appropriate corrective measures.*

2.5.1 General Mitigation Measures

1. Compliance with applicable provisions of the Spokane County Critical Areas Ordinance.
2. Compliance with the Clearing and Grading provisions of Spokane County Code.
3. Compliance with any Department of Fish and Wildlife Hydraulic Project Approval requirements.
4. Compliance with Department of Ecology General Stormwater Permit and National Pollution Discharge Elimination System (NPDES) Permit requirements.
5. Compliance with Department of Natural Resources Forest Practices Permit requirements.
6. Application of Best Management Practices (BMPs) and use of Forest Service or International Mountain Bicycling Association (IMBA) trail standards for trail and trail facility construction.
7. Establishment of temporary erosion sediment control measures prior to any site work and installation of surface water controls to intercept all surface water from disturbed areas.
8. Using preventive measures to minimize wind transport of soil when sediment transported by wind is likely to be deposited in water resources.
9. Conducting earthwork during drier periods to the degree possible.
10. Re-establishment of vegetation as soon as construction is completed.

**Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the
Potential Alpine Ski Expansion Area Final Environmental Impact Statement**

11. Stabilization of the entrance to construction areas with quarry spalls.
12. Covering trucks transporting soil materials.
13. Avoiding the concentration of runoff in ways that negatively impact the surrounding area or streams.
14. Covering stockpiled soil materials.
15. When practical, using any leftover organic debris on-site.
16. Minimizing vegetation disturbance and clearly delineating areas to be cleared to avoid unnecessary vegetation disturbance during construction.
17. Hardening trails and trailheads with soil protection measures (examples include gravel, culverts, grass plantings, mulch).
18. Using certified weed-free native or non-invasive vegetation on trailheads and in heavily disturbed areas where it is necessary to re-vegetate.
19. Delineating trails clearly to minimize use of off-trail sensitive areas.
20. To the degree practical, retaining woody debris and organic detritus on the site.
21. Using increased opportunities for education and nature awareness through interpretation and interpretive signing.

2.5.2 Mitigation Measures Specific to Invasive Species

1. Minimize soil disturbance.
2. Minimize canopy removal.
3. Where possible, use mowing and brush trimming to maintain trail widths, and avoid unnecessary digging that disturbs soils and can create new habitats for weeds.
4. Limit vehicles to existing roads, parking lots, and travel routes where they are allowed.
5. To the degree practical, obtain fill material on-site from weed-free project cuts.
6. Require all equipment to be thoroughly cleaned before being used on the site.
7. Specify certified weed-free native or non-invasive vegetation for reseeding.
8. Regularly monitor all trails to identify non-native and invasive species before they become established.
9. Control Class A and Class B (and regulated Class C) noxious weeds before seeds mature. Replant denuded areas with certified noxious-weed free seed.

2.5.3 Mitigation Measures Specific to Trail Construction

1. To the degree practical, minimize impacts to potential breeding bird populations by restricting construction activities during the breeding-nesting season from April 1 to July 31.
2. To the degree practical, minimize impacts to potential breeding and young-rearing mammal populations by restricting construction activities during the breeding season from March 1 through July 31.
3. During construction, enforce measures to ensure that trash or refuse associated with construction is minimized.
4. Install and maintain mufflers and sound attenuation devices on all equipment and vehicles in order to minimize construction noise impacts.
5. Clearly mark construction clearing limits and trail routes to ensure that habitat alteration is minimized during construction.
6. To the degree practical, retain important standing wildlife habitat by minimizing the falling of large or mature snags.
7. Retain standing snags and dying trees (of any size class) whenever possible, acknowledging the need to remove hazard trees and minimize fire danger.
8. To the degree practical, retain small diameter snags in clusters.
9. To the degree practical, retain snags adjacent to live green trees.
10. To the degree practical, retain important coarse woody debris in the form of downed logs greater than 6 inches diameter and with a length of 8 or more feet.
11. To the degree practical, retain patches of jackstrawed logs supported greater than 2 feet above ground by other logs while considering increased fire potential through ladder fuels.
12. Provide public education and interpretive opportunities to enhance the visitor's experience while helping to limit their impact on wildlife.

2.5.4 Mitigation Measures Specific to Trail Use

1. Consider seasonality of trail use to reduce stress on wildlife during nesting/denning, young-rearing, and winter and early spring foraging seasons in areas where there are high seasonal wildlife concentrations.
2. To the degree practical, maintain coarse woody debris (i.e., logs and downed wood) within the forest by routing trails through natural forest openings and non-vegetated areas.

2.6 PERMITS AND APPROVALS REQUIRED FOR IMPLEMENTATION

No permits or approvals beyond consideration by the Commission are required for the nonproject action of land classification/reclassification. Implementation of future recreational facility development consistent with the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) may require permits from Spokane County, Washington State, and/or the federal government. For the permits and approvals required for ski area expansion see Section III, section 2.5 – List of Permits and Approvals Required for Implementation of either of the action alternatives contemplated by Section III.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 SOILS AND GEOLOGY

3.1.1 Affected Environment

The topography of the PASEA extends from approximately 5,800 feet elevation near the summit of Mount Spokane to an elevation of approximately 4,400 feet near Chair 4 Road. Slope gradients vary from approximately 40 to 60 percent on higher elevation areas to relatively flat (less than 5 percent) in benched areas. According to the Natural Resource Conservation Service (NRCS) Soils Resource Report most soils in the park, including the PASEA, have a severe to extreme erosion hazard. This classification is primarily due to the parent soil material being comprised of crystalline granitic bedrock. Past field surveys revealed no signs of major soil erosion or landslides, primarily due to the largely undisturbed condition of the PASEA.

3.1.2 Environmental Consequences

3.1.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

3.1.2.2 Alternative 2 – Natural Forest Area

Under this alternative, there would be less opportunity for potential impacts to soil and geology resources due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. Impacts would be limited to those facilities and activities currently existing in the PASEA. This alternative would provide the least potential for soil and geology impacts and would be as described in Alternative 1 – No Action.

3.1.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

Implementation of this alternative would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) with the exception of alpine ski facilities, which would not be a permitted facility use in the Resource

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

Recreation classification. In general, trail based recreation and recreational facilities have the potential to negatively impact soils and geology if they are not constructed in a manner that is sensitive to the landscape.

3.1.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under this alternative, there would be greater opportunity for potential impacts to soil and geology resources due to the expanded range of uses that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use. Construction and operation of facilities such as recreational trails, ski runs and lift towers have the potential to negatively impact soils and geology (see Section III, section 3.1 – Soils and Geology for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.1.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency-prepared operational plans.

3.1.4 Cumulative Effects

Cumulative effects are the impacts that may result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Generally, an impact can be considered cumulative if: a) effects of several actions occur in the same locale; b) effects on a particular resource are similar in nature; and c) effects are long-term in nature.

Past development in portions of the PASEA has resulted in limited tree removal, grading, and installation of developed facilities. Cumulatively, past construction on lands within and in the vicinity of the PASEA include the construction of Chair 4 Road, the Vista House, the Summit Road, existing ski area facilities at the summit of Mount Spokane and communication towers. These existing facilities have changed sediment yield, soil compaction and impermeable surfaces between pre-development conditions and present day recreational area development. Changes in sediment yield and soil compaction are primarily temporary and associated with construction activities; however, permanent developments such as trails, roads, buildings, and structures would continue to result in an increase of impermeable surfaces over pre-development conditions.

3.2 WATERSHED RESOURCES

3.2.1 Affected Environment

The PASEA encompasses portions of Water Resource Inventory Area (WRIA) 57 – Middle Spokane River. The annual precipitation in WRIA 57 ranges from approximately 15 inches per year in the lower elevations of the basins to over 45 inches in the mountainous parts of the basins. About 70 percent of the

precipitation occurs during the months of October through March. Approximately 25–40 percent of the precipitation falls as snow, depending on elevation. Accumulations of snow range from a few inches to several feet at the Spokane National Weather Service Station. Mount Spokane is a critical component of the hydrologic cycle in the greater Spokane/Coer d'Alene area. The mountain serves an important role of storing water that falls as snow in winter, and recharging groundwater throughout the spring and summer months.

3.2.1.1 Streams

The streams located in the PASEA flow into Blanchard Creek and eventually the Middle Spokane River watershed. The primary source of hydrology to ephemeral (seasonal) and perennial (year-round) stream channels within the PASEA is runoff from snow melt and seasonal storm events. Multiple unnamed ephemeral and perennial streams occur within the PASEA. None of these streams are fish bearing although they do contribute to the overall health of downstream fish bearing waters. A wetland and stream delineation was performed on the 279-acre ski expansion area, the results of which are included in Appendix D (Section III) and are graphically displayed in Section III, Figure EIS-14: Existing Conditions – Watershed.

3.2.1.2 Wetlands

There are multiple, small wetlands located within the PASEA (see Section III – Appendix D). Due to the steep topography associated with the PASEA, these wetlands are typically sloped wetlands or wetlands associated with the initiation points of ephemeral and perennial drainages.

3.2.1.3 Water Quality

No water quality monitoring stations occur within the PASEA or within Mount Spokane State Park. The main source of potential water quality degradation within the PASEA is vehicular traffic on existing roads during the summer, as visitors to the Vista House travel to the summit of Mount Spokane. Vehicular traffic has the potential to pollute surface waters in the PASEA as oil and tire particles may be washed from the Summit Road into nearby drainages. Activities that are most likely to indirectly impact water quality within the PASEA are those that may occur within wetland or stream buffers such as any necessary clearing of riparian vegetation for recreational trails and facilities. Potential indirect impacts to water quality include the following:

- Increased sediment yield to streams and wetlands from clearing and grading,
- Increased pollutant runoff from construction equipment into streams and wetlands, and
- Increased water temperatures resulting from the removal of riparian vegetation and subsequent increases in solar radiation.

3.2.2 Environmental Consequences

3.2.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

3.2.2.2 Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to streams, wetlands and water quality due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. This alternative would provide the least potential for stream, wetland and water quality impacts of all the action alternatives and would be similar to Alternative 1.

3.2.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

Implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) with the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification. In general, trail based recreation and recreational facilities have the potential to negatively impact streams, wetlands, and water quality if they are not constructed in a manner that is sensitive to the landscape.

3.2.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential impacts to streams, wetlands and water quality due to the expanded range of uses that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses, such as alpine ski facilities, would be permitted. Construction and operation of facilities, such as recreational trails, cleared ski runs and lift towers, have the potential to negatively impact streams, wetlands and water quality (see Section III, section 3.2 – Watershed Resources for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.2.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency-prepared operational plans.

3.2.4 Cumulative Effects

Under Alternatives 3 and 4, future projects and construction activities occurring within wetlands and streams have the potential to alter plant communities and functional processes of the riparian zone. These processes include sediment filtration, stream bank stabilization, floodwater storage (duration and timing of flow), large woody debris (LWD) recruitment, and stream channel shading. Conversion of forest to

meadow is also likely to alter hydrologic functions within the project area (e.g., evapotranspiration reduction, infiltration rates). While wetland and stream buffer widths typically encompass an area greater than the functional riparian zone, construction activities within the buffers occur in closer proximity to watershed resources. Based on this circumstance, there is a higher potential for projects occurring within wetland and stream buffers to impact watershed resources compared to projects occurring outside.

3.3 VEGETATION

3.3.1 Affected Environment

Mount Spokane State Park, including the PASEA, occupies a unique position on the landscape in Spokane County. It has the highest point in the county and has high elevation habitat that is found nowhere else in the local area. Largely due to its isolation and high elevation in relation to the surrounding landscape, Mount Spokane receives a much greater amount of precipitation than the surrounding landscape. Due to the fairly deep soils of the area and the relatively high precipitation, most of Mount Spokane State Park and the PASEA are covered by coniferous forests, with a few scattered meadows, talus fields, shrub fields and riparian deciduous forests. The higher elevations are dominated by subalpine forests while the mid and lower elevations are dominated by montane forests. Forested communities are present in most of the PASEA. However, portions of the PASEA contain shrublands, meadows, areas of tree blow-down and talus. Snowmelt varies by topography and forest cover. No vascular plant species of conservation concern are known to occur within Mount Spokane State Park.

Washington State requires that noxious weeds be controlled to limit adverse effects on agricultural, natural, and human resources of the state. Noxious weeds are non-native, invasive plants that, when established, are highly destructive, competitive, or difficult to control by cultural or chemical means. Due to the relatively undisturbed state of the PASEA, noxious weeds are not common. Scattered individuals of common tansy (*Tanacetum vulgare*) have been observed occurring along roadsides within the park. Control of common tansy is not required in Spokane County. Additionally, Parks staff has indicated that orange hawkweed (*Hieracium aurantiacum*) has been observed occurring along the Chair 4 Road. Orange hawkweed is a Class B weed, and control is mandated by Spokane County.

Although land classification itself will not impact existing vegetative communities, construction and operation of recreational facilities and uses permitted consistent with the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) have the potential to impact vegetative communities and forested stands within the PASEA. Generally, recreational trail impacts can be assessed based on the proposed types of use and required construction methods for each use. Activities that could occur based on land classification include, but are not limited to, alpine skiing, hiking, horseback riding, mountain biking, snowshoeing, snowmobiling, and backcountry skiing.

The recreational use typically dictates the width and type of clearing associated with each trail. Mountain bike, hiking, cross country ski and snowshoe trails require a 1- to 2-foot trail width, with a 1- to 2-foot

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

off-trail maintenance area alongside the trail. Americans with Disabilities Act (ADA) accessible trails typically require a 5- to 6-foot wide trail width. Equestrian trails require trail size and maintenance widths similar to hiking trails; however, they may be larger due to the size of the animals using the trails, especially in forested areas. Snowmobile trails require a 10- to 12-foot wide trail, with an additional 2 feet for off-trail maintenance. Alpine ski trails typically require a wider trail footprint that can vary between 60 and 190 feet.

Potential impacts from trail construction, trail use or ongoing maintenance include the following:

- impacts to plants and their habitats;
- direct harm to plants providing ecosystem services;
- loss or alteration of plant habitats;
- altered ecosystem function;
- increased spread of invasive species;
- displacement of native plants by non-natives;
- increased soil disturbance favoring invasive species establishment;
- soil compaction and associated changes in hydrology and plant growth;
- human, pet and wildlife travel leading to the spread of invasive species;
- changed vegetation community composition or function;
- changes in animal browsing patterns or trampling of vegetation; and
- increased risk of wildfire.

Impacts to non-listed plants and plant communities can occur as a result of trail construction, maintenance and use. Vegetation removal affects plant communities by changing the availability of water, nutrients and sunlight, while selectively removing existing individuals and the habitat they provide. In addition to direct effects to live vegetation, trail construction activities involve indirect effects such as cutting trees and roots out of the path of the trail, digging soil to provide a hard and level graded surface, and allowing for drainage of rain and snowmelt. Trail construction and maintenance may also involve planting, seeding and weed control activities that can impact the community plant composition. Trail-based recreation and trail construction and maintenance can alter soil characteristics, which affects the germination, establishment, growth, and reproduction of plants. Altered soil characteristics include compaction, which can reduce successful germination. Loss or disturbance of organic soil horizons can disrupt ecosystems through impaired decomposition, nutrient cycling, oxygen exchange and water availability.

3.3.2 Environmental Consequences

3.3.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

3.3.2.2 Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to vegetative communities and forested stands due to the more limited range of uses that would be allowed to occur. Existing activities and facilities including Chair 4 Road, the Summit Road and mountain bike trail #140 would continue to be maintained. Under this alternative more intensive uses such as alpine ski facilities would not be a permitted use. This alternative would provide the least potential for impacts to vegetative communities and forested stands of all the action alternatives and would be similar to Alternative 1.

3.3.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). In general, trail-based recreation and recreational facilities have the potential to negatively impact vegetative communities and forested stands as discussed above if they are not constructed in a manner that is sensitive to the landscape.

3.3.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential impacts to vegetative communities and forested stands due to the expanded range of uses that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses, such as alpine ski facilities, would be permitted. Construction and operation of facilities, such as recreational trails, cleared ski runs and lift towers, have the potential to negatively impact vegetative communities and forested stands (see Section III, section 3.3 – Vegetation for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.3.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency-prepared operational plans.

3.3.4 Cumulative Effects

Under Alternatives 3 and 4, cumulative impacts to vegetation due to potential future recreational trail and facility development include alterations in snowpack and snowmelt due to a change in vegetation communities present in portions of the PASEA and corresponding alterations on the vegetation growing

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

season due to increased sunlight and longer snow retention in cleared areas). See Section III, section 3.3 – Vegetation for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities.

3.4 WILDLIFE

3.4.1 Affected Environment

Mount Spokane is home to a diversity of wildlife species. Coyote, deer, moose, elk, black bear, western toads, owls, small mammals, bats, butterflies, and a diversity of bird species all occur, or have the potential to occur within the PASEA. In consultation with WDFW, State Parks has prioritized twenty-one focal wildlife species, which potentially occur at Mount Spokane State Park and within the PASEA. These include game and non-game species from a wide range of taxa, which use a wide range of environments, including mature forests, talus slopes, recent burns, meadows, and alpine, subalpine, riparian and aquatic habitats. A detailed description of each of the twenty-one focal species, their potential distribution in the park, important habitat elements and their associated lifestage relationship can be reviewed in the document titled *Habitat Elements and Life Stage Matrix for Wildlife Species of Interest in Mount Spokane State Park*, as noted in Appendix 4.

Suitable habitat conditions within the PASEA currently exist for the various life stages of all twenty-one focal wildlife species. These wildlife species are listed in the table below. The identified wildlife species have the potential to occur within the PASEA during their various life stages.

**Table II-2:
Twenty-one Focal Wildlife Species of Mount Spokane State Park**

Species	Scientific Name	WDFW Species of Concern	Federal Status
CARNIVORES			
1 Gray wolf	<i>Canis lupus</i>	State Endangered	None
2 Canadian lynx	<i>Lynx Canadensis</i>	State Threatened	Federal Threatened
3 Wolverine	<i>Gulo gulo</i>	State Candidate	Federal Candidate Species
4 American marten	<i>Martes Americana</i>	None	None
UNGULATES			
5 Rocky Mountain elk	<i>Cervus elaphus</i>	None	None
6 White-tailed deer	<i>Odocoileus virginianus ochrourus</i>	None	None
7 Moose	<i>Alces alces</i>	None	None
BIRDS			
8 Northern goshawk	<i>Accipiter gentilis</i>	State Candidate	Federal Species of Concern
9 Boreal owl	<i>Aegolius funereus richardoni</i>	State Monitor	None
10 Pileated woodpecker	<i>Dryocopus pileatus</i>	State Candidate	None
11 Black-backed woodpecker	<i>Picoides arcticus</i>	State Candidate	None
12 Dusky grouse	<i>Dendragapus obscurus pallidus</i>	None	None

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

**Table II-2:
Twenty-one Focal Wildlife Species of Mount Spokane State Park**

Species	Scientific Name	WDFW Species of Concern	Federal Status
13 Brown creeper	<i>Certhia Americana</i>	None	None
14 Winter wren	<i>Troglodytes troglodytes</i>	None	None
15 Olive-sided flycatcher	<i>Contopus cooperi</i>	None	None
SMALL MAMMALS			
16 Pika	<i>Ochotona princeps</i>	None	None
17 Pygmy shrew	<i>Sorex hoyi</i>	State Monitor	None
18 Silver-haired bat	<i>Lasionycteris noctivagans</i>	None	None
19 Hoary bat	<i>Lasiurus cinereus</i>	None	None
OTHER SPECIES			
20 Western toad	<i>Bufo boreas</i>	State Candidate	Federal Species of Concern
21 Compton tortoiseshell butterfly	<i>Nymphalis vaualbum</i>	State Monitor	None

There are a wide variety of impacts from recreation on the twenty-one species of interest. Potential impact types by mode of recreation for the twenty-one focal wildlife species is provided in detail in *Recreation and Trail Impacts on Wildlife Species of Interest in Mount Spokane State Park*, as noted in Appendix 3. These impacts are summarized below:

Hiking/Backpacking – Hikers may affect wildlife through direct disturbance, trampling of habitat, and indirectly through discarded food and other items. Some species are particularly sensitive to the approach of humans on foot. Hikers/backpackers can inadvertently lead to the spread of noxious weeds and reduction of habitat quality for some species.

Horseback riding – Horseback riding appears to be on the lower end of the spectrum in causing direct disturbance to wildlife. Indirectly, this activity may contribute to the spread of noxious weeds in wildlife habitats. Concentrations of horses around water can negatively impact habitat quality for aquatic wildlife. Horses can attract brown-headed cowbirds and potential predators of some songbirds, particularly where corrals and stables are present.

Mountain Biking – Mountain biking is often assumed to be more disturbing to wildlife than hiking. Speed and sound-levels of bikers vary from those of hikers and skiers, affecting wildlife responses. Mountain biking may seem less predictable to wildlife due to generally less talking, quicker actions, and greater disruption during an encounter. However, animals react most to the human form, and mountain bikers, like vehicles, may seem less threatening and predictable since they are limited to trail corridors. Mountain bikers may contribute to the spread of noxious weeds, thus reducing or increasing forage habitat for a variety of wildlife species.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

Skiing – This category includes cross-country skiing as well as telemark, backcountry skiing, and alpine skiing/snowboarding. Skiing is often concentrated on trails but may unpredictably occur away from trails as well as in the form of backcountry skiing. Some wildlife appears more sensitive to the approach of humans on foot/skis than on motorized vehicles. Groomed trails are also used as travel corridors by generalist carnivores, allowing some species to range into formerly snowbound or difficult to reach areas.

Snowmobiles – Technological advances are increasing the type of terrain that snowmobiles can access, opening up previously undisturbed winter habitats that serve a variety of wildlife species. Noise, unpredictability, speed, and snow compaction associated with snowmobiles are variables that can impact wildlife. Irresponsible and illegal snowmobile use is associated with harassment of wildlife, increasing susceptibility to physiological effects on wildlife species. Snowmobile use occurs in winter when many species may already be stressed by thermal regulation and food shortages. Packed or groomed roads and trails are used as travel corridors by generalist carnivores, allowing some species to range into formerly snowbound or difficult to reach areas. Impacts of snowmobile activity using maintained roads and trails is less than that of snowmobiles using off-road routes.

The following potential impacts to wildlife from recreational uses may occur:

Trapping/poaching – Although trapping is not allowed in Washington State Parks, illegal trapping and hunting are cited as risks associated with trails (particularly snowmobile trails).

Stress/physiological response – Studies of animal heart rates and fecal glucocorticoid levels have shown stress responses to human activity. Chronic stress can make species susceptible to illness and reduce individual fitness.

Breeding/rearing disturbance – Species that are considered generally tolerant of human activity may experience higher levels of disturbance at breeding and rearing sites. This may result in reduced attentiveness to young, disruption of feeding patterns, abandonment of nests and dens, and cause adults to undertake additional risks to their young by moving them to a new location.

Displacement/avoidance – Many species often move away from human activity or intentionally avoid associated sites. Sites may be avoided due to the disruption caused by human presence or habitat changes associated with the site (e.g., soil compaction, dryness of soils and vegetation along roadsides and trails). Animals displaced are less likely to survive and reproduce where habitat is unfamiliar or inferior. Displacement or avoidance is by far the most common response found in the literature related to recreation facilities and activities.

Disease – Domestic dogs are allowed in Washington State Parks and, although regulations specify that they should be restrained at all times, there are potentially dog owners who do not abide by this rule. Domestic dogs can transmit diseases such as rabies, distemper, and parasites to a variety of wildlife species.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

Animal collection – Although relatively uncommon, certain species (e.g., goshawk chicks for falconry) are sometimes illegally collected. Trail access can increase vulnerability.

Habitat fragmentation/edge effects – Habitat fragmentation/edge effects are often associated with timber harvest and/or roads, however recreational trails can have similar, though typically less intense impacts. Edge effects refer to habitat impacts to lands immediately adjacent to cleared trails and roads. However, fragmenting effects are not limited to wide road corridors and power lines. Narrow corridors associated with smaller roads and nature trails may have similar impacts. Forest fragmentation effects on songbirds mainly include nest parasitism and presence of nest predators (such as brown-headed cowbirds) in the trail corridor and adjacent interior forest. It has been noted that predation of songbird nests was greater closer to forested hiking trails. Another study found bird composition and abundance of songbirds was altered adjacent to trails.

Predator/competitor increased accessibility – Winter trails and snowmobile trails in particular, can greatly ease travel and access for species less adapted for movement in deep snows. This may cause greater rates of predation on some species and increased competition for prey for other species. Domestic animals (which may include livestock, cats and dogs) may be considered a competitor or predator species, especially near the periphery of Mount Spokane State Park where domestic livestock and pets are commonly found.

Snag/coarse woody debris reduction – Snags and coarse woody debris are used for cover, nesting and denning, and are key habitat components for some species. These components may be lost through trail development, wood gathering around campsites, recreational site development and associated removal of “hazard” trees.

Incidental mortality – Direct collision with motorized vehicles can result in incidental mortality. During winter months, snowmobiles may indirectly cause mortality of small mammals by compacting snow and collapsing subnivalian tunnels. During summer months, off-trail hiking and equestrian use can cause indirect mortality of small mammal broods by caving in denning sites.

Habituation – Many species will become habituated to human presence. Habituation often poses risks to animals, resulting in undesirable behaviors, poor nutrition, incidental destruction of property, and a host of other factors.

3.4.2 Environmental Consequences

3.4.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

3.4.2.2 Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to wildlife due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. This alternative would provide the least potential for wildlife impacts of all the action alternatives and would be similar to Alternative 1, with the exception that potential wildlife disturbance from backcountry skiing would not occur.

3.4.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

Implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) with the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification. As discussed above, trail based recreation and recreational facilities have the potential to negatively impact wildlife.

3.4.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential impacts to wildlife due to the expanded range of uses that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses, such as alpine ski facilities, would be permitted. Construction and operation of facilities, such as recreational trails, cleared ski runs and lift towers, have the potential to negatively impact wildlife (see Section III, section 3.4 – Wildlife for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.4.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency prepared operational plans.

3.4.4 Cumulative Effects

Potential cumulative effects are discussed in this section. Depending upon the degree of trail development and use patterns, new trails through forests and meadows that do not currently have trail use may result in displacement/avoidance behavior by wildlife. Many species often move away from human activity or they intentionally avoid associated human recreation sites. Animals that have been displaced by recreation are less likely to survive and reproduce where habitat is unfamiliar or inferior. In particular, during breeding, rearing, and winter and early spring foraging seasons; stress on wildlife is likely to increase susceptibility to illness, predation, and reduce individual fitness.

3.5 VISUAL RESOURCES

3.5.1 Affected Environment

Mount Spokane is prominent from many vantages within Spokane County. The mountain's prominence has increased its importance as a cultural and regional landmark. Large land clearing activities, and any activity that would add light to the mountain landscape, have the potential to negatively impact views of and from the mountain. A primary viewing site is the summit of Mount Spokane at a location generally referred to as Vista House. Visual impacts from this site are a key measure. Other areas within the park share a scenic resource predominantly defined by the forested environment and normal recreational amenities. Developed facilities such as roadways and cleared ski runs stand in contrast to the forested environment.

3.5.2 Environmental Consequences

3.5.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

3.5.2.2 Alternative 2 – Natural Forest Area

Under Alternative 2, there would be the least opportunity for potential impacts to visual resources due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski runs would not be a permitted use. Accordingly, the impact to visual resources under Alternative 2 would be similar to Alternative 1.

3.5.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). The most likely use of the PASEA would be single track trail-based recreation, which has a lower potential to impact visual resources.

3.5.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4 there would be greater opportunity for potential impacts to visual resources due to the expanded range of uses that would be allowed to occur in the Recreation classification. In particular, cleared ski runs, which may occur at widths of 60 to 190 feet, have the potential to impact views of Mount Spokane (see Section III, section 3.5 – Visual Resources for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.5.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency prepared operational plans.

3.5.4 Cumulative Effects

Although the PASEA is largely undeveloped, the existing ski area and base area have incrementally developed as skiing has gained popularity. Additionally, previous recreational development at Mount Spokane has involved clearing of hiking trails, grading, and construction of lifts, roads (e.g., Summit Road), and buildings (e.g., Vista House). Changes in vegetative patterns and developed facilities are visible from public lands within the park and from private lands outside of the park.

Alternatives 3 and 4 contain elements that have the potential to result in visual impacts, primarily through the clearing and grading necessary for hiking as well as formal ski trails. Under Alternative 4, the formal ski trails and facilities would be visible by visitors accessing the Vista House on the Summit Road during the summer as additional clearing in a relatively forested landscape, as well as from various distant vantage points.

3.6 RECREATION

3.6.1 Affected Environment

Mount Spokane State Park, encompassing a total of approximately 13,000 acres, offers a wide range of recreation opportunities throughout the year. Existing recreational facilities include 85 picnic sites, 3 picnic shelters, a group camping area for 90 people, 8 standard camp sites, parking for approximately 1,588 vehicles, 2 horse feeding stations, 2 comfort stations, 16 vault toilets, 100 miles of hiking/equestrian trails, 90 miles of bike trails, 31 miles of Nordic ski trails, 50 miles of roads, extensive opportunities for snowmobiling and snowshoeing, 3 cabins and the historic Vista House. An existing concessionaire, Mount Spokane 2000, operates the Mount Spokane Ski and Snowboard Park within a 1,425-acre developed portion of its 2,233-acre concession area. Within the developed portion of the ski area boundary, MS 2000 currently operates five aerial chairlifts. The lift network at Mount Spokane provides access to 45 named trails on approximately 150 acres of formal ski trails and another 130 acres of tree and open skiing.

The PASEA exists in a relatively undeveloped state. It provides limited recreational facilities that include Chair 4 Road, which is used for snowmobiling, cross-country skiing and snowshoeing. During the winter season, the PASEA is primarily utilized by backcountry skiers, snowmobilers and snowshoers. Examples of summer use include hiking and mountain bike use on Trail #140 and horseback riding.

3.6.2 Environmental Consequences

3.6.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification. Accordingly, under Alternative 1 there would be no change in the recreational uses allowed in the entire PASEA.

3.6.2.2 Alternative 2 – Natural Forest Area

Under Alternative 2, there would be a net loss in recreational opportunities available within the PASEA when compared to any of the other alternatives analyzed due to the more limited range of uses that would be allowed to occur. Unlike Alternatives 1 and 3, under Alternative 2, lift-served alpine backcountry skiing would not be a permitted use.

3.6.2.3 Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). The most likely use of the PASEA would be for trail based recreation. Under this alternative, recreation opportunities could potentially increase.

3.6.2.4 Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Alternative 4 provides the greatest potential for increased recreational opportunities of all the action alternatives due to the expanded range of uses that would be allowed to occur in the Recreation classification. In particular, developed ski facilities would be permitted under this alternative and these would provide an additional recreation opportunity within the PASEA (see Section III, section 3.6 – Recreation for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.6.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency prepared operational plans.

3.6.4 Cumulative Effects

Cumulative impacts to recreation are considered for short-term and long-term impacts. The cumulative effect on recreation is a potential increase in the quantity and access to varied recreation opportunities in the PASEA, including, lift served alpine skiing and an increase in lift-served backcountry skiing opportunities. Alternatively, under Alternative 4, the loss of hike-to, backcountry and side-country ski terrain at Mount Spokane would be a cumulative impact to recreation. Additionally, there would be a loss

of solitude during the summer as hikers, mountain bikers and other dispersed summer visitors potentially experience new cleared areas in a previously relatively undeveloped area.

3.7 RESOURCES NOT ANALYZED IN DETAIL.

3.7.1 Historic, Cultural and Archaeological Resources

3.7.1.1 Affected Environment

Mount Spokane State Park has a long history with Native American, as well as European American peoples in the Spokane area. While the prehistory of the park has not yet been fully established, the mountain has spiritual significance to local tribes. Traditionally, Mount Spokane was used for game hunting and huckleberry gathering, as well as spiritual quests. Mount Spokane's more recent past has been marked by many events that indicate its importance to the community as a notable destination. Mount Spokane's initial development as a park was pursued privately, then by county and state park departments in succession. Mount Spokane has an active history as a destination for skiing. During the 1930s, local ski clubs constructed an overnight ski chalet, rope tows, and ski jumps. In 1946, the world's first double chair lift was built on Mount Spokane. In the 1950s, overnight accommodations, a ski lodge, and restaurant all operated on the mountain until the lodge was burned to the ground in 1952.

The Paradise Camp/Summit Area Cultural Landscape contains sixteen individual buildings, structures, and objects. These features were documented on Historic Property Inventory Forms and submitted to the Department of Archaeology and Historic Preservation (DAHP) for concurrence on eligibility for the National Register of Historic Places (NRHP) in December of 2012. Of these, ten were determined by DAHP to be eligible for listing on the NRHP including the Vista House, the Latrine, Woodshed, and Reservoir at Cook's Camp, CCC Camp Francis Cook, Cook's Auto Road, the Headquarters Building at CCC Camp Cook, the Memorial to Spokane County War Dead, the Boy Scout Memorial, and the View Tubes. Of these eligible resources, only a portion of Cook's Auto Road (i.e., the Summit Road) lies within the PASEA. Others are nearby, and the expansion area alternatives overlap slightly with the cultural landscape boundary as defined in the 2009 Cultural Resources Management Plan (CRMP). The six features determined to be not eligible for the NRHP include the remains of a CCC telephone line, the original Mt. Spokane Lodge remains, the unfinished Beauty Mountain Latrine, the remains of the Caretaker's Residence in the Cook's Cabin area, communications facilities near the summit, and Chair #1.

Mount Spokane is generally considered by ethnographers to be within the aboriginal homeland of the Upper Spokane bands, a subgroup of the Spokane Indians, although use by nearby native groups such as the Lower and Middle Spokane, Coeur d'Alene, Kalispel, Colville, San Poil, and Nespelem peoples is also suggested by some sources. Ray (1936) goes so far as to make Mount Spokane an intersection point of Upper Spokane, Kalispel, and Coeur d'Alene territorial boundaries, thereby inferring joint use if not joint occupancy. All groups shared a dependence on resources acquired by a fishing-hunting-gathering technology.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

Food and other subsistence resources were obtained via a seasonal round, whereby native groups circulated through their territories (and those of others) to pursue the changing opportunities for plants and animals. Using localized campsites or seasonal habitations, the annual round began in spring when bands and families abandoned their winter villages (Ross 1991, 1998, 2011). Uplands such as Mount Spokane were known as prime berry and game areas (Curtis 1911; Wynecoop 1969). Additional upland plant resources included beargrass, Oregongrape, kinnikinnick, flora with distinct medicinal qualities, and trees such as Western redcedar, tamarack, and cottonwood.

As the highest elevation in proximity to traditional Spokane territory, it seems reasonable that Mount Spokane was also a destination for aboriginal vision quests and additional puberty rites. Such activity often entailed the stacking of large stones to construct alignments and cairns. Prehistoric cairns in upland locales frequently command panoramic views and can signify vision quests or commemorate other important events (Cline 1938; Mandelbaum 1938; Ray 1942, Teit 1930). Although no prehistoric cairns are presently known on Mount Spokane summit, one 1895 travel account up the mountain provides evidence for this apparent aboriginal land-use. Mount Spokane also plays a role in the creation traditions of Spokane native peoples. Most recently, Spokane tribal representatives have identified Mount Spokane as a Traditional Cultural Property (TCP), as a place or location with traditional cultural significance to a living community.

Although a few cultural resources surveys were completed in Mount Spokane State Park during the 1970s and 1980s, most studies have been completed since 2000. From then to the present day, 16 project-specific archaeological surveys or independent historic preservation efforts have recorded circa 25 historic sites, buildings, and structures within Mount Spokane State Park. A majority of these studies were associated with linear road, trail, or fiber optic projects. Additional surveys were undertaken for buildings or separate structural facilities, and all largely outside of the PASEA's proposed 279-acre expansion area. Sixteen of those inventoried resources are included within the Paradise Camp/Summit Area Cultural Landscape. To date, no archaeological sites with prehistoric or pre-contact associations are identified in Mount Spokane State Park. Post-1980 Mount Spokane State Park cultural resource reports include:

- Luttrell, C. 2000a. Cultural Resources Investigations of the Stage I Area at Mount Spokane State Park, Spokane County, Washington. AHS Letter Report 00-1. Archaeological and Historical Services, Eastern Washington University, Cheney.
- . 2000b. Cultural Resources Investigations for the Mount Spokane State Park Road Improvement Project, Spokane County, Washington. Short Report 696. Archaeological and Historical Services, Eastern Washington University, Cheney.
- . 2000c. Cultural Resources Investigations for the Mount Spokane State Park Night Lighting Project, Spokane County, Washington. Short Report 696. Archaeological and Historical Services, Eastern Washington University, Cheney.

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

- . 2009a. Mt. Spokane 2000 Tubing Hill Project Letter Report – Mount Spokane State Park, Spokane County. Washington State Park and Recreation Commission, Olympia.
- . 2009b. Mount Spokane State Park – Kit Carson Road and Chair 4 Road Culverts Project, Spokane County, Washington Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2010a. The Mount Spokane State Park – Bald Knob Comfort Station Improvement Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2010b. The Mount Spokane State Park Trail #140 Realignment and Trail #153 Construction Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2011a. Mount Spokane State Park – Mt. Spokane 2000 Snowcat Pick Point Project, Spokane County, Washington Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2011b. Mount Spokane State Park – Mt. Spokane 2000 Fiber Optics Cable Project, Spokane County, Washington Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2011c. The Mount Spokane State Park – Nordic Ski Trails Improvement Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2012a. The Mount Spokane State Park – Trails #140 and #160 Improvement Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2012b. The Mount Spokane State Park – Warming Hut Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2012c. The Mount Spokane State Park – Warming Hut Project Redux, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2012d. The Mount Spokane State Park – Ski Connection Ramp Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2012e. The Mount Spokane State Park – Trail #140 Segment Reroute Project, Spokane County Letter Report. Washington State Park and Recreation Commission, Olympia.
- . 2013. Mount Spokane State Park – Equipment Storage Pole Building Project, Spokane County, Washington Letter Report. Washington State Park and Recreation Commission, Olympia.

3.7.1.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to historic, cultural, and archaeological resources due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. Of the action alternatives, Alternative 2 would provide the least potential for historic, cultural, and archaeological impacts of all the action alternatives and would be similar to Alternative 1.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). In general, trail based recreation and recreational facilities have the potential to negatively impact historic, cultural, and archaeological resources.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential impacts to historic, cultural, and archaeological resources due to the expanded range of uses that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use and would involve more intensive clearing than less developed trails (i.e., single-track trails, horseback, etc.). Construction of facilities, such as recreational trails, ski runs and lift towers, have the potential to negatively impact historic, cultural, and archaeological resources (see Section III, section 3.7.1 – Historic, Cultural, and Archaeological Resources for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.1.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting and surveys, and through agency-prepared operational plans.

3.7.2 Air Quality

3.7.2.1 Affected Environment

Air quality and visibility within Mount Spokane State Park and the surrounding area follows patterns strongly influenced by weather and topography. Local air quality in the Study Area is primarily affected by emissions from the use of fireplaces, summer dust storms, and motorized vehicles and occasional

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

nearby wildfires. The use of snowmobiles and high density traffic on high use days affects air quality intermittently.

3.7.2.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to air quality due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as snowmobiling would not be a permitted use (except for existing use occurring on Chair 4 Road, which would continue to be permitted and vehicular traffic on the Summit Road). Alternative 2 would provide the least potential for air quality impacts of the action alternatives and would be similar to Alternative 1.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities*. In general, non-motorized trail based recreation and recreational facilities have less potential to negatively impact air quality.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential impacts to air quality due to the expanded range of motorized uses, such as grooming vehicles and snowmobiles that would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use. Construction and operation of facilities such as recreational trails, ski runs and lift towers have the potential to negatively impact air quality (see Section III, section 3.7.2 – Air Quality for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.2.3 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project-specific permitting, and through agency prepared operational plans.

3.7.3 Noise

Noise effects are direct effects experienced on-site or immediately adjacent to the source. To maintain the trail systems, intermittent operation of power equipment during the summer and grooming equipment

during the winter is a source of noise on existing trails. Snowmobiles are sources of noise along trails and roads during the winter months.

3.7.3.1 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential noise impacts due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be permitted. Snowmobiling along the Chair 4 Road and vehicular traffic on the Summit Road would continue. Of the action alternatives, Alternative 2 would provide the least potential for noise impacts and would be similar to Alternative 1.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). In general, non-motorized trail based recreation has less potential for measurable noise impacts. There would be noise impacts associated with existing snowmobile use on Chair 4 Road and vehicular traffic on the Summit road.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, there would be greater opportunity for potential noise impacts due to the expanded range of winter motorized uses that may be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as snowmobiling and alpine ski facilities would be permitted. Construction and use of facilities such as snowmobile trails (including the existing use of Chair 4 Road), ski runs and lift towers have the potential to create noise impacts (see Section III, section 3.7.3 – Noise for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.3.2 Mitigation Measures

Potential environmental impacts of the action alternatives would be minimized through implementation of the mitigation measures described in section 2.5 above, through project specific permitting, and through agency prepared operational plans.

3.7.4 Land Use

3.7.4.1 Affected Environment

The PASEA lies within Spokane County and is subject to local land use regulations. The PASEA is entirely surrounded by existing State Park managed lands. Development within the park must also receive approval from other state and federal agencies for specific projects. Spokane County has zoned all of Mount Spokane State Park, including the PASEA, as Rural Conservation (RCV). Within the RCV zone, winter recreation areas, including downhill, Nordic/cross-country skiing, snowmobiling and ice-skating are permitted uses.

WAC 352-16-020 establishes a Land Classification System (LCS) for management of State Park Lands (see Appendix 2). The LCS is a system of management zoning for park lands and waters that sets forth, in a general fashion, the basic philosophy, physical features, location, activities, and developments in a park. When assigned to a specific area within a park, each classification sets an appropriate intensity for recreational activities and facilities development. For purposes of park management, the State Parks LCS takes precedence over local zoning, as in this case the RCV zoning is a general land use designation where the LCS provides detailed management direction by the agency. Classifications are aligned along a spectrum ranging from low to high-intensity recreational uses and developments. By classifying park lands, the agency is able to consciously strike a balance between protecting park resources and providing an appropriate variety of recreational opportunities to park visitors.

3.7.4.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing land use and management practices without applying a land classification for the PASEA.

Alternative 2 – Natural Forest Area

Under Alternative 2, more intensive uses such as alpine ski facilities would not be a permitted use. Of the action alternatives, Alternative 2 would provide the least potential for land use impacts, as the entire currently undeveloped PASEA acreage would be designated Natural Forest Area. Since no alpine or backcountry skiing would be allowed under Alternative 2, this change in land classification would likely result in the removal of the PASEA from the current MS 2000 Concessionaire Agreement.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). None of these uses are anticipated to have a negative impact on land use. Similar to Alternative 2, classifying a portion of the PASEA as Natural Forest Area would likely result in removing Natural Forest Area lands from the current MS 2000 Concessionaire Agreement.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4 lands within the PASEA would be classified as Recreation, Resource Recreation and Natural Forest Area. Alternative 4 of this nonproject action also considers potential reclassification of approximately 20 acres south of the PASEA from Resource Recreation to Recreation as well as reclassification of approximately 1 acre from Heritage to Recreation in the vicinity of the Vista House. Under Alternative 4 there would be an expanded range of winter motorized uses (e.g., grooming equipment) that may be allowed to occur in the Recreation classification and more intensive uses such as alpine ski facilities would be a permitted use. However, none of the uses contained in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2) in the Recreation classification are anticipated to have an impact on land use (see Section III, section 3.7.4 – Land Use for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities). Similar to Alternatives 2 and 3, classifying a portion of the PASEA as Natural Forest Area would likely result in removing Natural Forest Area lands from the current MS 2000 Concessionaire Agreement.

3.7.4.3 Mitigation Measures

No specific mitigation measures beyond compliance with local, state and federal regulations are proposed.

3.7.5 Transportation and Parking

3.7.5.1 Affected Environment

Accessibility to Mount Spokane Ski and Snowboard Park is provided by U.S. Highway 206, which is in good condition and is maintained by the state. The park access road to the base area is an asphalt surface in mostly good condition, and it is maintained by State Parks. The only road in the PASEA is a portion of the Summit Road and the Chair 4 Road, which does not carry public vehicular traffic. Due to the topography and terrain in the PASEA, it is unlikely that new parking facilities or new roads would be constructed.

3.7.5.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to parking and transportation due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. Of the action alternatives, Alternative 2 would provide the least potential for parking and transportation impacts and would be similar to Alternative 1.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for a range of recreational uses consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities*. This Alternative would provide more potential for parking and transportation impacts than Alternatives 1 and 2.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, a broader range of uses would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use. This alternative has the most potential for parking and transportation impacts (see Section III, section 3.7.5 – Transportation and Parking for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.5.3 Mitigation Measures

No specific mitigation measures beyond compliance with local, state and federal regulations are proposed.

3.7.6 Public Services

3.7.6.1 Affected Environment

State Parks utilizes an on-going “risk management” approach for public services, including prompt correction of unsafe conditions (facilities, work environment, etc.), adequate emergency preparedness and training, effective law enforcement coordination, and participation with park users and neighbors to improve the overall safety of the park environment. Park staff will continue to coordinate with regional staff, headquarters’ Chief of Visitor Protection and Law Enforcement, local emergency service providers, and other interested individuals to formulate and implement additional management policies and prescriptions as necessary to ensure the overall safety of park visitors and park staff.

Maintenance: Park staff will monitor park facilities on a regular basis to identify deficiencies that potentially could impact public or staff health, safety, and welfare, and take appropriate follow up measures. Facility deficiencies will be addressed through routine and planned maintenance, and capital projects.

EMS and Fire Response: Permanent park staff is required to maintain a current first aid and CPR certification. Park staff will continue improving communications and coordination with DNR, local fire, and EMS districts to ultimately decrease response times and enhance emergency preparedness. Current contracts with Fire Districts in both Spokane County and Kootenai County (Idaho) will be continued and enhanced as appropriate.

Law Enforcement: Initially ranger contacts are geared towards compliance through education and interpretation; however, at times rangers must modify public behavior by use of selected actions

**Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the
Potential Alpine Ski Expansion Area Final Environmental Impact Statement**

which may include issuing notices of infractions, citation, or physical arrests if resources or people are at risk.

Volunteers: Park staff will continue to work with volunteers, user groups, and neighbors to encourage reporting of hazardous conditions and unauthorized uses.

Emergency Reporting: Park staff will continue to promote awareness of existing systems for reporting park-related emergencies including fires, crimes, injuries, and unauthorized park uses.

Police Services: Park rangers are the point of first contact for police services at the Park, with backup as needed from the Spokane County Sheriff's Office.

Fire Protection: Structural fire protection is provided through contract with the Mead Fire District. The Washington Department of Natural Resources is responsible for wildland fire control.

Emergency Medical Services: The Mead Fire District provides emergency services at the Park. Park staff has CPR and first aid training and provides first response services in most circumstances.

Community Services: Community services, such as medical services, housing, schools, and other public services, are provided by the Mead School District, City of Mead and Spokane County.

3.7.6.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2 there would be less opportunity for potential impacts to public services due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. However, as Alternative 2 could result in the removal of the PASEA from the concession area boundary, management/safety related issues may be fully or partially shifted to park staff which could potentially create additional demands on public service providers.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for an expanded range of recreational uses above current conditions consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). In general, the combination of increased visitation, potential construction of additional recreational facilities, and access into new portions of the park would be expected to result in some increased demand for public services. The level

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

of this demand has not been quantified, but would be expected to incrementally increase with the phased development of facilities.

A minimal increase in demand could occur for police services. Contributing factors in this demand include: increased visitation, access into new areas within the PASEA, and potential conflicts among users of the multi-use trail systems. No significant increases in park staffing are expected; consequently impacts on schools, government services, or other community services would be expected to be minimal.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, a broader range of uses would be allowed to occur in the Recreation classification. However, impacts are anticipated to be similar to but better than those described above in Alternatives 1, 2 and 3 due to the increased access to the area by emergency services (see Section III, section 3.7.6 – Public Services for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.6.3 Mitigation Measures

No specific mitigation measures beyond compliance with local, state and federal regulations are proposed.

3.7.7 Environmental Health

3.7.7.1 Affected Environment

The PASEA has a limited amount of recreational facilities including Chair 4 Road, the Summit Road and Trail #140. Vehicle exhaust, noise, and traffic normally associated with recreational activities, such as snowmobiling and vehicular access to trails and the summit, are present.

3.7.7.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to environmental health due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be a permitted use. Mount Spokane State Park, and the PASEA in particular, are relatively isolated so exhaust, noise and traffic generated by park users is unlikely to affect adjacent property owners or the general public.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for an expanded range of

recreational uses above current conditions consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). Mount Spokane State Park and the PASEA in particular are relatively isolated so exhaust, noise and traffic generated by park users is unlikely to affect adjacent property owners or the general public.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, a broader range of uses would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use. Mount Spokane State Park, and the PASEA in particular, are relatively isolated, so exhaust, noise and traffic generated by park users is unlikely to affect adjacent property owners or the general public (see Section III, section 3.7.7 – Environmental Health for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.7.3 Mitigation Measures

No specific mitigation measures beyond compliance with local, state and federal regulations are proposed.

3.7.8 Utilities

3.7.8.1 Affected Environment

Mount Spokane Ski and Snowboard Park receives electrical power through service from Inland Power. Electricity arrives and is distributed via underground cable. Inland Power also provides power to the TV/communications towers at the summit of Mount Spokane. No septic, water or sewer services are currently provided in the PASEA; however, electricity is available.

3.7.8.2 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative reflects a continuation of existing management practices without applying a land classification.

Alternative 2 – Natural Forest Area

Under Alternative 2, there would be less opportunity for potential impacts to utilities due to the more limited range of uses that would be allowed to occur. Under this alternative, more intensive uses such as alpine ski facilities would not be permitted. Potential impacts to utilities are expected to be minimal and similar to Alternative 1.

Alternative 3 – Resource Recreation and Natural Forest Area

With the exception of alpine ski facilities, which would not be a permitted facility use in the Resource Recreation classification, implementation of Alternative 3 would allow for an expanded range of recreational uses above current conditions consistent with those detailed in the *Land Classification Compatibility Matrix for Facilities and Activities* (see Appendix 2). Under this alternative, development

Section II. Mount Spokane State Park Proposed Land Classification for the Area known as the Potential Alpine Ski Expansion Area Final Environmental Impact Statement

would primarily include non-motorized trails so the potential impact to electricity, water, and septic utilities is expected to be minimal and similar to Alternatives 1, 2 and 4.

Alternative 4 – Recreation, Resource Recreation, and Natural Forest Area

Under Alternative 4, a broader range of uses would be allowed to occur in the Recreation classification. Under this alternative, more intensive uses such as alpine ski facilities would be a permitted use; however, potential impacts to utilities are expected to be minimal and similar to Alternatives 1, 2 and 3 (see Section III, section 3.7.8 – Utilities for a detailed analysis of the potential impacts associated with construction and operation of alpine ski facilities).

3.7.8.3 Mitigation Measures

No specific mitigation measures beyond compliance with local, state and federal regulations are proposed.

FIGURE II-1: PASEA LAND CLASSIFICATION ALTERNATIVE 1 - NO ACTION

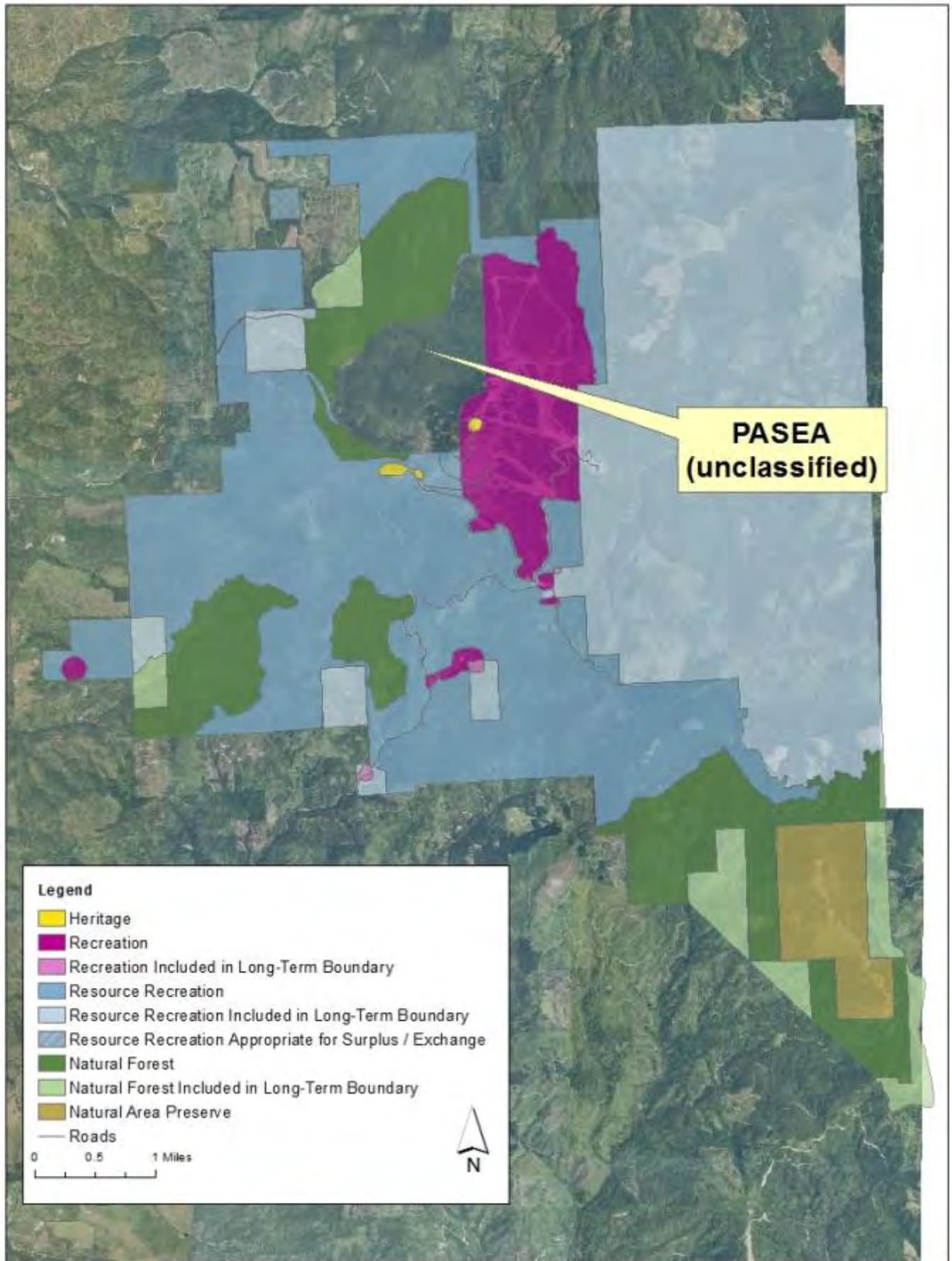


FIGURE II-2: PASEA LAND CLASSIFICATION ALTERNATIVE 2 – NATURAL FOREST AREA

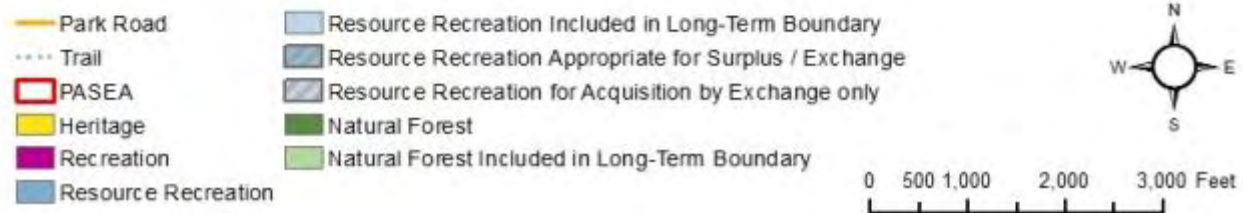
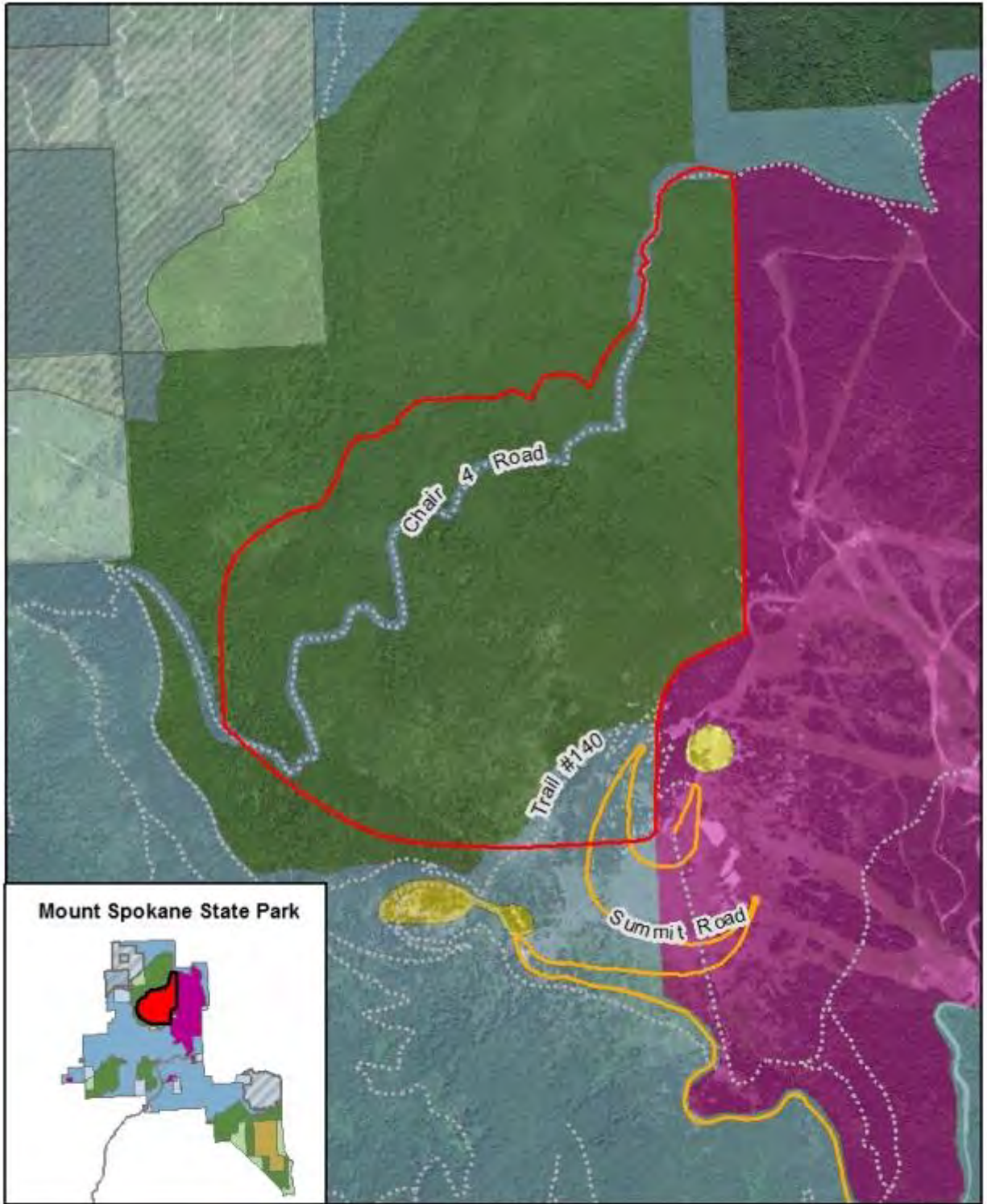
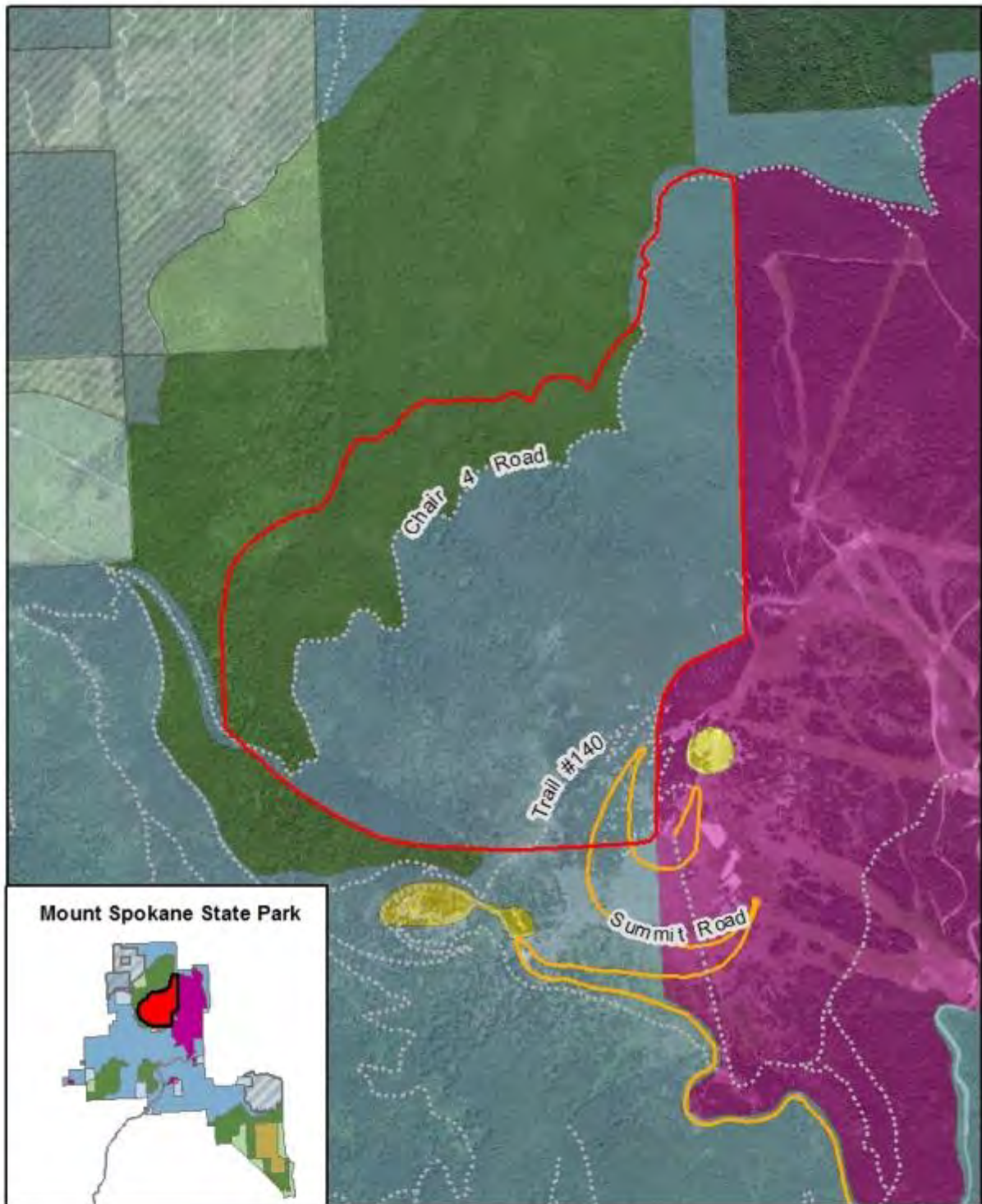
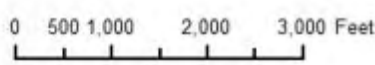


FIGURE II-3: PASEA LAND CLASSIFICATION ALTERNATIVE 3 -



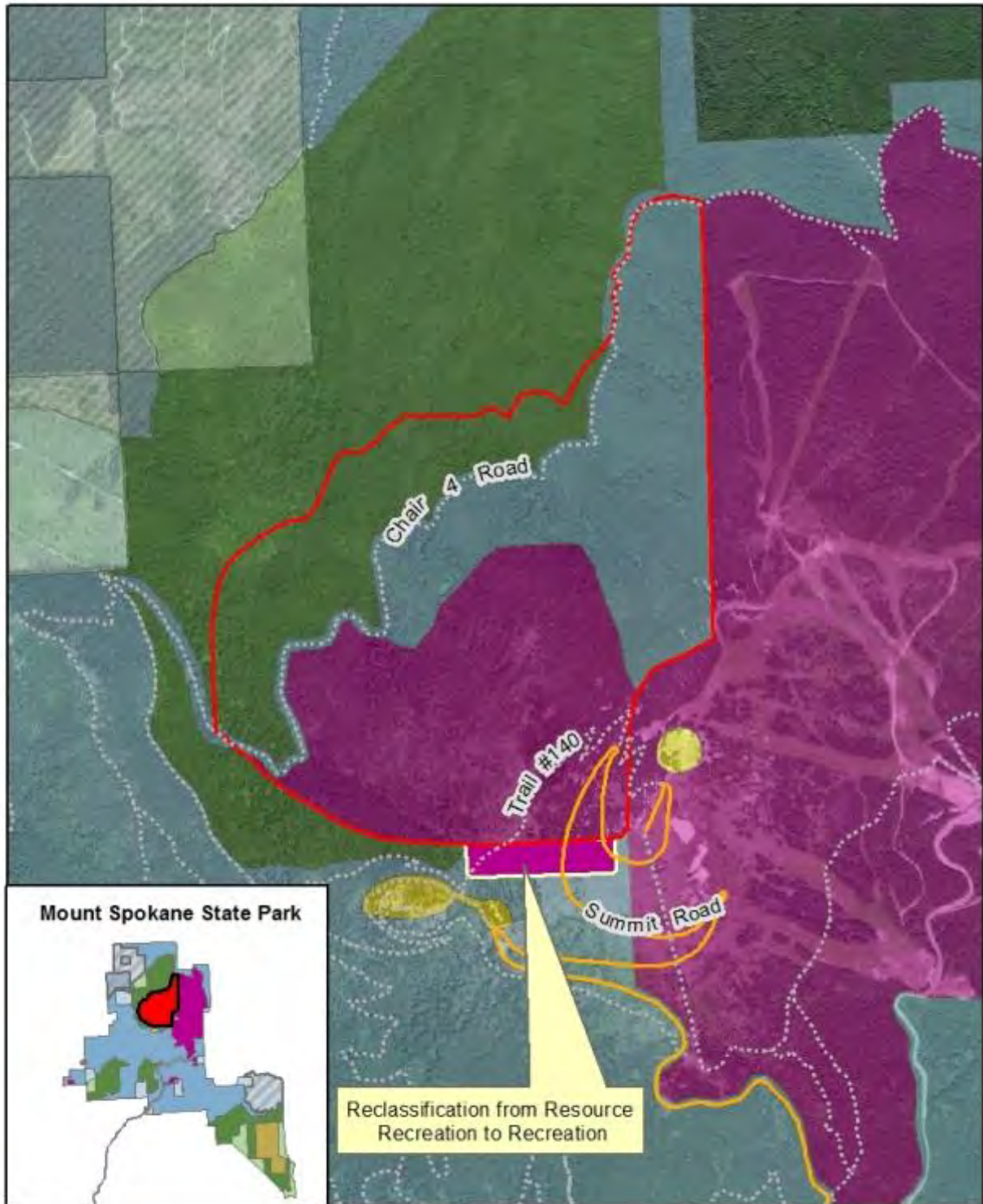
- Park Road
- - - Trail
- PASEA
- Heritage
- Recreation
- Resource Recreation

- Resource Recreation Included in Long-Term Boundary
- Resource Recreation Appropriate for Surplus / Exchange
- Resource Recreation for Acquisition by Exchange only
- Natural Forest
- Natural Forest Included in Long-Term Boundary



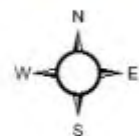
RESOURCE RECREATION AND NATURAL FOREST AREA

FIGURE II-4: PASEA LAND CLASSIFICATION ALTERNATIVE 4 - RECREATION, RESOURCE RECREATION AND NATURAL FOREST AREA



- Park Road
- Trail
- PASEA
- Heritage
- Recreation
- Resource Recreation

- Resource Recreation Included in Long-Term Boundary
- Resource Recreation Appropriate for Surplus / Exchange
- Resource Recreation for Acquisition by Exchange only
- Natural Forest
- Natural Forest Included in Long-Term Boundary



0 500 1,000 2,000 3,000 Feet

**SECTION III.
MOUNT SPOKANE STATE PARK
PROPOSED SKI AREA EXPANSION
FINAL ENVIRONMENTAL IMPACT STATEMENT**

FACT SHEET

Proposal/Title:	Mount Spokane State Park: Proposed Ski Area Expansion Final Environmental Impact Statement
Description of Proposal:	A proposal to the Commission by Mount Spokane Ski and Snowboard Park to develop alpine ski facilities into a 279-acre expansion area within and adjacent to the PASEA by constructing one new chairlift and seven associated ski trails (project action).
Description of Alternatives:	Three alternatives are analyzed in detail for the project action: a No Action Alternative, the Proposed Action and a Mitigated Proposed Action.
Location:	Mount Spokane State Park is located approximately 22 miles northeast of the City of Spokane in Spokane County. Access to the park is almost exclusively by State Highway SR 206. The highway at the park entrance is Mount Spokane State Park Drive.
Proponent:	Mount Spokane Ski and Snowboard Park
Tentative Date of Implementation:	Spring/Summer 2015
Name and Address of Lead Agency and Contact:	Washington State Parks and Recreation Commission 1111 Israel Road Southwest; PO Box 42650 Olympia, WA 98054-2650
Responsible Official:	Contact: Randy Kline, Environmental Program Manager 360.902.8632 randy.kline@parks.wa.gov
Required Approvals:	See Table EIS 2-5 of this document
Authors/Principal Contributors to the Final EIS:	SE Group 220 South Second Avenue, Suite 201 Ketchum, ID 83340 970.668.3398 Washington State Parks and Recreation Commission 1111 Israel Road Southwest Olympia, WA 98504-2650 360.902.8638
Date of Issuance of Final EIS:	October 31, 2014
Scheduled Date of Final Action:	November, 2014
Location of Copies of Final EIS for Public Review:	Washington State Parks and Recreation Commission 1111 Israel Road Southwest Olympia, WA 98504-2650 360.902.8638 Mount Spokane State Park N. 26107 Mount Spokane Park Dr. Mead, WA 99021 Washington State Parks and Recreation web page http://www.parks.wa.gov/856/Mount-Spokane-PASEA-Land-Classification and http://www.parks.wa.gov/335/Mount-Spokane

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

Location of Copies of Final EIS for Purchase and Cost of Copy to Public:	Washington State Parks and Recreation Commission 1111 Israel Road Southwest Olympia, WA 98504-2650 360.902.8638
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SECTION III – TABLE OF CONTENTS

1.	BACKGROUND, PURPOSE AND NEED	III-1
1.1	INTRODUCTION	III-1
1.2	BACKGROUND.....	III-1
1.3	PURPOSE AND NEED.....	III-3
1.4	SCOPING AND PUBLIC PARTICIPATION	III-5
2.	ALTERNATIVES INCLUDING THE PROPOSED ACTION	III-6
2.1	PROCESS USED TO DEVELOP ALTERNATIVES	III-6
2.1.1	<i>Alternatives Considered but Eliminated to Avoid and/or Minimize Impacts</i>	III-6
2.2	ALTERNATIVES CONSIDERED IN DETAIL.....	III-9
2.2.1	<i>Alternative 1 – No Action</i>	III-9
2.2.2	<i>Alternative 2 – Proposed Action (Enhanced Recreation Alternative)</i>	III-9
2.2.3	<i>Alternative 3 – Mitigated Proposed Action</i>	III-10
2.2.4	<i>Comparison of Alternatives</i>	III-11
2.2.5	<i>Assumptions and Actions Common to All Action Alternatives</i>	III-11
2.3	SCOPE OF THE FINAL EIS	III-15
2.3.1	<i>Resources not Analyzed in Detail</i>	III-15
2.4	MITIGATION MEASURES	III-16
2.4.1	<i>Operation and Management-Related Mitigation Measures</i>	III-22
2.4.2	<i>Potential Compensatory Mitigation Measures</i>	III-22
2.5	LIST OF PERMITS AND APPROVALS REQUIRED FOR IMPLEMENTATION	III-22
3.	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	III-23
3.1	SOILS AND GEOLOGY	III-23
3.1.1	<i>Affected Environment</i>	III-23
3.1.2	<i>Alternative 1 – No Action</i>	III-27
3.1.3	<i>Alternative 2 – Proposed Action</i>	III-27
3.1.4	<i>Alternative 3 – Mitigated Proposed Action</i>	III-28
3.1.5	<i>Mitigation Measures</i>	III-29
3.1.6	<i>Cumulative Effects</i>	III-29
3.2	WATERSHED RESOURCES	III-30
3.2.1	<i>Introduction</i>	III-30
3.2.2	<i>Affected Environment</i>	III-33
3.2.3	<i>Environmental Consequences</i>	III-36
3.2.4	<i>Mitigation Measures</i>	III-40
3.2.5	<i>Cumulative Effects</i>	III-40
3.3	VEGETATION.....	III-41
3.3.1	<i>Introduction</i>	III-41
3.3.2	<i>Affected Environment</i>	III-42
3.3.3	<i>Environmental Consequences</i>	III-49
3.3.4	<i>Mitigation Measures</i>	III-53
3.3.5	<i>Cumulative Effects</i>	III-53
3.4	WILDLIFE.....	III-54
3.4.1	<i>Introduction</i>	III-54
3.4.2	<i>Affected Environment</i>	III-55
3.4.3	<i>Environmental Consequences</i>	III-66
3.4.4	<i>Mitigation Measures</i>	III-99

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

3.4.5	<i>Cumulative Effects</i>	III-99
3.5	VISUAL RESOURCES.....	III-100
3.5.1	<i>Introduction</i>	III-100
3.5.2	<i>Scenic Environment Management</i>	III-100
3.5.3	<i>Affected Environment</i>	III-102
3.5.4	<i>Environmental Consequences</i>	III-104
3.5.5	<i>Mitigation Measures</i>	III-106
3.5.6	<i>Cumulative Effects</i>	III-106
3.6	RECREATION.....	III-107
3.6.1	<i>Introduction</i>	III-107
3.6.2	<i>Affected Environment</i>	III-107
3.6.3	<i>Environmental Consequences</i>	III-114
3.6.4	<i>Mitigation Measures</i>	III-117
3.6.5	<i>Cumulative Effects</i>	III-117
3.7	RESOURCES NOT ANALYZED IN DETAIL.....	III-118
3.7.1	<i>Historic, Cultural, and Archaeological Resources</i>	III-118
3.7.2	<i>Air Quality</i>	III-119
3.7.3	<i>Noise</i>	III-121
3.7.4	<i>Land Use</i>	III-122
3.7.5	<i>Transportation and Parking</i>	III-123
3.7.6	<i>Public Services</i>	III-125
3.7.7	<i>Environmental Health</i>	III-126
3.7.8	<i>Utilities</i>	III-127
4.	LIST OF PREPARERS	III-128
4.1	PROJECT MANAGEMENT TEAM.....	III-128
5.	REFERENCES	III-129

FIGURES

- FIGURE EIS-1: LOCATION MAP
- FIGURE EIS-2: EXISTING CONDITIONS
- FIGURE EIS-3: ALTERNATIVE 2 – PROPOSED CONDITIONS
- FIGURE EIS-4: ALTERNATIVE 3 – PROPOSED CONDITIONS
- FIGURE EIS-5: EXISTING CONDITIONS – VEGETATION
- FIGURE EIS-6: IMPACTS TO VEGETATION – ALTERNATIVE 2
- FIGURE EIS-7: IMPACTS TO VEGETATION – ALTERNATIVE 3
- FIGURE EIS-8: VISUAL SIMULATION E. BLANCHARD RD. – ALTERNATIVE 2
- FIGURE EIS-9: VISUAL SIMULATION N. ELK CHATTAROY RD. – ALTERNATIVE 2
- FIGURE EIS-10: VISUAL SIMULATION E. TALLMAN RD. – ALTERNATIVE 2
- FIGURE EIS-11: VISUAL SIMULATION E. BLANCHARD RD. – ALTERNATIVE 3
- FIGURE EIS-12: VISUAL SIMULATION N. ELK CHATTAROY RD. – ALTERNATIVE 3
- FIGURE EIS-13: VISUAL SIMULATION E. TALLMAN RD. – ALTERNATIVE 3
- FIGURE EIS-14: EXISTING CONDITIONS – WATERSHED
- FIGURE EIS-15: IMPACTS TO WATERSHED – ALTERNATIVE 2
- FIGURE EIS-16: IMPACTS TO WATERSHED – ALTERNATIVE 3
- FIGURE EIS-17: SOLAR ASPECT ANALYSIS

APPENDICES

APPENDIX A: GEOTECHNICAL REPORT
 APPENDIX B: BIOLOGICAL SURVEYS CONDUCTED IN THE ANALYSIS AREA AT MT. SPOKANE STATE PARK DURING 2010
 APPENDIX C: FOREST HEALTH ASSESSMENT AND PLAN
 APPENDIX D: WETLAND DELINEATION REPORT – MOUNT SPOKANE SKI AND SNOWBOARD PARK PROPOSED EXPANSION AREA
 APPENDIX E: DRAFT HABITAT MANAGEMENT PLAN – MOUNT SPOKANE SKI AND SNOWBOARD PARK PROPOSED EXPANSION AREA
 APPENDIX F: WASHINGTON STATE PARKS LAND CLASSIFICATION SYSTEM
 APPENDIX G: NATURESERVE CONSERVATION STATUS RANKS
 APPENDIX H: MOUNT SPOKANE SEPA COMBINED ENVIRONMENTAL IMPACT STATEMENT: COMMENT SUMMARY AND RESPONSES ON THE DRAFT EIS

LIST OF TABLES

TABLE EIS 2-1: COMPARISON OF ALTERNATIVES III-11
 TABLE EIS 2-2: SLOPE GRADIENT BY ABILITY LEVEL III-11
 TABLE EIS 2-3: MOUNT SPOKANE EIS CLEARING AND OTHER ASSUMPTIONS III-12
 TABLE EIS 2-4: MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES INCORPORATED INTO THE PROJECT PROPOSAL III-18
 TABLE EIS 2-5: SUMMARY OF PERMITS, APPROVALS, AND CONSULTATION FOR THE PROPOSED EXPANSION III-23
 TABLE EIS 3.1-1: SOIL TYPES IDENTIFIED WITHIN THE STUDY AREA III-24
 TABLE EIS 3.1-2: ACREAGE OF TREE REMOVAL AND GRADING BY SOIL MAP UNIT III-27
 TABLE EIS 3.2-1: WATER TYPE CLASSIFICATIONS III-33
 TABLE EIS 3.2-2: CHARACTERISTICS OF THE DELINEATED STREAMS IN PROJECT SITE III-34
 TABLE EIS 3.2-3: CHARACTERISTICS OF THE DELINEATED WETLANDS IN PROJECT SITE III-35
 TABLE EIS 3.3-1: FIELD SURVEYS FOR VEGETATION IN OR ADJACENT TO THE MOUNT SPOKANE STUDY AREA 2006 TO 2013 III-42
 TABLE EIS 3.3-2: PLANT ASSOCIATIONS FOUND IN THE STUDY AREA III-44
 TABLE EIS 3.3-3: POTENTIAL IMPACTS TO VEGETATION COMMUNITIES WITHIN THE MOUNT SPOKANE STUDY AREA III-51
 TABLE EIS 3.4-1: CONSERVATION STATUS OF THE TWENTY-ONE FOCAL SPECIES IDENTIFIED FOR MOUNT SPOKANE STATE PARK III-56
 TABLE EIS 3.4-2: SUITABLE HABITAT ESTIMATES FOR THE TWENTY-ONE FOCAL SPECIES IN THE 279-ACRE EXPANSION AREA III-58
 TABLE EIS 3.4-3: POTENTIAL IMPACTS TO THE TWENTY-ONE FOCAL SPECIES UNDER ACTION ALTERNATIVES... III-73
 TABLE EIS 3.4-4: POTENTIAL IMPACTS TO VEGETATION COMMUNITIES WITHIN THE MOUNT SPOKANE STUDY AREA III-76
 TABLE EIS 3.4-5: CHANGE IN SUITABLE HABITAT FOR THE TWENTY-ONE FOCAL WILDLIFE SPECIES UNDER ALTERNATIVE 2 III-78
 TABLE EIS 3.4-6: CHANGE IN SUITABLE HABITAT FOR THE TWENTY-ONE FOCAL WILDLIFE SPECIES UNDER ALTERNATIVE 3 III-91
 TABLE EIS 3.5-1: DESCRIPTION OF SCENIC INTEGRITY LEVELS III-101

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

LIST OF ILLUSTRATIONS

ILLUSTRATION EIS 2-1: TYPICAL FULL CLEARING TREATMENT SCALLOPING WITH GRADING III-14
ILLUSTRATION EIS 2-2: TYPICAL FULL CLEARING TREATMENT WITH FEATHERING AND NO GRADING III-14
ILLUSTRATION EIS 3.1-1: SOIL MAPPING UNITS WITHIN THE STUDY AREA..... III-26
ILLUSTRATION EIS 3.2-1: MIDDLE SPOKANE WATER RESOURCE INVENTORY AREA (WRIA) #57 III-32
ILLUSTRATION EIS 3.3-1: AGE DISTRIBUTION OF CORED TREES WITHIN THE MOUNT SPOKANE SKI AND
SNOWBOARD PARK EXPANSION AREA..... III-47
ILLUSTRATION EIS 3.5-1: VIEWPOINT PLAN III-103
ILLUSTRATION EIS 3.6-1: TERRAIN DISTRIBUTION BY ABILITY LEVELS – EXISTING CONDITIONS III-110
ILLUSTRATION EIS 3.6-2: MOUNT SPOKANE SKIER VISITS (2001/02 THROUGH 2012/13)..... III-112
ILLUSTRATION EIS 3.6-3: TERRAIN DISTRIBUTION BY ABILITY LEVELS – PROPOSED UPGRADING
(ALTERNATIVE 2) III-115

1. BACKGROUND, PURPOSE AND NEED

1.1 INTRODUCTION

Mount Spokane Ski and Snowboard Park is located within Mount Spokane State Park, approximately 22 miles northeast of Spokane in Spokane County, Washington (see Figure EIS-1). With approximately 13,000 acres, the park provides a wide range of year-round recreation opportunities to a large and diverse community of supporters and user groups. Since 1997 Mount Spokane Ski and Snowboard Park has been managed and operated by a community-based non-profit organization known as Mount Spokane 2000 (MS 2000) under the terms of a long-term concession agreement with the Commission. Currently, Mount Spokane Ski and Snowboard Park maintains 32 ski runs, 5 chairlifts, 2 lodges (including restaurant, lounge, ski school, equipment rentals), a ski patrol building, and various administrative support structures on 1,425 acres (see Figure EIS-2).

Alpine skiing on Mount Spokane began in the early 1930s when several ski clubs from the Spokane area began acquiring land and building ski area improvements at various sites around the summit of the mountain. In the mid-1950s Washington State Parks (State Parks) awarded a concession agreement to a private operator, the Mount Spokane Skiing Corporation (MSSC). With the growing popularity of the sport throughout the baby-boom years, skier visitation at Mount Spokane continued to increase well into the 1980s. MSSC continued to operate the concession under various owners until the concession agreement between MSSC and State Parks expired on June 9, 1995. The current Concessionaire, Mount Spokane 2000 (MS 2000) has operated the ski area since October, 1997.

1.2 BACKGROUND

Mount Spokane has an active history as a destination for skiing. During the 1930s, local ski clubs constructed an overnight ski chalet, rope tows, and ski jumps. A portion of two historic rope tows passed through the southeast portion of the PASEA. In 1946, the world's first double chair lift was built on Mount Spokane. In the 1950s, overnight accommodations, a ski lodge, and restaurant all operated on the mountain until the lodge was burned to the ground in 1952. These historic structures were just south of the PASEA on land currently as Heritage.

Development of the northwest facing slopes of Mount Spokane has been discussed for many years, beginning in the 1930s. More recently, proposed development of the northwest face or "backside" of the mountain was identified in the 1992 study "Mount Spokane State Park Alpine Ski Area Study," commissioned by State Parks to analyze the existing ski area operation and provide recommendations and guidelines for the future. The PASEA is also noted as a potential expansion area in the 1997 Concession Agreement between MS 2000 and State Parks. As part of its October 1999 classification action for Mount Spokane State Park, the Commission left the PASEA as an unclassified area within the Park in order to further study what the eventual classification should be, particularly within the context of a potential expansion of Mount Spokane Ski and Snowboard Park. In 2010, MS 2000 approached the Commission

Section III. Mount Spokane State Park Proposed Ski Area Expansion Final Environmental Impact Statement

with a conceptual proposal to expand skiing into approximately 279 acres of the 800-acre PASEA (see Section I, Chapter 2 – Background).⁷ For purposes of this analysis, the 279 acres are hereafter referred to as the expansion area or Study Area.⁸

Over the past decade, MS 2000 has contracted a number of studies related to the capacity of existing facilities, infrastructure (e.g., power, water, sewer), a financial analysis of a range of development alternatives, a Regional Recreational Demand Study, an Assessment on the Effects of PASEA Development on Existing Recreation, and field inventories of wetlands, streams, and wildlife habitat in support of the proposed ski expansion into the PASEA. These studies included, but are not limited to:

- Mt. Spokane Ski & Snowboard Park – Potential Expansion Area Concept, 2006,
- Market and Economics Analysis for the Mount Spokane Ski and Snowboard Park Master Facilities Plan, 2007,
- Mount Spokane Ski and Snowboard Park – Base Area Lodge Preliminary Design Study, 2008,
- Biological Surveys Conducted in the SEIS Analysis Area at Mt. Spokane State Park During 2010,
- Wetland Categorization/Buffer Establishment Stream Typing/Buffer Establishment PASEA, 2011
- Wetland Delineation Report Mount Spokane Ski and Snowboard Park Proposed Expansion Area, 2014, and
- Draft Habitat Management Plan Mount Spokane Ski and Snowboard Park Proposed Expansion Area, 2014.

These studies have been utilized by MS 2000 and State Parks to develop a number of working concepts related to the expansion of ski area infrastructure into the PASEA. These concepts have been further refined by the project team through many years of planning and public outreach resulting in the current proposal by MS 2000, which is intended to minimize the potential physical impacts of a ski area expansion within the PASEA.

⁷ Due to the evolution of mapping technologies from 1999 to present, the expansion boundary includes approximately 20 acres to the south of the PASEA that was previously classified by the Commission as Resource Recreation. Without an adjustment to existing land classification boundaries, Alternative 4 would potentially site recreational facilities in a Resource Recreation classification. In addition, Alternative 4 would potentially site recreational facilities within less than 1 acre of the existing Heritage land classification adjacent to the Vista House. This action seeks to address this issue and adjust the boundaries of previously classified lands to be more consistent with the potential placement of developed recreation facilities.

⁸ For purposes of the project description or description of alternatives, the 279 acres is referred to as the expansion area. However, because the Study Area may vary by resource in Chapter 3, a separate description of “Study Area” is frequently used. While the PASEA boundary and acreage has changed (see footnote 6), the 279-acre expansion area/study area has not changed.

State Parks is the SEPA lead agency. As discussed above, this SEPA FEIS builds upon the previous Final SEIS and specifically addresses the proposed expansion of lift-served downhill skiing and snowboarding into the 279-acre expansion area.

1.3 PURPOSE AND NEED

This Final EIS has been prepared in accordance with the Washington State Environmental Policy Act (SEPA, RCW43.21C). This Final EIS is not a decision document; its primary purpose is to disclose the potential environmental consequences of implementing any of the alternatives under consideration. As detailed later, a variety of federal, state and local government permits may also be required.

The underlying Purpose and Need for the proposed development of ski area improvements within the PASEA are:

1. Increasing the available inventory of round trip, consistent gradient, intermediate level trails within the concession area, which will allow for better circulation and more even distribution of low-intermediate and intermediate level skiers throughout the ski area;
2. Increasing the amount of terrain that has better long term snow accumulation, retention capability and snow quality available within the ski area, which provides a better assurance of continued operations during periods of low snowfall and gives the resort the ability to favorably compete in the market as well as to address the potential effects of climate change; and
3. Improving search and rescue operations within the PASEA.

Purpose #1:

Increasing the available round trip, consistent gradient, intermediate level trails within the concession area, which will allow for better circulation and more even distribution of low-intermediate and intermediate level skiers throughout the ski area.

The PASEA expansion represents an opportunity to add a significant quantity of intermediate level terrain to Mount Spokane. This terrain would significantly change the experience of skiing at Mount Spokane, as it would add several new trails of a type of terrain that is currently a deficiency at the ski area (i.e., top-to-bottom, consistent gradient, intermediate level trails). The terrain in the expansion area presents the potential to create low to advanced intermediate level trails that have consistent grade and are consistently in the fall-line. Low intermediate and intermediate level skiers are the largest segment of the market, so this terrain will appeal to the greatest percentage of skiers.⁹ Increasing the quantity and quality of intermediate level ski runs at Mount Spokane will also create a more even distribution of skiers at Mount Spokane. Since low intermediate and intermediate level terrain is currently restricted primarily to Chair 3 at Mount Spokane, the addition of the terrain within the expansion area would reduce the high demand that the terrain off of Chair 3 currently witnesses—particularly in the merge zones found in the lower

⁹ Intermediate skiers accounted for 41% of visits to ski areas during the 2013/14 ski season and represented the largest portion of the skier market at 46%. (Source: NSAA National Demographic Study 2013/14.)

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

portion of the Chair 3 terrain, where densities are currently quite high. As a result, allowing for better circulation and more even distribution of low intermediate and intermediate level skiers would improve the ski experience throughout Mount Spokane.

Purpose #2:

Increasing the amount of terrain that has better long term snow accumulation, retention capability and snow quality available within the ski area, which provide a better assurance of continued operations during periods of low snowfall and gives the resort the ability to favorably compete in the market, as well as to address the potential effects of climate change.

Mount Spokane has historically benefited from consistently cold winter temperatures and an average annual snowfall accumulation of about 150 inches. The existing lift and trail network is primarily situated on the southeastern exposure between a base elevation of approximately 4,300 feet and the summit of the mountain at approximately 5,900 feet elevation. As annual snow deposition has varied significantly over the last ten years, the 4,100-foot level has emerged as the critical snowline. As a result, the location of the ski resort on the southeast aspects of Mount Spokane has restricted the operation of Mount Spokane Ski and Snowboard Park, especially early in the season, due to the lack of snow in the lower terminal and base areas. Predicted climate change could exacerbate this effect due to the relative lack of northerly-facing terrain. Accordingly, there is a need for additional northwest-facing terrain to provide better snow retention, increase operating days, and address potential climate change. As a general rule, the higher elevation, the more northerly facing, and the more wind protected areas will have consistently better snow retention and quality (see Section III, section 3.6.2.1 – Alpine Skiing Analysis and Figure EIS-17). As a result of all of these factors, the snow quality in the PASEA area is generally some of the best found at Mount Spokane. The elevations are generally higher, the slopes are generally more northerly facing, and the area is generally more protected from wind than other portions of the ski area. As a result, there is generally more snow and higher quality snow in the PASEA area.

Purpose #3:

Improving search and rescue operations within the PASEA.

The PASEA has been managed by State Parks as a Natural Forest Area, even though it is located within MS 2000s concession area boundary and is listed as Unclassified. As such, MS 2000 has not been permitted to patrol, maintain or operate the PASEA in a manner consistent with the rest of its ski area operations. Because the PASEA is easily accessed from the summit and is known for its higher snow quality and excellent tree and glade skiing, it has become a popular destination for skiers seeking a lift-served “backcountry” experience. Accordingly, MS 2000 has provided emergency response to lost and injured skiers within the PASEA on almost a weekly basis, which taxes the resources of its all-volunteer ski patrol (see section 3.7.6). A formalized trail system and chairlift in the PASEA would lead to a decrease in backcountry injuries and lost skiers by providing safer, groomable trails with more effective ski patrol operations.

1.4 SCOPING AND PUBLIC PARTICIPATION

Scoping is an integral part of the environmental analysis. Scoping includes refining the Proposed Action, identifying the preliminary issues and inviting the participation of interested and affected persons. The results of scoping are used to 1) refine the issues; and 2) explore alternatives to the Proposed Action and their potential effects.

This Final EIS has been developed with extensive public participation. The project and non-project actions were originally presented to the public in 2011 prior to the May 19, 2011 Commission Action to classify lands within the PASEA (non-project action) and in 2012 with the *Mount Spokane Ski and Snowboard Park Final Supplemental Environmental Impact Statement* (project action). The Draft SEIS alone received a total of 157 individual comment letters, 8 responses from state agencies and non-profit entities, and 153 pre-formatted comment cards in 2012 and the non-project action was the subject of several public meetings held in the Spokane area.

On November 12, 2013 Parks issued a Determination of Significance and Scoping Notice, which described the non-project action to classify lands within the greater 800-acre PASEA and the project action to expand ski facilities into the 279-acre expansion area. In response, Parks received 600 public comments on the Scoping Notice from other government agencies, tribes, non-profit groups and the general public. A DEIS analyzing the effects of the non-project (see Section II) and project (Section III) actions was released to inform the public; local, state and federal agencies; and tribal entities on August 15, 2014.

The comment period for the DEIS closed on September 30, 2014. In response to the DEIS, a total of 704 comment letters were received from individuals, organizations (e.g., The Lands Council, Mount Spokane Ski and Snowboard Park), public agencies (e.g., The Washington Department of Fish and Wildlife) and tribal entities as well as a petition signed by 538 people in support of the ski area expansion. Pursuant to Washington Administrative Code (WAC) 197-11-560, Section III – Appendix H summarizes and responds to comments received during the August 15, 2014 to September 30, 2014 comment period for the DEIS. Comments have been grouped based on subject area.

As such, identification of probable adverse environmental impacts has occurred through review of comments received during the SEPA review process for the Commission's May 19, 2011 PASEA Land Classification decision, comments received during the preparation of the Draft and Final SEIS, the Combined DEIS and the environmental record that has been assembled over the life of this project.

Pursuant to WAC 197-11-402(1), EIS's need analyze only the reasonable alternatives and probable adverse environmental impacts that are significant. State Parks staff has identified the following elements of the environment that may be significantly impacted by the proposed ski area expansion:

- Wildlife habitat supporting populations and occurrences of resident wildlife species within the PASEA and transiting through it;

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

- Wildlife habitat connectivity to intra-park and regional wildlife corridors;
- Natural forest and native plant associations and communities;
- Soils and slope stability;
- Water quality;
- Introduction of non-native plant species; and
- Scenic resources including viewsheds.

2. ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter identifies and compares a reasonable range of alternatives related to the proposed expansion of a chairlift and trails into the 279-acre expansion area. A “No Action Alternative” and two “action alternatives,” which include the proponent’s Proposed Action, are included within this range of alternatives.

Chapter 2 also identifies and discloses the process used to develop alternatives, alternatives considered but eliminated, alternatives considered in detail, mitigation, comparison of alternatives and monitoring requirements.

2.1 PROCESS USED TO DEVELOP ALTERNATIVES

A multi-step process was used to develop the range of alternatives considered in detail in this SEPA Final EIS. This range is intended to:

- Provide clear choices for State Parks;
- Fulfill the Purpose and Need for the Proposed Action;
- Address specific areas of public concern developed during the scoping process; and
- Remain consistent with other applicable federal, state, and local laws, regulations, policies, and plans.

2.1.1 Alternatives Considered but Eliminated to Avoid and/or Minimize Impacts

The following section discusses the reasons for additional alternatives that were explored, but not developed in detail. A detailed discussion of these alternatives, and alternative components that were considered during the development of the Proposed Action but eliminated from further analysis, is presented below. Where feasible, potential effects of the construction of specific elements or groups of elements within the Proposed Action were reduced or eliminated by making revisions to the expansion proposal. Finally, the project team considered whether the resulting project component or alternative would actually meet the Purpose and Need for the Proposed Action.

2.1.1.1 PASEA Two-Chairlift Concept

This project component was developed in early 2006 as a concept intended to analyze the effect of maximizing ski trail development within the PASEA. Within the local market, Mt. Spokane competes with 49° North, Silver Mountain, and Schweitzer. Each of these areas has unique differentiators that attract a particular segment of the skier market. At the time the concept was developed, all of the areas in Mount Spokane's market had witnessed increases in visitation as a result of population and economic growth in the region as well as increased demand. Additionally, Lookout Pass had recently received approval for additional lift and ski trail development within the "Northstar" pod.

Development of the two-chairlift concept, with approximately 15 additional ski trails would have provided lift served access to the majority of the terrain above Chair 4 Road. As such, the concept would have the greatest potential to address the public need for new facilities and respond to the need for additional improvements at Mount Spokane in order to maintain competitiveness within their market.

Rationale for Elimination

It was determined during the preliminary environmental analysis that the beneficial aspects of this alternative could be addressed in a lower impact manner, as shown in Alternatives 2 and 3. Additionally, the terrain accessed by the second lift, located immediately southwest of the existing Chair 4, would have eliminated the "side-country" ski experience at Mount Spokane. As such, elimination of a second chairlift from consideration resulted in a reduced impact to backcountry users.

2.1.1.2 Connector Trail between Chair 6 and Chair 4

This project component was developed in order to provide more efficient circulation between proposed Chair 6 and existing Chair 4. This revision to the Project Proposal would have included the development of a connector trail between the bottom of the proposed Trail 7 in the Chair 6 pod and bottom of the existing Skid Road trail to allow skiers in the PASEA to access ski trails in the Chair 4 pod from ski trails served by Chair 6. Additionally, the connector trail would have functioned as a catch trail to funnel skiers accessing terrain between the two pods to the bottom of Chair 4.

Rationale for Elimination

During the surveys performed by Pacific Biodiversity Institute (PBI) in 2010 (see Appendix B) it was concluded that 14 (totaling approximately 83.44 acres) of the 92 stands in the approximately 490-acre Biological Survey Area (BSA), located entirely within the greater 800-acre PASEA, contained potential old growth forest or forests approaching old growth conditions. As such, elimination of the crossover trail specifically avoided seven of these stands (totaling 32.18 acres) altogether. Additionally, it was determined that construction of the connector trail would result in approximately 6 acres of grading to formalize the connector trail. As mentioned above, the trail alignment contains the highest density of large diameter trees within the PASEA analysis area, as well as numerous streams and wetlands.

Based on discussions with MS 2000, the ski patrol could rope and sign the boundary to provide a similar informal catch trail function between the pods without grading the trail, as originally designed. Therefore,

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

MS 2000 altered their Project Proposal to reflect the elimination of the formalized connector trail in order to protect wildlife habitat within the trail alignment.

2.1.1.3 2007 Trail Alignment

This alternative trail alignment was developed during the 2007 planning process. At that time, the confluence of Trails 3 and 6 was proposed further to the west in order to provide a smoother skiing transition and access to the bottom terminal of the proposed Chair 6 lift. This alternative would have resulted in an increased recreational experience for Mount Spokane guests round-trip skiing in the proposed Chair 6 pod.

Rationale for Elimination

During the early planning process, the confluence of streams and the concave landform in this area was identified as a “high” hazard area for mass wasting. Consequently, the trails were re-designed to avoid removal of trees in this area. After more detailed analysis no mass wasting hazard greater than “moderate” exists in the 279-acre Study Area (see Appendix A). However, the design amendment remains unchanged and the concave landform remains protected.

2.1.1.4 Infill Option

This alternative to the PASEA expansion was developed based on public comments received during scoping for the 2011 Draft SEIS to analyze whether additional trail development within the existing Chair 4 pod would meet existing market demand. This alternative would have included an increase in available terrain within the existing Chair 4 pod to meet the expressed “Purpose and Need” for the PASEA proposal, thereby eliminating the need to develop the seven new ski trails and chairlift as proposed.

Rationale for Elimination

The terrain distribution for the Chair 4 in-fill plan would result in a notable increase in expert terrain. Mount Spokane currently has a large quantity of good, consistent gradient, fall-line, advanced and expert level terrain, available off the existing Chairs 1, 2, and 4. As a result, the resort has no particular need for additional advanced or expert level terrain. Advanced and expert skiers make up a small percentage of the overall skier market. Currently, Mount Spokane has a need for consistent gradient and consistent fall-line low intermediate and intermediate level ski terrain. This is the largest section of the market, so it will appeal to the greatest percentage of skiers. This is the type of terrain that is available in the proposed PASEA expansion. Additionally, the snow quality and retention in the PASEA area is generally better than in other portions of the ski area. As a result of all these factors, the PASEA area presents the best opportunity to create terrain that will significantly improve the ski experience at Mount Spokane and meet the needs of the greatest segment of the market. Therefore, for purposes of this analysis, the Infill option was eliminated from further consideration.

2.2 ALTERNATIVES CONSIDERED IN DETAIL

Two action alternatives and a No Action Alternative (Alternative 1) are analyzed in detail in this Draft EIS, including the MS 2000 Proposal (Alternative 2). Table EIS 2-1 summarizes the range of alternatives considered in detail in this Draft EIS.

2.2.1 Alternative 1 – No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative essentially reflects a continuation of existing management practices without changes, additions, or upgrades. No new facilities or recreational opportunities would be approved in the PASEA under the No Action Alternative (see Figure EIS-2).

2.2.2 Alternative 2 – Proposed Action (Enhanced Recreation Alternative)

The Proposed Action would allow the construction of a new chairlift (Chair 6) within the 279-acre expansion area, together with seven new ski trails (totaling approximately 85.4 acres) and accompanying infrastructure to support these proposed improvements. Under Alternative 2, 85.4 acres of formal ski trails would be constructed within the expansion area. Approximately, 24 chairlift towers would be installed under Alternative 2. Each tower footing would require approximately 100 square feet of ground disturbance. The lower loading terminal of the proposed chairlift would be located at approximately 4,420 feet in elevation and would require approximately 0.75 acre of excavation and grading (see Figure EIS-3). The new top terminal near the summit of Mount Spokane would be located approximately 250 feet in distance from the top terminal of Chair 1 at an elevation of approximately 5,850 feet, and would require approximately 0.5 acre of excavation and grading.

Development of the new chairlift and seven ski trails under Alternative 2 would require approximately 43.5 acres of tree removal and 32.6 acres of grading. Much of this clearing would occur in areas of the expansion area that are better described as small clusters of tree islands or open stands of blown-down or dead-standing trees.

The Proposed Action would increase the acreage of lift-served ski terrain by approximately 279 acres and include the development of approximately 85 acres of formal ski trails. The proposed trail network is designed to address existing deficiencies in the amount of continuous fall line low intermediate and intermediate terrain available within the ski area boundary. Where practical, the new trails are located to avoid potential impacts to vegetation, by utilizing existing meadows, trails and openings in the forest canopy. The remaining 521 acres within the 800-acre PASEA would not be managed as lift-served terrain, but would continue to be accessible (as in the existing condition) by winter recreators (e.g., snowshoers, snowmobilers, backcountry skiers) via existing ski area facilities.

2.2.3 Alternative 3 – Mitigated Proposed Action

Alternative 3 is a revised version of Alternative 3 presented in the *Mount Spokane Ski and Snowboard Park Final SEIS* released in October, 2012 (the Selected Alternative). Following the selection of this alternative, project-level environmental surveys were performed in order to further inform the design process and support the development of Spokane County permit documentation (see Appendix D and Appendix E). Subsequent adjustments were made to the ski trail alignment which allowed for a reduction in the overall impacts to stream buffers within the expansion area while still meeting the Purpose and Need for the expansion. Specifically, using the project-level wetland and stream delineations completed during the summer of 2013, field modifications were made to sections of Trails 1, 2, 3, and 4 in order to adjust portions of the trails outside of the defined wetland and stream buffers (as defined by the Spokane County Critical Areas Ordinance). The recreational benefit of the ski trails was not compromised, as the trail modifications did not decrease the skiability of any of the trails.

Similar to Alternative 2, Alternative 3 would increase lift-served ski terrain by approximately 279 acres to allow for the construction of a new chairlift and seven associated ski trails within the expansion area (see Figure EIS-4). Alternative 3 represents a reduced version of the Proposed Action, and was developed to address concerns associated with:

- Water and Watershed Resources
- Soils

Alternative 3 would be the same as described for Alternative 2, except Alternative 3 modifies the Proposed Action by reducing or eliminating altogether the amount of clearing and grading in wetland and stream buffers necessary to construct new ski trails within the expansion area (see section 3.2 – Watershed Resources). Specifically, Alternative 3:

- Realigns Trail 1 to eliminate clearing within a wetland and reduce buffer impacts
- Adjusts the alignment of Trail 3, eliminating the need to remove vegetation in a stream buffer by intersecting the proposed ski trail further uphill
- Modifies the alignment of Trail 6 to eliminate the need to remove vegetation in a stream buffer

Alternative 3 would require 59.3 acres of clearing and 15.2 acres of grading. When compared to Alternative 2, Alternative 3 would result in 15.8 acres of additional tree removal and 17.4 acres less grading. The new trail alignments would reduce the potential impacts of the project to water and soil resources in the expansion area while continuing to meet the Purpose and Need for expansion of alpine ski facilities at Mount Spokane. The acreage of formal ski trails within the expansion area would be approximately 80.1 acres under Alternative 3, or 5.3 acres less than Alternative 2 (see Table EIS 2-1).

2.2.4 Comparison of Alternatives

The differences proposed in Alternatives 1 through 3 are summarized and compared in Table EIS 2-1. For a detailed discussion of potential effects resulting from implementation of the alternatives, see Chapter 3.

**Table EIS 2-1:
Comparison of Alternatives**

Project Component	Alternative 1	Alternative 2	Alternative 3
Acreage of Developed Alpine Skiing (acres)	1,425	1,709	1,709
Total Number of Trails	32	39	39
Total Number of Chairlifts	5	6	6
Additional Formal Ski Terrain (acres)	-	85.4	80.1

2.2.5 Assumptions and Actions Common to All Action Alternatives

2.2.5.1 Skier Ability

As used in this EIS, skier ability levels are defined based on the slope gradient, as shown in Table EIS 2-2.

**Table EIS 2-2:
Slope Gradient by Ability Level**

Skier Ability Level ^{ab}	Acceptable Slope Gradient (percent slope)
Beginner	8 to 12%
Novice	12 to 25%
Low Intermediate	25 to 35%
Intermediate	35 to 45%
Advanced Intermediate	45 to 55%
Expert	55 to 70%

Source: SE Group

^a The ability level designation of any given ski trail also includes consideration of the access to, or egress from the trail.

^b The ability level designation is determined by calculating the maximum sustained grade over a 150-foot linear distance.

2.2.5.2 Construction

The majority of direct effects to resources would be related to treatments (clearing) for the development of the lift and associated ski trails. Estimates on the amount of clearing that would occur for specific activities proposed in the action alternatives are shown in Table EIS 2-3 (for analysis purposes, clearing widths should be considered “worst-case”; actual clearing would not exceed the stated limit and may be less). No permanent road construction would be required.

**Table EIS 2-3:
Mount Spokane EIS Clearing and Other Assumptions**

Ski Area Component	Clearing Requirement^a
SKI LIFT	
Alignment Clearing	60-foot corridor
Upper Terminal Ground Disturbance	0.50 acre
Lower Terminal Ground Disturbance	0.75 acre
Tower Ground Disturbance (each)	100 square feet
UTILITY LINES	
Power	15-foot corridor
Communications	15-foot corridor
SKI TRAIL	Average Width (feet)^b
Proposed Trail 1	122
Proposed Trail 2	158
Proposed Trail 3	169
Proposed Trail 4	191
Proposed Trail 5	60
Proposed Trail 6	104
Proposed Trail 7	170

^a “Worst case” estimate of clearing, grading, machinery operation, storage of spoils, etc.

^b Trail widths are determined primarily by slope gradients, but also by other factors (e.g., planned usage, ability level goals). Formalization of each trail would not require the complete clearing and/or grading of the entire run length due to existing conditions (e.g., unvegetated, blowdown, meadow).

A small crane or boom truck would be necessary for terminal construction. Depending on the season the work is being performed, equipment would access the site either over snow when possible or, when the area is snow free equipment would utilize a single, temporary access point. Where work over the snow is possible, it would be limited to tree removal. Typically, lift towers and chairlift terminals are not constructed over the snow. The equipment would remain onsite until construction was completed and would leave the site using the temporary access point. Lift terminals would be excavated by machine. Once construction is completed any disturbed areas created by equipment accessing the site would be reseeded and the temporary travel way vacated. Grading for lift terminals and towers would be limited by construction envelopes listed in Table EIS 2-3.

A detailed breakdown of the location and extent of each treatment technique is provided in the description of alternatives and in Table EIS 2-1 (see sections 2.2.1 through 2.2.3) Treatment techniques include:

Full Clearing: To the extent practical after felling downed logs would be retained on site. Trees presenting a safety concern if left in formal ski trails would be removed and stored in an existing off site disturbed area. Trees would be cut flush to the ground and stumps would not be removed. The

surface would not be graded and the natural ground cover would be maintained. Tree removal would be accomplished by hand, or with processors such as feller bunchers.

Full Clearing with Grading: All trees would be removed within the construction limits, stumps would be removed, and the surface would be graded and re-vegetated, where appropriate. Grading would occur at all locations where structures are proposed (e.g., lift towers, terminal locations) and along key trails where a smooth surface is necessary. Grading may include the use of heavy equipment (e.g., excavators, bulldozers, etc.) for earthmoving. The removal of trees would be accomplished by hand, or with processors such as feller bunchers. After felling, all trees would be removed and stored in an existing disturbed area.

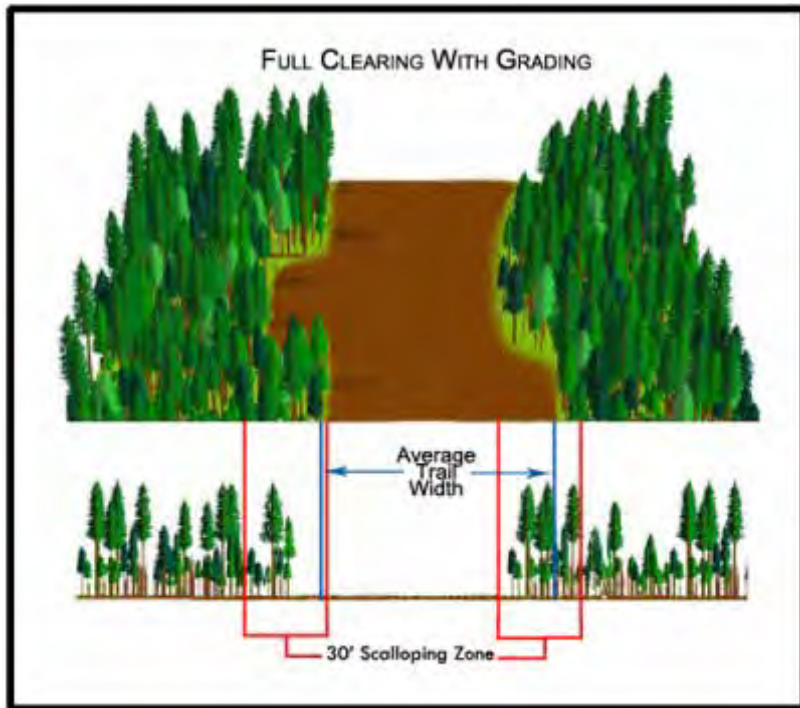
Tree Island Retention: Tree islands resulting from implementation of the action alternatives would be retained between the ski trails/lift corridor. A limited number of informal skiing routes would be permitted through the treed islands. Limited hand clearing of trees, snags, understory vegetation, and downed woody debris would be allowed to the extent necessary to provide a travel route through the tree islands. No grading would occur. All large trees and snags (over 20 inches dbh) located in proposed tree islands would be left standing unless they are identified by State Parks as a hazard tree. The Commission could choose to mitigate impacts to tree islands through the adoption of certain mitigation measures in Table EIS 2-4.

In addition to the clearing prescription outlined above, ski trail clearing would include edge treatments that are intended to reduce the visual and biological effects of trail clearing and to enhance the skiing opportunities along the trail edge (see Illustrations EIS 2-1 and EIS 2-2). These prescriptions include:

Forest Edge Scalloping: Flagging a separate limit of clearing boundary outside of the trail edge so the boundary is non-linear, in order to reduce visual impacts associated with straight trail edges. The limit of clearing would meander, or undulate, outside of, but adjacent to, the flagged trail edge, giving a more natural, irregular scalloped edge to the tree line. The limit of clearing would not exceed a maximum distance of 30 feet from the original flagged trail edge.

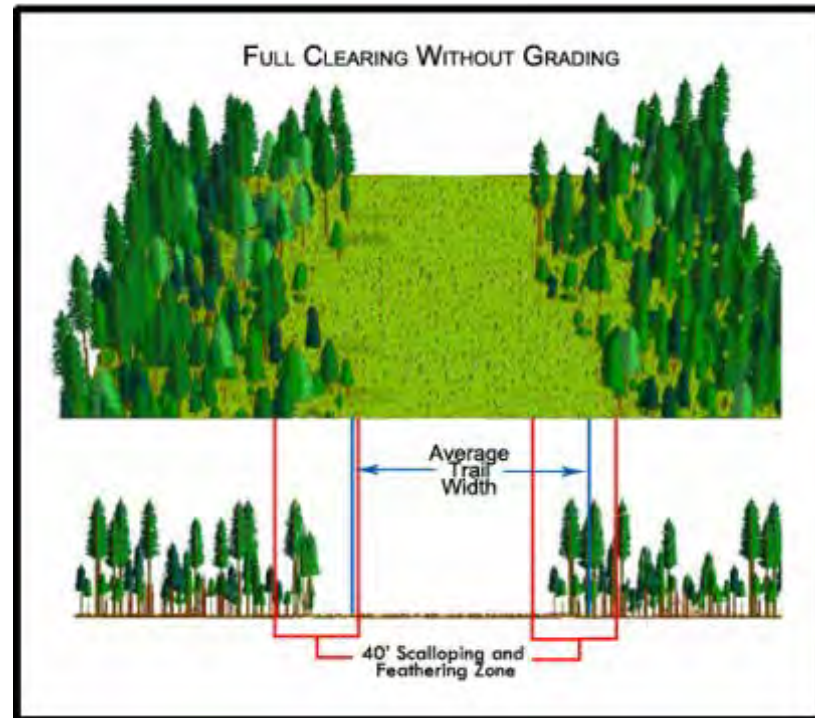
Forest Edge Feathering: Selectively removing trees along the limit of clearing, where appropriate, so that a hard line in the new trail-to-forest transition is not evident. The area to be thinned for forest edge feathering would be approximately 10 feet wide. Large trees (i.e., greater than 8 inches dbh) would be selectively removed starting at the limit of clearing, so that the tree density would get progressively lower toward the interior of the trail and within the 10-foot feathering area.

**Illustration EIS 2-1:
Typical Full Clearing Treatment
Scalloping with Grading**



Note: Not to scale (for illustrative purposes only)

**Illustration EIS 2-2:
Typical Full Clearing Treatment
With Feathering and No Grading**



Note: Not to scale (for illustrative purposes only)

Ongoing vegetation management to maintain openings would occur over the life of the Concession Agreement.

As described above, standard construction techniques would be used for erecting lift terminal structures. Access to terminal locations would occur over snow when possible and impacts would be minimized by making one entry and exit, where practical. Historically, snow remains in the expansion area throughout most of June. Terminals would be constructed onsite and the footings would be excavated by machine. Equipment access to the terminal and tower locations would not require construction or reconstruction of a road, although the use of a temporary travelway would be necessary to access building sites. Lift tower footings would be excavated by hand or by small, low impact excavators. Concrete for footings and lift towers would be pumped from a concrete truck. As described above, the temporary travelway would be vacated and reseeded following completion of construction activities.

2.2.5.3 Ongoing Impacts Associated with the Expanded Ski Area

Implementation of either of the action alternatives would result in operational and maintenance practices similar to historic ski area operations on the front side of Mount Spokane through the extension of the development area boundary within the existing concession area. This is consistent with a *Recreation* land classification designating the formal ski terrain.¹⁰ Following implementation of either action alternative, vegetation on formal ski trails would be annually mowed to approximately 18 to 24 inches in height. Formal ski trails would also be groomed during the winter to ensure a consistent snow surface. Tree islands within the 279-acre expansion area would be maintained consistent with the “Tree Island Retention” prescription above.

2.3 SCOPE OF THE FINAL EIS

Based on the results of internal and public scoping, State Parks staff identified specific areas of public concern, which were carried forward to be addressed in this FEIS. Therefore, the primary focus of this SEPA Final EIS will be on the following resources identified by State Parks as having the potential for being significantly impacted by the Proposed Action. These resources are: Wildlife and Wildlife Habitat, Vegetation, Soils, Watershed Resources, Visual Resources, and Recreation.

2.3.1 Resources not Analyzed in Detail

In addition to analyzing resources that have been identified by State Parks as having the potential to be significantly impacted by the Proposed Action, this Final EIS includes a discussion of other resources, which were similarly analyzed in the Mount Spokane State Park Master Facilities Plan EIS. Specifically,

¹⁰ Commission direction regarding the management of natural resources within areas classified as “*Recreation*” is discussed in *Commission Policy 73-04-1 Protecting Washington State Parks Natural Resources*. For clarity, Subsection A(1) states that “State Parks will maintain native plants and animals (biodiversity) that occur, or seek to re-establish them where they historically occurred, within those park lands classified by the Commission as Resource Recreation Areas, Natural Areas, Natural Forest Areas, or Natural Area Preserves. **When consistent with recreational use, cultural resources integrity, and other agency objectives, native plants and animals will also be preserved in lands classified as Recreation and Heritage Areas**” (emphasis added).

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

the Final EIS will contain a description of the existing conditions and affected environment for the following resources:

- Historic, Cultural and Archaeological Resources
- Air Quality
- Noise
- Land Use
- Transportation and Parking
- Public Services
- Energy/Environmental Health
- Utilities

2.4 MITIGATION MEASURES

In order to minimize potential resource impacts from construction of the proposed project, the Mitigation Measures detailed in Table EIS 2-4 have been incorporated into the Proposed Action. SEPA recognizes that mitigation may be built-into the proposal or the various alternatives. Under SEPA, alternatives are also available mitigation measures, including those that have been eliminated from further consideration. Alternatives are defined as other means of accomplishing the objectives of a proposal with less adverse environmental impacts. The required no-action alternative contains the ultimate mitigation measure. As such, available measures to mitigate adverse environmental impacts may be found throughout this Final EIS, including material incorporated by reference (e.g., SWPPP, Habitat Management Plan).

Ultimately, the Commission has the authority to decide which of the mitigation measures included in this Final EIS should be adopted. These mitigation measures discussed here are intended to inform the Commission of the measures it may choose to adopt in its ultimate decisions on the project action. However, only the Commission can decide the extent of mitigation to include in its final decision after considering the EIS in the context of the Commission's authority and responsibility to pursue a number of public interests, including environmental protection, providing recreational opportunities, economic development, and the general welfare of the state.

For purposes of this analysis, the definition of mitigation under SEPA can be found in WAC 197-11-768 – Mitigation where:

“Mitigation” means:

- (1) Avoiding the impact altogether by not taking a certain action or parts of an action;*
- (2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*
- (3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*

- (4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;*
- (5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or*
- (6) Monitoring the impact and taking appropriate corrective measures.*

Additionally, several alternatives were explored, but not developed in detail. As discussed in section 2.1.1, where feasible, potential effects of the construction of specific elements or groups of elements within the Proposed Action were reduced or eliminated by making revisions to the expansion proposal, consistent with the SEPA definition of mitigation. For example, a two-chairlift concept was eliminated to *avoid* impacts to mature forest habitat associated with expansion into the PASEA (see section 2.1.1.1).

Mitigation Measures were devised in the pre-analysis and analysis phases of the planning process to reduce potential environmental impacts associated with project elements. Mitigation Measures come from federal, state, and local laws, regulations and policies; scientific recommendations, or from experience in implementing similar ski area projects.

The bulk of the Mitigation Measures provided in Table EIS 2-4 are considered common practices that ski area managers have historically used in alpine and sub-alpine environments to prevent or decrease potential resource impacts. They are also similar in scope and intent to the Mitigation Measures included in the 2010 Mount Spokane Master Facilities Plan FEIS prepared by State Parks. They are highly effective methods that can be planned in advance and adapted to site conditions as needed. Table EIS 2-4 also presents other management provisions (e.g., development of a Stormwater Pollution Prevention Plan) that would be implemented *to protect resources* during construction, but which are not intended to entirely avoid potential adverse effects to resources.

Mitigation Measures were designed by MS 2000 and specialists involved in this proposal. The potential effects of implementing the Proposed Action assume these Mitigation Measures are applied. In addition to the Mitigation Measures prescribed below for each resource area, MS 2000 would incorporate any conditions of approval from Spokane County and other jurisdictional agencies (e.g., Washington Department of Ecology, State Parks, Washington Department of Fish and Wildlife) during the permitting phase following the selection of an Action Alternative by State Parks. For clarity, if an Action Alternative is selected by State Parks the project would be required to comply with additional permit conditions levied by other jurisdictional agencies, including the development, approval and implementation of a wetland and stream mitigation plan by Spokane County.

Clearing and grading activities necessary to implement either of the action alternatives would result in unavoidable impacts to resources. As mentioned in Chapter 1, the action alternatives have been developed in order to balance the recreational needs of the public and the resource conservation goals of State Parks. However, implementation of either Alternative 2 or 3 would result in impacts to soils and geology

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

(through grading), mature forest (through clearing) and wildlife habitat (through removal and/or conversion of habitat) that could not entirely be mitigated by the mitigation measures proposed. As such, the overall intent of the action alternatives is to minimize the impact of providing lift served alpine skiing within the 279-acre expansion area on these resources. The impacts to these resources are disclosed in Chapter 3.

**Table EIS 2-4:
Mitigation Measures and Best Management Practices Incorporated into the Project Proposal**

VEGETATION
Understory vegetation would be preserved to the extent possible in all areas designated for flush cutting and/or overstory vegetation removal.
Prior to construction, the disturbance limits of the site would be flagged. Fencing, flagging, or a staked rope line would be established to denote the limits of construction proximate to sensitive resource boundaries.
Prior to any tree cutting or construction activity related to ski area development the following must occur: <ul style="list-style-type: none"> Y A tree cutting plan addressing project timing, cutting methods and logistics, site access and treatment of downed trees. Y A landscape management plan for the site after construction must be developed by MS2000 and submitted for State Parks review and approval. At minimum, the finalized landscape management plan for the area must set allowed practices for modification or removal of vegetation and other landscape features (e.g., standing snags, coarse woody debris, boulders, and other terrain features), and an integrated pest management (IPM) approach for dealing with non-native vegetation.
Topsoil replacement, native plant seeding, and weed-free mulching (as necessary) would be used to stabilize disturbed soils in all areas where grading and soil disturbance would occur to promote native plant re-establishment.
Revegetation would use native plants. Seed mixtures and mulches would be noxious weed-free. To prevent soil erosion, non-persistent, non-native perennials or sterile perennials may be used while native perennials become established.
Local seeding guidelines would be used to determine detailed procedures and appropriate mixes. Preference is given to local seed sources, cultivars, and species available commercially. To avoid weed contamination, all seed purchased shall be certified weed-seed free.
Adequately mark tree clearing limits to avoid errors in clearing limits during construction.
Before ground-disturbing activities begin, identify and locate all equipment staging areas. Establish equipment wash stations at the base of the ski area for construction activities. Each station shall have a filter system, for example at least 6 inches of large cinder or gravel spread over an area 10' x 30'. Filter cloth may be used for temporary stations. The area would be a perched drainage to allow excess moisture to drain after being filtered. Equipment wash stations shall be located at least 200 yards from any natural drainage to avoid contamination. All soiled equipment shall be washed before entering and before leaving the expansion area. This includes construction personnel vehicles in addition to trucks and other heavy equipment. Equipment wash stations shall be monitored frequently and after completion of all construction activities. All weed materials shall be removed promptly.
Monitor all construction areas and roadways within the expansion area annually for at least five growing seasons and treat any non-native species found.
Effective ground cover (mulch) upon completion of ground disturbing activities would meet minimum level of the pre-treatment habitat type.
If any new populations of special status plant species are encountered during the construction process, work would be suspended in that area until State Parks is consulted.
Mount Spokane Ski and Snowboard Park would be required to develop for State Parks the following plans to mitigate adverse effects from the proposed ski area expansion on focal wildlife species and their habitats: a tree cutting plan; a vegetation management plan to provide direction for coarse woody debris management and general ongoing maintenance of vegetation in developed ski trails, a non-native invasive species management plan to control/eliminate non-native invasive plant species, a hazard tree management plan, and a ski trail erosion control plan.

**Table EIS 2-4:
Mitigation Measures and Best Management Practices Incorporated into the Project Proposal**

<p>Tree islands resulting from project implementation would be retained between the ski trails/lift corridor. These islands would be managed to allow natural processes to proceed. No cutting or removal of live trees or understory vegetation regardless of size is permitted, with the following exception. Removal of standing snags or other trees at high risk of failure may be considered in areas where said trees are within striking distance of developed facilities and where people are expected to stay for extended periods of time (e.g., structures, lift terminals, lift towers and lift haul lines).</p>
<p>WILDLIFE</p>
<p>If the presence of any special status wildlife species is determined in the area affected by the action alternatives, State Parks staff, or equivalent specialist, would be immediately notified and management activities altered as appropriate. If any new populations of special status species are encountered during the construction process, work would be suspended in that area until State Parks staff is consulted and potential adverse impacts mitigated.</p>
<p>Where practical, trees felled during ski trail construction will be left within the trails long-term to provide additional wildlife habitat.</p>
<p>During construction, enforce measures to ensure that trash or refuse associated with construction is minimized.</p>
<p>If work between March 1 and July 31 is necessary, a qualified wildlife biologist will conduct preconstruction surveys of the weekly construction footprint for the twenty-one focal wildlife species. This period generally corresponds to the critical breeding and rearing life stages for birds and mammals at Mount Spokane State Park. In the event one or more of these species is detected between March 1 and July 31, construction in the immediate area would cease immediately, and all project activities would relocate to a location approved by a qualified wildlife biologist.</p>
<p>All construction activities should be confined to daylight hours, excluding emergencies.</p>
<p>No food/drink should be kept/stored in construction worker vehicles. All windows will be kept closed and doors locked on all vehicles to prevent bear entry.</p>
<p>SOIL AND WATER</p>
<p>A grading and erosion control plan would be developed and submitted to Spokane County for review and approval prior to implementation of proposed project elements that include grading.</p>
<p>MS 2000 would develop a Spill Prevention and Response Plan, which would be included in the Stormwater Pollution Prevention Plans (SWPPP) as part of the construction documents. Fuel, oil and other hazardous materials would be stored in structures placed on impermeable surfaces with impermeable berms designed to fully contain the hazardous material plus accumulated precipitation for a period at least equal to that required to mitigate a spill. Petroleum products would not be discharged into drainages or bodies of water. No fuels or construction machinery would be stored within stream or wetland buffers.</p>
<p>Project-specific Stormwater Pollution Prevention Plans would include additional erosion protection (such as two rows of silt fence, straw bales and/or more permanent structures such as logs) to be provided between streams and construction areas close to stream channels. Water bars will be constructed within the newly disturbed areas to minimize downslope water movement through the site, and to direct sediment laden water away from stream channels. As specified in the project-specific SWPPP, water bars will be lined with erosion control fabric, sod, and/or mulch to prevent failures prior to the establishment of vegetation, as necessary.</p>
<p>Bridge crossings installed over intermittent/perennial channels would be completed in a single span to minimize in-water work. All footings would be constructed above the bankfull channel width. Additional short and long-term erosion control measures (e.g., erosion blanket, straw bales, rip-rap.) and water quality monitoring (e.g., pH, turbidity) would be specified in the SWPPP for the bridge crossing projects consistent with any required Hydraulic Project Approval permitting.</p>
<p>Soil-disturbing activities would not be initiated during periods of heavy rain, spring runoff or excessively wet soils.</p>
<p>Immediately following completion of approved ground disturbing activities and seeding, all areas of ground disturbance would be mulched with weed-free straw, wood chips, bark, jute mat, etc.</p>
<p>In all areas where grading or soil disturbance would occur, stockpile topsoil and re-spread topsoil following slope grading and prior to re-seeding. The stockpiled soil would be protected from wind and water erosion.</p>
<p>Areas determined to have been compacted by construction activities may require mechanical subsoiling or scarification to the compacted depth to reduce bulk density and restore porosity.</p>
<p>Vegetative buffers would be maintained adjacent to any intermittent or perennial drainages and wetlands, to the extent possible and would be flagged or otherwise marked to provide protection during clearing.</p>

Table EIS 2-4:

Mitigation Measures and Best Management Practices Incorporated into the Project Proposal

<p>Check dams and sediment barriers (i.e., silt fence, weed-free hay bales, wattles, etc.) would be placed in all temporary erosion channels with minimum sufficient spacing to control runoff velocity and encourage sediment deposition. When check dams, sediment barriers, or sediment detention dams fill with sediment and exceed their design effectiveness, sediment would be excavated (by hand or mechanically) and removed from the site to a permanent upland storage area where erosion would not occur.</p>
<p>Logs and logging debris removal would minimize dragging or pushing through soil to minimize disturbances.</p>
<p>In areas where site conditions necessitate (i.e., excessively steep slopes and/or highly erosive soil types), temporary sediment detention basins would be created to detain runoff and trap sediment. Sediment basins would be created within the overall disturbance limits of the applicable project elements. Temporary sediment basins would be reclaimed following reestablishment of permanent vegetation and would likewise be revegetated.</p>
<p>On steeper slopes (>30% slope gradient), areas exposed by grading may require implementation of jute-netting or other appropriate measures to further stabilize disturbed soils. Installation should include:</p> <ul style="list-style-type: none"> ÿ Seeding and mulching of the disturbed area. ÿ Burial of the top end of the netting in a trench of at least 4 inches depth and 8 inches width. The trench shall be backfilled and tamped. ÿ Netting should extend beyond the edge of the mulched and/or seeded area at least 1 foot on the sides and 3 feet on the top and bottom. ÿ The netting should be rolled downslope and secured with staples or pins. ÿ Netting should overlap at least 4 inches on the sides and secured with staples 5 feet apart along the overlap. ÿ The lower end of the uphill strip should overlap the downhill strip at least 1 foot and should be secured with staples 1 foot apart.
<p>Fuel delivery and storage would be located, designed, constructed and maintained to reduce the potential and severity of spills.</p>
<p>GEOTECHNICAL</p>
<p>Forest clearing in areas susceptible to mass wasting would be avoided to the extent practical during trail layout and construction. The area of grading and soil compaction would be reduced by limiting access by construction equipment and drainage structures for stormwater and erosion control would not divert water into areas of mass wasting potential.</p>
<p>For projects proposed in areas susceptible to landslides or within slopes steeper than 60%, a qualified engineer or geologist would assist in the final design of ski area facilities to minimize the effects of unstable slopes.</p>
<p>WETLANDS</p>
<p>Apply BMPs for all ground disturbing activities to avoid sediment migration from ground disturbance into wetlands.</p>
<p>Wetlands proximate to potential disturbance zones of project elements would be re-identified and flagged prior to the initiation of construction related activities. Construction limits would be clearly defined prior to construction including buffers required by the permit conditions of Spokane County</p>
<p>AIR QUALITY</p>
<p>Grading areas would be watered, as necessary and practical, to prevent excessive amounts of dust. In the absence of natural precipitation, watering of these areas would occur as practical.</p>
<p>Any burning of cleared timber would occur when air quality standards would not be compromised.</p>
<p>All equipment would be properly tuned and maintained. Idling time would be minimized to the extent practical.</p>
<p>RECREATION</p>
<p>Notices would be posted on summit trailheads and at the Vista House informing visitors about the possibility of encountering construction noise and activities within the PASEA. The notices would also identify where and when construction activities would be taking place</p>

**Table EIS 2-4:
Mitigation Measures and Best Management Practices Incorporated into the Project Proposal**

SCENERY RESOURCES
Avoid straight edges where removing trees. The edges of lift lines, trails and structures, where the vegetation is removed, need to use a variable density cutting (feathering) technique applied to create a more natural edge that blends into the existing vegetative cover. Edges would be non-linear, and changes in tree heights along the edges of openings should be gradual rather than abrupt. Soften hard edges by selective removal of trees of different ages and heights to produce irregular corridor edges where possible.
Stumps would be cut as low as possible to the ground to avoid safety hazard.
Regrade to restore a natural terrain appearance. Prior to grading, strip topsoil and save for revegetation. Where there is disturbed ground for new chairlifts including terminals, towers and foundation placements put any excess material back to the area with grading to avoid stockpile of material and maintain a natural appearance at transitions. Any site grading should blend disturbance into the existing topography to achieve a natural appearance and minimize cuts and fills at the transition with proposed grading and existing terrain.
Utilities must be buried, other than communication lines.
All disturbed areas shall be revegetated after the site has been satisfactorily prepared. Seeding should be repeated until satisfactory revegetation is accomplished. Reseed with a native seed mixture using a variety of native seed grasses and forbs.
Buildings, towers and terminals would be painted with a color blending with the area.
Chairlift terminals and towers would utilize muted colors to minimize the visual impact to the surrounding area. Bright colors are inappropriate for the forest setting. The colors should be muted, subdued colors because they blend well with the natural color scheme. The colors used for new facilities would include darker colors; greens, browns, navy blue, grays and black.
CULTURAL RESOURCES
If any artifact or human remains are found during project activities, affected tribes and State Parks would be immediately notified and the work in the immediate area would cease.
State Parks archaeologists or a professional State Parks designee will undertake a Phase I cultural resources survey in advance of timber removal and other project construction activities.
Identified cultural resources (i.e., artifacts, features, and sites) will be appropriately recorded with the Department of Archaeology and Historic Preservation (DAHP).
Following tree removal within formal ski runs and prior to any construction within the formal ski runs, all harvest areas will undergo a Phase II cultural resources survey by State Parks archaeologists or a State Parks designee to identify additional cultural resources.
If human remains are found during project activities, interested tribes, DAHP, State Parks, and law enforcement personnel will be notified and all work in the immediate area will cease.
Results of Phase I and II survey will be compiled into a professional report of findings that complies with DAHP reporting standards. Cultural resources staff of the Spokane Tribe, Coeur d'Alene, the Kalispell Tribe, and the DAHP will have the opportunity to review and comment upon the survey report.
If any culturally modified tree(s) are encountered during construction, the tree(s) would be retained and preserved.
TRANSPORTATION AND PARKING
A contingency plan addressing closures to the main access road to the ski area due to weather and/or fallen trees will be developed in coordination with WSDOT, State Parks, and MS 2000.
Mount Spokane Ski and Snowboard Park would improve Average Vehicle Occupancy (AVO) through the use of incentives for carpooling and more efficient utilization of the regular and scheduled busing programs from Spokane to the ski area on weekends and holidays.

State Parks staff also proposes several additional mitigation measures for consideration by the Commission.

2.4.1 Operation and Management-Related Mitigation Measures

- Monitoring and correction of impacts, particularly those relating to erosion and non-native species would be required. There would be no tolerance for non-native vegetation in the newly developed area. Ongoing monitoring would be needed to ensure early detection of any introduced species, and any non-native plants will be treated with the goal of eradication. Monitoring will be conducted by State Parks or a qualified contractor approved by State Parks.
- Ski runs would be managed for viable communities of self-perpetuating vegetation, capable of flowering and fruiting.
- Formal ski trails could be groomed during winter to ensure a consistent snow surface. However, if snow levels became insufficient to provide protective cover for vegetation, runs would be closed.
- If species of conservation concern were found in the area and verified by a qualified wildlife biologist, temporary closures could be implemented for their protection (under WAC 352-32-050).

2.4.2 Potential Compensatory Mitigation Measures

Working with the Washington Department of Fish and Wildlife, State Parks would prioritize protection of wildlife corridors and wintering habitat within the Mount Spokane State Park long-term boundary. Where willing sellers exist, State Parks would prioritize seeking funds to acquire these properties. If fee simple acquisition is not possible, State Parks would explore the potential for conservation easements. State Parks would also explore opportunities to reclassify portions of the park to increase protective land classifications.

2.5 LIST OF PERMITS AND APPROVALS REQUIRED FOR IMPLEMENTATION

Construction will be scheduled to minimize seasonal impacts to biological and physical resources. Specifically, construction of facilities involving significant ground disturbance will take place during the dry season (generally summer and fall) to the greatest extent possible. Where practical, ski trail clearing and construction of other facilities (i.e., chairlift terminal and towers) will take place over the snow. Once detailed construction documents are developed, all necessary consultations, permits and approvals will be acquired from the regulatory agencies identified in Table EIS 2-5. A SWPPP will be prepared by MS 2000 to provide documentation for, and to obtain a National Pollution Discharge Elimination System permit for construction activities, as required. The SWPPP will include the development of project-specific Mitigation Measures. Project-specific Mitigation Measures and permit conditions from all construction permits will be incorporated into construction documents and permit applications when judged necessary by the regulatory agencies. The SWPPP will be approved by the Spokane County Building and Planning Department and construction activities will not commence until authorized by the agency.

**Table EIS 2-5:
Summary of Permits, Approvals, and Consultation for the Proposed Expansion**

Agency	Action/Regulation	Description of Permit/Action
STATE		
Washington Department of Ecology	National Pollution Discharge Elimination System Permit.	Stormwater Permit for stormwater discharges at construction sites.
LOCAL		
Spokane County Building and Planning Department	Building Permit	Authorize construction of chairlift terminals
	Clearing and Grading Permit/Timber Harvesting/ Critical Area Review	Authorize clearing, excavation and fill for ski trail construction

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 SOILS AND GEOLOGY

This section describes the affected environment and the potential effects of ski trail construction and chairlift installation on soils and geologic resources. The scope of the soils resource analysis includes areas proposed for direct disturbance in the 279-acre expansion area. This description of soil and geology resources is based primarily on a review of the USDA Natural Resources Conservation Service (NRCS) Soil Survey of Spokane County and a geotechnical field analysis completed on November 3, 2011.¹¹

3.1.1 Affected Environment

The topography of the Study Area extends from approximately 5,800 feet elevation near the summit of Mount Spokane to an elevation of 4,418 feet near the proposed bottom terminal site. Slope gradients vary from approximately 40 to 60 percent on higher elevation areas to relatively flat (less than 5 percent) benched areas. According to the NRCS Soils Resource Report most soils in the park (including the expansion area) have a severe to extreme erosion hazard. This is primarily due to the parent soil material being crystalline granitic bedrock. Field surveys revealed no signs of major soil erosion or landslides. This is primarily due to the undisturbed condition of the expansion area being primarily vegetated with native grasses and trees. Soil types are noted in Table EIS 3.1-1.

A total of five soil map units were identified within the project area (see Illustration EIS 3.1-1).

¹¹ The geohazard evaluation completed on November 3, 2011 by ALLWEST Testing and Engineering is included as Appendix A.

**Table EIS 3.1-1:
 Soil Types Identified within the Study Area**

Soil Map Unit	NRCS Map Unit Number	Area (acres)
Brickel gravelly ashy silt loam, 15 to 30% slopes	5001	7
Vaywood medial silt loam, 15 to 30% slopes	5080	20
Vaywood medial silt loam, 30 to 60% slopes	5081	206
Boulder creek ashy silt loam, 15 to 30% slopes	5110	10
Boulder creek ashy silt loam, 30 to 60% slopes	5111	36
TOTAL		279

The soils exposed at the site were field verified as consistent with the described NRCS soil types. The Vaywood medial silt loam (30 to 60 percent slopes), series comprises the majority (74 percent) of the project area with the remaining area being comprised of Boulder creek ashy silt loam (30 to 60 percent slopes), Vaywood medial silt loam (15 to 30 percent slopes), Boulder creek ashy silt loam (15 to 30 percent slopes), and Brickel gravelly ashy silt loam (15 to 30 percent slopes).

The following descriptions for these soil types and hydric soil classifications were obtained from the Web Soil Survey website (Natural Resources Conservation Service 2013):

Brickel gravelly ashy silt loam – This soil series is described as a well-drained soil located on the back slopes, shoulders, and summits of mountains. It is typically characterized by a 0- to 1-inch surface layer of slightly decomposed plant material overlying a 3- to 9-inch layer of gravelly ashy silt loam. Below 9 inches, the amount of gravel in the soil typically increases, with cobbles becoming prominent below 19 inches. Bedrock typically occurs at 20 to 40 inches below the ground surface. Depth to water table is typically greater than 80 inches. Brickel gravelly ashy silt loam has moderately high to high permeability and low water capacity. This soil is considered non-hydric by the Natural Resources Conservation Service. It is not known to contain hydric inclusions.

Vaywood medial silt loam – This series is a well-drained soil associated with back slopes and foot slopes of mountains. It is typically characterized by a 0- to 3-inch layer of slightly to moderately decomposed plant material overlying 20+ inches of ashy silt loam. Very gravelly/cobbly sandy loams are typically present below 25 inches. Depth to the bedrock and water table is typically greater than 80 inches. Permeability is moderately high to high and available water capacity is moderate. Vaywood medial silt loam is considered to be a non-hydric soil and is not known to contain hydric inclusions.

Boulder creek ashy silt loam – This soil series is described as a well-drained soil that occurs on back slopes and foot slopes of mountains. It is typically characterized by a 0- to 3-inch layer of slightly to moderately decomposed plant material overlying 20+ inches of ashy silt loam. Very gravelly sandy loams are typically present between 25 and 33 inches, with extremely cobbly sandy loams present

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

below 33 inches. Depth to bedrock and water table is typically more than 80 inches. Permeability is moderately high to high and available water capacity is moderate. This soil series is considered to be a non-hydric soil and is not known to contain hydric inclusions.

Due to the highly erosive soils that make up the majority of the park, the Study Area was surveyed for observable evidence of large-scale erosion or landslides. None were observed within or nearby the project area.

Illustration EIS 3.1-1: Soil Mapping Units within the Study Area



Note: See Table EIS 3.1-1 for the soil map units which correspond to the soil map numbers.

3.1.2 Alternative 1 – No Action

No new development projects would occur as a result of implementation of the No Action Alternative. Mount Spokane Ski and Snowboard Park would continue to operate under its current configuration and capacity. Because no ground disturbance is proposed under the No Action Alternative, there is no potential to affect geologic and soil resources within the area of potential effect as a result of the No Action Alternative.

3.1.3 Alternative 2 – Proposed Action

Implementation of Alternative 2 would result in approximately 43.5 acres of flush cut tree removal and approximately 32.6 acres of grading to construct the upper and lower terminals, chairlift towers and seven ski trails.

The majority of tree removal, approximately 34.1 acres, would occur on the Vaywood medial silt loam, 30 to 60 percent slopes, while the remaining 9.4 acres would occur over the other four soil units (see Table EIS 3.1-2). In areas where tree removal is prescribed, trees would be flush cut leaving the root systems in place to minimize soil mobility; however, ground cover would be revegetated where it is disturbed by tree removal activities. With tree removal, there would be a reduction in water uptake, as well as an increase in peak runoff and timing. As a result, maintaining a dense ground cover in ungraded areas would help reduce erosion potential and improve infiltration, minimizing these effects.

**Table EIS 3.1-2:
Acreage of Tree Removal and Grading by Soil Map Unit**

Soil Map Unit	NRCS Map Unit Number	Alternative 2 Acreage	Alternative 3 Acreage
TREE REMOVAL			
Brickel gravelly ashy silt loam, 15 to 30% slopes	5001	0.3	0.9
Vaywood medial silt loam, 15 to 30% slopes	5080	3.8	5.4
Vaywood medial silt loam, 30 to 60% slopes	5081	34.1	44.1
Bouldercreek ashy silt loam, 15 to 30% slopes	5110	0.2	2.2
Bouldercreek ashy silt loam, 30 to 60% slopes	5111	5.1	6.6
Tree Removal Total		43.5	59.3
GRADING			
Brickel gravelly ashy silt loam, 15 to 30% slopes	5001	0.7	0.6
Vaywood medial silt loam, 15 to 30% slopes	5080	5.5	3.5
Vaywood medial silt loam, 30 to 60% slopes	5081	16.2	4.7
Bouldercreek ashy silt loam, 15 to 30% slopes	5110	5.0	3.0
Bouldercreek ashy silt loam, 30 to 60% slopes	5111	5.2	3.5
Grading Total		32.6	15.3
TOTAL		76.1	74.6

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

Grading removes vegetative cover and topsoil that under natural conditions provide soil stability and allow for infiltration. Under Alternative 2, grading would occur within 16.2 acres of Vaywood medial silt loam, 30 to 60 percent slopes (see Table EIS 3.1-2), while approximately 5 acres of grading would occur within each of the following soil units: Vaywood medial silt loam, 30 to 60 percent slopes; Boulder creek ashy silt loam, 15 to 30 percent slopes; and Boulder creek ashy silt loam, 30 to 60 percent slopes. Minimal grading would occur within the Brickel gravelly ashy silt loam, 15 to 30 percent slopes. Although these soils range from moderate to high erodibility, soil mobility would be minimized during and after construction through implementation of temporary and permanent erosion and sediment control measures. After construction, re-spreading topsoil, or other organic amendment, and establishing successful vegetation on ski slopes would be essential to reducing erosion from runoff. Additionally, a closely spaced network of water bars would manage the volume and velocity of runoff, by interrupting overland flow and routing water onto slopes with native vegetation or armoring. Implementation of this and other Mitigation Measures identified in Table EIS 2-4, would minimize the effects of grading on these soils.

An erosion and sediment control (ESC) plan would be developed and submitted to Spokane County prior to the initiation of construction activities, identifying existing and proposed topography as well as environmental controls (e.g., erosion and sediment controls).

Native material would be excavated for footer construction, temporarily stockpiled, and broadcast in the disturbance area to establish final grade. Excess material excavated from the bottom terminal will be hauled via existing roads to be used as fill at the top terminal site or disposed of at an authorized fill site. The spoils will be stabilized for long-term storage with erosion and sediment control BMPs per the Mitigation Measures listed in Table EIS 2-4. No specific fill material would be required to construct the new chairlift terminals or towers. Areas of bare soil will be revegetated and mulched. At project completion, approximately 0.1 acre of new impervious surfaces would occur in the expansion area primarily from the covered mechanical space above the new chairlift terminals.

3.1.4 Alternative 3 – Mitigated Proposed Action

Impacts to the soils resource would be slightly less under Alternative 3 than under Alternative 2 because less surface grading is proposed. Implementation of Alternative 3 would require 59.3 acres of tree removal and 15.3 acres of grading to construct the upper and lower terminals, chairlift towers and seven ski trails.

The majority of tree removal would occur on 44.1 acres of Vaywood medial silt loam, 30 to 60 percent slopes, while the remaining 15.2 acres occurring on the other four soil units (see Table EIS 3.1-2). As discussed under Alternative 2, root systems would be left in place to minimize soil disturbance and revegetation would occur where ground cover was disturbed. With tree removal, there would be a reduction in uptake as well as an increase in peak runoff and timing. Accordingly, maintaining a dense ground cover in ungraded areas would help reduce erosion potential and improve infiltration, minimizing these effects.

Under Alternative 3, grading would occur on 4.7 acres of Vaywood medial silt loam, 30 to 60 percent slopes (see Table EIS 3.1-2), while approximately 3 acres of grading would occur within each of the following soil units: Vaywood medial silt loam, 30 to 60 percent slopes; Boulder creek ashy silt loam, 15 to 30 percent slopes; and Boulder creek ashy silt loam, 30 to 60 percent slopes. Minimal grading would occur within the Brickel gravelly ashy silt loam, 15 to 30 percent slopes. Grading would remove the vegetative cover and topsoil that under natural conditions provide soil stability and allow for infiltration. As discussed above, impacts from increased runoff volume and velocity would be minimized through re-spreading topsoil or other organic amendment, successful revegetation, water bars, and other Mitigation Measures identified in Table EIS 2-4 and the ESC plan.

Chairlift installation would occur as discussed above for Alternative 2. Implementation of erosion and sediment control BMPs per the Mitigation Measures listed in Table EIS 2-4, would be required. At project completion, approximately 0.1 acre of new impervious surfaces would occur in the expansion area primarily from the covered mechanical space above the new chairlift terminals.

3.1.5 Mitigation Measures

Potential direct and indirect effects of the action alternatives would be minimized through implementation of the BMPs and Mitigation Measures described in Table EIS 2-4 and through project specific operational plans.

3.1.6 Cumulative Effects

Cumulative impacts are the effects that may result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Generally, an impact can be considered cumulative if: a) effects of several actions occur in the same locale; b) effects on a particular resource are similar in nature; and c) effects are long-term in nature. Potential areas where cumulative impacts to soil and geological resources as a result of the construction and operation of new ski area facilities are discussed below.

Past development in the 279-acre expansion area has resulted in limited tree removal, grading, and installation of developed facilities. Cumulatively, past construction on state lands in and in the vicinity of the expansion area include the construction of Chair 4 Road, the Vista House, the Summit Road, ski area facilities at the summit of Mount Spokane, and communication towers. These previous construction projects have changed sediment yield, soil compaction and impermeable surface between pre-development conditions and present day recreational area development. Changes in sediment yield and soil compaction are primarily temporary and associated with construction activities; however, permanent developments such as roads and buildings would continue to result in increased impermeable surfaces. Future projects that could cumulatively impact the Study Area include implementation of the Comprehensive Trail Plan, which is part of the 2010 Master Facilities Plan. The Comprehensive Trail Plan contemplates a multi-use trail in the PASEA, depending upon the land classification adopted (see Section II).

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

Long-term effects to soil and geology resources occur from a loss of geologic stability or soil productivity. The construction of impervious surfaces serves as a surrogate for measuring long-term losses in soil productivity. The replacement of soils with impervious surfaces also alters the soil permeability and its ability to absorb water. No identified cumulative effects would alter geologic stability; therefore, geologic stability is not discussed in this cumulative effects analysis.

In the context of past, present and reasonably foreseeable effects, the contribution of the action alternatives to overall long-term cumulative impacts is minimal, with 0.1 acre of new impervious surfaces (i.e., lift terminals) for Alternative 2 and Alternative 3, with respect to permanent structures being constructed. Implementation of the BMPs outlined in Table EIS 2-4 would help manage soil movement and sedimentation within the project area. Cumulatively, it is likely that long-term changes in soil structure due to a transition from a forested condition to meadows associated with ski trails would over time result in changes to soil hydrology due to changes in both vegetation and contours as a result of the developed ski runs. No other past, present or reasonably foreseeable projects were identified that would add cumulatively to soil and geology resources in the Study Area.

3.2 WATERSHED RESOURCES

3.2.1 Introduction

The Study Area for the watershed resources analysis is approximately 279 acres in size and encompasses the proposed expansion area. Areas immediately outside this analysis were also reviewed to ensure off site wetland and/or stream buffers (as defined by Spokane County) did not extend into the proposed expansion area. The Mount Spokane Study Area encompasses the upper portions of the Water Resource Inventory Area (WRIA 57 – Middle Spokane River). This section presents the analysis of watershed resources as three distinct topics: Streams, Wetlands, and Water Quality. Documents frequently used as references during this analysis include: *Wetland Categorization/Buffer Establishment Stream Typing/Buffer Establishment PASEA (Towey 2011)*, *Wetland Delineation Report Mount Spokane Ski and Snowboard Park Proposed Expansion Area (ICF 2013)* and *Watershed Management Plan – Water Resource Inventory Area 55; Little Spokane River & Water Resource Inventory Area 57 Middle Spokane River (Spokane County 2006)*. The wetland delineation report authored by ICF in 2013 is included in this EIS as Appendix D.

The primary focus of the analysis of the affected environment and potential impacts to watershed resources from the action alternatives is at the site scale (Mount Spokane Study Area). Since impacts at a given point in a watershed may be transmitted downstream, potential effects to watershed resources are also analyzed at the watershed scale, as well.

Direct impacts to Watershed Resources would include clearing vegetation (over 3 feet high) for ski trails that cross streams and wetlands and construction activities within streamside areas that would interrupt riparian functions.

**Section III. Mount Spokane State Park Proposed Ski Area Expansion
Final Environmental Impact Statement**

Indirect impacts would include construction of impervious surfaces, removal of natural vegetation (affecting hydrologic function), removal or maintenance of vegetation in wetlands or streams, construction activities that result in water quality degradation in streams and wetlands, introduction of noxious weeds or other non-native species from construction activities, changes in land cover that alter flow rates and discharge timing, and windthrow impacts.

The Study Area is situated at elevations ranging from approximately 5,800 feet elevation near the summit of Mount Spokane to an elevation of 4,418 feet near the proposed bottom terminal site for the proposed chairlift. The project area is part of the Middle Spokane River watershed, often described for watershed planning purposes as Water Resource Inventory Area (WRIA) 57. WRIA 57 contains less than 10 percent of the contributing natural drainage of the Spokane Basin. Most of the Middle Spokane River watershed lies in Idaho. Surface waters in the Study Area convey water into Blanchard Creek (Linsey 2011). The Blanchard Creek drainage flows north and east across the Idaho border into Blanchard Lake adjacent to Highway 41. Within the Blanchard Drainage Basin, 20 percent of the water in Blanchard Creek is generated within the park on the north, undeveloped portion of the mountain. Because of the elevation and forest condition, the percentage of the basin's contribution to stream flow is likely reduced in winter and expanded in summer (Washington State Parks 2010a).

Surface water quality issues in WRIA 57 include heavy metals, dissolved oxygen, pH, temperature, PCBs and sediment. Heavy metal concentrations are primarily due to mining activities in Idaho, whereas the remaining water quality issues are likely related to wastewater treatment plant effluents, industry, or land use activities (Spokane County 2006). Illustration EIS 3.2-1 graphically illustrates WRIA 57 and the position of Mount Spokane in the watershed.

**Illustration EIS 3.2-1:
Middle Spokane Water Resource Inventory Area (WRIA) #57**

