Chapter 1
Purpose and Need

INTRODUCTION

The purpose of the 2003 Final Environmental Impact Statement (FEIS) for the Payette National Forest Land and Resource Management Plan (Forest Plan) (USDA Forest Service 2003) was to revise the previous Forest Plan (USDA Forest Service 1988) to meet legal and regulatory requirements and to address changes, issues, and concerns that had arisen since it was originally released. The need for the revision was identified as the legal timeframe for revision had arrived, and significant change in conditions and demands in the areas covered by the Forest Plan (USDA Forest Service 1988) had been identified. The Preliminary Analysis of the Management Situation Summary (USDA Forest Service 1997) identified the threat for disease transmission from livestock to bighorn sheep as a potential reason for population decline. This concern translated into a need for change topic revision of the Forest Plan (USDA Forest Service 1988) and was further validated during regulatory agency consultation with the U.S. Fish and Wildlife Service (USFWS). As such, bighorn sheep were identified as a species of special interest for the Forest Plan revision effort. The bighorn sheep need for change topic was then translated into a significant issue used in effects analysis, alternative formulation, and development of management direction. Significant issues tied to the bighorn sheep viability concern included the following:

1. Terrestrial Wildlife Habitat and Species

Issue Statement 1: Forest Plan management strategies may affect habitat for terrestrial wildlife species, including species that are listed or proposed for listing under the Endangered Species Act, Region 4 sensitive species, species of special interest, species at risk, and Forest Management Indicator Species.

Issue Statement 2: Forest Plan management strategies may affect disruption, vulnerability, and disease risk to terrestrial wildlife species.

2. Rangeland Resources

Issue Statement: Forest Plan management strategies may affect rangeland resources, including lands considered suitable for livestock grazing and the form of livestock grazing management authorized under permit for the Forest.

3. Tribal Rights and Interests

Issue Statement: Forest Plan management strategies may affect the availability of resources and the use of traditional places important to American Indian rights and interests.

In addition to the USFWS concern over the viability of bighorn sheep, several comments from tribal governments and the public were received supporting concern for the species. It was assumed during the FEIS analysis that disease transmission from domestic sheep was a threat to bighorn sheep as this was supported by laboratory research and the overwhelming

majority of published science. It continues to be recognized that the exact mechanisms of the transfer are not fully understood.

The Payette National Forest included direction to the Forest Plan (USDA Forest Service 2003) as a guideline and an objective for the Hells Canyon Management Area (MA) #1 that read:

> Guideline—Within bighorn habitat emphasis areas, close sheep allotments as they become vacant, or convert then to cattle where appropriate, to eliminate the risk of disease transmission from domestic to wild sheep. Do not convert cattle allotments to sheep allotments within occupied bighorn sheep habitat.
>
> Objective—Coordinate with Idaho Department of Fish and Game, Oregon Department of Fish and Game, and domestic sheep permittees to reduce the risk of disease transmission between domestic and wild sheep.

Several entities appealed the 2003 FEIS stating that the Forest Service violated National Forest Management Act (NFMA) and the Hells Canyon National Recreation Area (HCNRA) Act on the Payette National Forest by allowing grazing of domestic sheep in or near the range of bighorn sheep, thus threatening the viability of bighorn sheep through disease transmission. One appellant stated, "The Hells Canyon National Recreation Area Act…requires livestock grazing to be compatible with native wildlife protection…the selected alternative fails to address the issues of ongoing conflicts of domestic sheep grazing and wild bighorn sheep in a way that assures the ultimate survival of the bighorn population in a manner sufficient to meet its obligation under the HCNRA Act."

The Appeal Reviewing Officer found the following:

> The Payette Forest Plan (USDA Forest Service 2003) does not contain any direction for protecting or maintaining bighorn sheep or their habitat in the Hells Canyon MA, in particular for the protection of bighorn sheep from the documented current and likely future threat of disease transmission from domestic sheep. By permitting the presence of domestic sheep within occupied bighorn sheep range, the Payette National Forest does not appear to be managing the habitat to maintain viable populations of bighorn sheep.
>
> Based on the above analysis, the viability of bighorn sheep populations within the Hells Canyon area, and across the Payette National Forest, appears to be threatened by allowing continued grazing of domestic sheep in or near occupied bighorn sheep habitat. As documented in the FEIS and relevant scientific literature, without immediate removal of domestic sheep from occupied bighorn sheep habitat, bighorn within that habitat are likely at risk of extirpation. Bighorn sheep habitat is contiguous between the Payette National Forest and National Forest System land to the north, east and south, and bighorn sheep appear to move between the two identified habitat areas (Hells Canyon and Snake River) within the Payette National Forest. Transmission of disease to bighorn sheep on the Payette National Forest that are part of the Hells Canyon population will place the entire Payette National Forest population at substantial risk.

> While the Hells Canyon MA is thus not specifically included in the HCNRA Act, it is clear that by permitting the presence of domestic sheep within adjacent occupied bighorn sheep range, and with documented movement of bighorn sheep between the NRA and the Payette National Forest, the Payette National Forest is not managing livestock grazing in the Hells Canyon MA in a manner compatible with the protection and maintenance or bighorn sheep or their habitat in the HCNRA.

The Appeal Reviewing Officer's decision stated the following:

> Serious questions are raised in the SW Idaho Ecogroup FEIS, supported by applicable scientific literature, about the viability of bighorn sheep populations in the Hells Canyon MA (MA#1) of the Payette National Forest, and indeed across the Payette National Forest. However, the effects analysis does not address bighorn sheep viability. Management direction in the Payette NF LRMP for the Hells Canyon MA does not adequately provide for habitat to insure the maintenance of a viable bighorn sheep population within the Payette National Forest (36 CFR 219.19). It also does not adequately protect bighorn sheep populations and habitat in the Hells Canyon NRA (36 CFR 292.48). I find the Payette National Forest LRMP is not in compliance with NFMA regulations concerning wildlife viability of bighorn sheep, and may not be in compliance with the Hells Canyon NRA Act and its implementing regulations. The Regional Forester's decision to approve revised management direction in the Payette LRMP for the Hells Canyon MA is reversed.
>
> The Regional Forester is instructed to do an analysis of bighorn sheep viability in the National Forest commensurate with the concerns and questions discussed above, and amend (supplement) the SW Idaho Ecogroup FEIS accordingly. Changes to the management direction of the Payette LRMP for MA #1 (Hells Canyon) and adjacent areas shall be evaluated, and adopted as necessary to ensure bighorn sheep viability. The analysis should be extensive enough to support determinations of compliance with applicable law and regulation, specifically the Hells Canyon NRA Act, 36 CFR 219.19 and 36 CFR 292.48.

This set of instructions from the Appeal Reviewing Officer created an additional purpose and need for this Draft Supplemental Environmental Impact Statement (DSEIS) that will be discussed in the section below. It must be pointed out that the HCNRA and the Hells Canyon MA are two separate and distinct delineations on a map. Only a small portion of the Hells Canyon MA overlaps into the HCNRA. However, the HCNRA does extend alongside the western boundary of the Hells Canyon MA for a considerable distance. Bighorn sheep have repeatedly been documented traversing back and forth across the boundaries of these two areas and coming into contact with domestic sheep allotments on the Payette National Forest during the permitted grazing season. In instructing the Payette National Forest to conduct a viability analysis at the planning unit scale, the entire Payette National Forest was analyzed which also affects the Salmon River Mountain bighorn sheep population.

Considerable debate about the science has surrounded the disease transmission issue since the Supplemental Environmental Impact Statement (SEIS) process began. Even so, the preponderance of science literature still supports the notion that the issues are significant and warrant consideration of effects analysis and management direction.

Decisions to be Made in the Final Supplemental Environmental Impact Statement Process

The SEIS assessment involves conducting a viability analysis for bighorn sheep on the Payette National Forest. The assessment includes a review of the available bighorn sheep source habitat, its distribution across the Payette National Forest, and how contiguous it is. Additional considerations include how bighorn sheep are now and how have they used the habitat at a landscape scale internal to the Payette National Forest and between adjacent federal lands. The relative risk for contact with permitted domestic sheep is also considered.

The Responsible Official for this analysis, amendment, and decision is the Payette National Forest Supervisor. Given the information gathered in the above analyses, the Responsible Official decides which alternative to select as the Agency Preferred for the DSEIS and what Forest Plan amendment management direction is developed.

Decisions to be made for the Final SEIS and Amendment to the Forest Plan (USDA Forest Service 2003) include the following:

1. What alternative to select for implementation
2. What management direction to develop that will assist with implementing the selected alternative
3. Does the selected alternative and its implementation language comply with federal law and regulation, in particular NFMA and the HCNRA Act.

Consistent with 36 CFR §219.20(a), the following pages will supplement the National or Regional Issues section, page 1-31, of Chapter 1 of the 2003 Southwest Idaho Ecogroup Land and Resource Management Plans Final Environmental Impact Statement.

National or Regional Issues

The Payette National Forest received several appeals on the 2003 Record of Decision for the FEIS on the Forest Plan (USDA Forest Service 2003). One appeal point dealt with bighorn sheep viability and the effects of disease transmission from domestic sheep to bighorn sheep on the rapidly declining populations. The Appeal Reviewing Officer in the Washington Office remanded the direction found in the Forest Plan (USDA Forest Service 2003) regarding bighorn sheep management. The Chief of the Forest Service (Chief) instructed the Regional Forester to analyze bighorn sheep viability in the Payette National Forest commensurate with the concerns and questions discussed in the appeal review and amend the Forest Plan (USDA Forest Service 2003) accordingly to ensure bighorn sheep viability. The analysis was to be thorough enough to determine compliance with applicable laws and regulations, specifically the HCNRA Act, 36 CFR 219.19, and 36 CFR 292.48.

The purpose of this DSEIS and Draft Amendment to the Forest Plan (USDA Forest Service 2003) is to respond to the instructions received from the Appeal Reviewing Officer on March 9, 2005 regarding appeals to the 2003 ROD.

The first need for this DSEIS and Draft Amendment to the Forest Plan (USDA Forest Service 2003) is to conduct a bighorn sheep viability analysis on the Payette National Forest that looks at the effects of disease transmission from domestic to bighorn sheep, evaluates

how the effects impact the persistence of bighorn sheep populations over time; and adds language to the Forest Plan (USDA Forest Service 2003) adequately addressing the management concern. For the second need, the analysis will determine whether or not the Payette National Forest is providing adequate bighorn sheep habitat, well distributed across the planning unit, to provide for a viable population of bighorn sheep as required by NFMA:

NFMA—36 CFR 219.19

> *36 CFR 219.19—"Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area."*
>
> *36 CFR 219.27—"The minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System are set forth in this section. These requirements guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans.*
>
> *(a) Resource Protection. All management prescriptions shall—* […]
>
> *(6) Provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for species chosen under Sec. 219.19 is maintained and improved to the degree consistent with multiple–use objectives established in the plan;"*

For the third need, the analysis will determine compliance with the HCNRA Act. Domestic sheep grazing allotments currently cross over and into or are immediately adjacent to the HCNRA. Analysis needs to be completed to determine if Payette National Forest management is compatible with the HCNRA Act as stated below:

Hells Canyon National Recreation Area Act

The HCNRA Act (PL 94-199) was enacted on December 31, 1975, and the Act provides direction for the "administration, protection, and development" of the HCNRA (16 USC §460gg-4). According to the HCNRA Act, grazing is identified as one of several traditional and valid uses of the recreation area, and the continuation of grazing can occur as compatible with the provisions of the HCNRA Act.

The HCNRA Act and its implementing regulations require that the Payette National Forest manage livestock grazing in the Hells Canyon MA in a manner compatible with the protection and maintenance of bighorn sheep or their habitat within the HCNRA. This requirement was considered and used in developing the alternatives.

Significant Issues

Significant issues identified in the FEIS that carry forward into this analysis include the following:

1. Terrestrial Wildlife Habitat and Species

Issue Statement 1: Forest Plan management strategies may affect habitat for terrestrial wildlife species, including species that are listed or proposed for listing under the Endangered Species Act, Region 4 sensitive species, species of special interest, species at risk, and Forest Management Indicator Species.

Issue Statement 2: Forest Plan management strategies may affect disruption, vulnerability, and disease risk to terrestrial wildlife species.

2. Rangeland Resources

Issue Statement: Forest Plan management strategies may affect rangeland resources, including lands considered suitable for livestock grazing and the form of livestock grazing management authorized under permit for the Payette National Forest.

3. Tribal Rights and Interests

Issue Statement: Forest Plan management strategies may affect the availability of resources and the use of traditional places important to American Indian rights and interests.

Chapter 2
Alternatives Considered

INTRODUCTION

This Draft Supplemental Environmental Impact Statement (DSEIS) contains alternate management options developed in response to the direction outlined in the March 9, 2005, Decision for Appeal of the Payette National Forest Land and Resource Management Plan (Forest Plan) (USDA Forest Service 2003). Specifically, the Appeal Reviewing Officer found that the management direction in the Forest Plan (USDA Forest Service 2003) does not adequately provide for habitat to ensure the maintenance of a viable bighorn sheep population within the within the Payette National Forest (36 CFR 219.19). She also found that the Forest Plan (USDA Forest Service 2003) does not adequately protect bighorn sheep populations and habitat in the Hells Canyon National Recreation Area (HCNRA) (36 CFR 292.48). The Payette National Forest was found not compliant with National Forest Management Act (NFMA) regulations concerning wildlife viability of bighorn sheep and may not be compliant with the HCNRA Act and its implementing regulations. The management direction for Hells Canyon Management Area (MA) #1 was reversed and the Payette National Forest was instructed to amend the Forest Plan (USDA Forest Service 2003) as necessary to ensure viability for bighorn sheep.

The Forest Plan (USDA Forest Service 2003) was developed to implement Alternative 7 from the Final Environmental Impact Statement (FEIS). Because the direction tied to bighorn sheep management was found inadequate and was reversed, the Payette National Forest developed alternate management strategies to Alternative 7 for bighorn sheep. In this document, the alternatives from the FEIS—1B, 2, 3, 4, 5, 6, and 7—are considered part of the range as are those developed for this process, 7A through 7K. Because the FEIS analysis for bighorn sheep viability was deemed inadequate, the FEIS alternatives and the action alternatives from the DSEIS will be analyzed and the effects to bighorn sheep disclosed in this document.

Alternate management strategies to Alternatives 7 were developed utilizing the issues developed and comments received on the FEIS and comments received on the products of the Supplemental Environmental Impact Statement (SEIS) process. The issues used for this process are found in the FEIS (pages 1-14, 15, 19, 20, and 23) and are as follows:

1) Terrestrial Wildlife Habitat and Species

Issue Statement 1: Forest Plan management strategies may affect habitat terrestrial wildlife species, including species that are listed or proposed for listing under the Endangered Species Act, Region 4 sensitive species, species of special interest, species at risk, and Forest Management Indicator Species.

Issue Statement 2: Forest Plan management strategies may affect disruption, vulnerability, and disease risk to terrestrial wildlife species.

2) Rangeland Resources

Issue Statement: Forest Plan management strategies may affect rangeland resources, including lands considered suitable for livestock grazing and the form of livestock grazing management authorized under permit for the Forest.

3) Tribal Rights and Interests

Issue Statement: Forest Plan management strategies may affect the availability of resources and the use of traditional places important to American Indian rights and interests.

Public scoping and involvement on the FEIS was extensive and spanned over a 7-year period. The risk for disease transmission from domestic sheep to bighorn sheep and the subsequent population declines was identified early on and noted as a concern by the U.S. Fish and Wildlife Service (USFWS). It was assumed for the FEIS that disease transmission can occur. Only one comment was received during the 7-year period questioning that assumption. Tribal consultation, both informal and formal, was also extensive during the Forest Plan (USDA Forest Service 2003) development process.

To begin the SEIS process, the Forest Service completed an analysis on the risk for contact between domestic sheep and bighorn sheep on the Payette National Forest. The *Risk Analysis for Disease Transmission Between Bighorn Sheep and Domestic Sheep on the Payette National Forest* (risk analysis) (USDA Forest Service 2006a) was completed in February 2006 and released for a 96-day comment period. Sixty-two comments were received on the document. In November 2006, the Payette National Forest contracted the setup and facilitation of a science panel composed of veterinary, livestock, and wildlife experts to discuss the risk analysis and the science-based comments received on the risk analysis. The scientists provided the Forest Service with a guiding set of consensus statements that have become known as the "Payette Principles" (USDA Forest Service 2006b). Further science meetings were held in Davis, California; Tucson, Arizona; Salt Lake City, Utah; and Boise, Idaho. The Western Association of Fish and Wildlife Agencies (WAFWA) also convened and discussed the issue.

Comments, concerns, insights, and information gathered from all of the public involvement efforts, science panels, and fish and game meetings were considered for the alternatives for bighorn sheep management. The section below on alternatives will address only developing the alternate bighorn sheep strategies as the remainder of Alternative 7 was left intact.

Chapter 2, *Alternatives Considered*, will follow the format from the FEIS and will only contain the discussion regarding Alternatives 7A through 7K. Discussion about Alternatives 1B through 7 is provided in the FEIS. As with the FEIS, Chapter 2 will include the following:

- Development of the Reasonable Range of Alternatives
- Alternatives Considered but Eliminated from Detailed Study
- Alternatives Considered In Detail

- Comparison of Alternatives
- Preferred Alternative.

Maps of each of the alternatives are also included.

Consistent with 36 CFR §219.20(a), the following pages will supplement the Development of Reasonable Range of Alternatives section, pages 2-1 through 2-131, of Chapter 2 of the 2003 Southwest Idaho Ecogroup Land and Resource Management Plans Final Environmental Impact Statement.

DEVELOPMENT OF REASONABLE RANGE OF ALTERNATIVES

To develop a reasonable range of alternatives for bighorn sheep management, the Payette National Forest utilized all public comments, tribal and regulatory agency consultation, and the Appeal Decisions instructions received on the FEIS and Forest Plan (USDA Forest Service 2003). In addition, the Payette National Forest utilized the following: comments received on the risk analysis (USDA Forest Service 2006a); the Payette Science Panel statements (USDA Forest Service 2006b), which were developed through consensus; the findings from science meetings held in California, Arizona, Utah, and Idaho; the guidelines developed by the WAFWA; and the input and dialogue from the recognized cooperators at the DSEIS Interdisciplinary Team (IDT) meetings.

Typically, reasonable alternatives meet two criteria: 1) they fulfill purpose and need for the proposed action and 2) they address the significant issues. For this DSEIS, Alternative 7 is carried into detailed study although the Appeal Reviewing Officer found it to not be compliant with the NFMA for bighorn sheep management. In this case, it will be used for the purpose of comparison only.

Significant issues utilized for alternative development included the following:

1) Terrestrial Wildlife Habitat and Species

Issue Statement 1: Forest Plan management strategies may affect habitat for terrestrial wildlife species, including species that are listed or proposed for listing under the Endangered Species Act, Region 4 sensitive species, species of special interest, species at risk, and Forest Management Indicator Species.

Issue Statement 2: Forest Plan management strategies may affect disruption, vulnerability, and disease risk to terrestrial wildlife species.

2) Rangeland Resources

Issue Statement: Forest Plan management strategies may affect rangeland resources, including lands considered suitable for livestock grazing and the form of livestock grazing management authorized under permit for the Forest.

3) Tribal Rights and Interests

Issue Statement: Forest Plan management strategies may affect the availability of resources and the use of traditional places important to American Indian rights and interests.

One key assumption carried over from the 2003 FEIS is that disease transmission from domestic sheep to bighorn sheep is a threat to the wild sheep species. The overwhelming majority of published science supports this assumption and transmission from domestic sheep to bighorn sheep has been proven in laboratory settings. Transmission has yet to be disproven in a laboratory setting. Even with the controversy over the issue, scientists from both sides of the issue have agreed that the prudent action is to keep the two sheep species separated.

Risk of Contact Model

Prior to development of the alternatives, the Payette National Forest conducted three critical baseline analyses: 1) a modeled effort to look at where the depressed populations of bighorn sheep have utilized the Payette National Forest and surrounding areas over the last 10 to 25 years (geographic population range [GPR]); 2) a risk for contact between bighorn sheep and permitted domestic sheep on the Payette National Forest (risk analysis [USDA Forest Service 2006a]); and 3) a modeled bighorn sheep source habitat map.

Geographic Population Range

To develop a GPR, the Payette National Forest utilized available telemetry data on bighorn sheep movements to model the utility distributions (probability distributions) of bighorn sheep populations with 50 to 100 percent (in 10 percent increments) fixed kernal estimators, following the methods of Clifford et al. (2007). The objective was to describe the areas that bighorn sheep would be utilizing and/or moving through, known as herd home ranges, based on the actual occurrence data. The herd home range and GPR analysis that we completed in this DSEIS follows the process found in the Clifford et al. (2007) paper. We decided to follow this process because the main issue with bighorn sheep on the Payette is disease transmission, which is what Clifford et al. (2007) paper was designed to analyze. The Clifford et al. (2007) paper designed a process of quantitatively measuring the risk of a disease event with in three populations of California bighorn sheep in the Sierra Nevada range in a management context. This is the only published work that focuses on disease transmission within a management context.

Two GPRs were developed: one for Hells Canyon populations and one for the Salmon River population (Figure W-9a from *Terrestrial Wildlife Habitat and Species*). The term GPR was created by the DSEIS IDT because the home range term is typically used for an individual, not a herd group or larger. A GPR, as defined by this project, is a range in which a group larger than a herd, but smaller than a metapopulation, occupies or has occupied the habitat in the past. It is the Forest Service's closest approximation of occupied habitat at this time. The GPR for the Hells Canyon population was created by merging all of the final herd home range 100 percent volume contours. The Salmon River GPR was developed using a different technique since there is only a 0.06 percent level of telemetry and observation in the Salmon River herds compared to the Hells Canyon herds. Idaho Department of Fish and

Game (IDFG) biologists provided a map showing a GPR based on their best professional judgment and the known data at the time. When the first map was provided, approximately 150 locations existed in the Salmon River area. More telemetry and observational data were collected from the Taylor Ranch study and more field surveys, which provided 310 total points. A new step was added to create a home range analysis with all 310 points. This home range analysis was identical to the Hells Canyon fixed kernel and volume contours from 50 to 100 percent in 10 percent increments. The one modification used was in the band width selection because of the nonherd nature and low density of the points. The band width came from a least squares cross-validation calculation. The two separate products were spatially merged into the final product, which was reviewed by the DSEIS IDT and Cooperators and approved by the Line Officer.

Risk Analysis of Disease Transmission between Domestic Sheep and Bighorn Sheep on the Payette National Forest

The objective of the risk analysis (USDA Forest Service 2006a) was to provide decision makers with information about the likelihood of disease transmission from domestic sheep to bighorn sheep for specific sheep allotments on the Payette National Forest. This analysis was completed in February 2006 and utilized bighorn sheep experts, state fish and game biologists familiar with the landscape and use patterns of the bighorn sheep, and Forest Range Specialists familiar with domestic allotment management on the Payette National Forest to discuss and independently rate each allotment for its risk for contact with bighorn sheep. To develop the risk analysis, an expert panel rated the risk of disease transmission according to the following factors: distance between the sheep allotment[1] and nearest bighorn sheep populations, amount of Geographic Information System (GIS)-modeled bighorn sheep habitat within the sheep allotment and between the allotment and the nearest bighorn sheep herd, expert knowledge of the amount and quality of bighorn sheep habitat, presence of incidental bighorn sightings in or near allotments, expert knowledge about bighorn sheep distributions and movements near the allotments, and characteristics of each sheep allotment.

The risk analysis assigned each allotment to a very high, high, moderate, low, or very low risk rating based on the likelihood of direct contact between bighorn and domestic sheep. For the potential risk of contact model, each rating is treated as varying exponentially from very low to very high as a mathematical relationship that infers the increasing potential rates of contact and subsequent risk for disease transmission between those categories, which is consistent with the assumptions used in applying the risk analysis ratings.

Source Habitat

In 2003, an interagency memorandum of understanding (MOU) was signed to cooperatively implement "The Interior Columbia Basin Strategy" to guide the amendment and revision of forest plans. This MOU stated that "management plans shall address ways to maintain and secure terrestrial habitats that are comparable to those classified by the science findings as

[1] The Surdam On/Off Allotment (158 acres) was not included in the expert panel risk assessment because the risk assessment team leader was not aware of the existence of the allotment at the time of the December 14, 2005, risk analysis.

"source habitats." Therefore, this DSEIS uses source habitat to assess conditions for bighorn sheep. Source habitats are those characteristics of macrovegetation that contribute to positive population growth for a species in a specified area and time (Wisdom et al. 2000). Wisdom et al. (2000) describe source habitats for bighorn sheep in alpine, subalpine, upland shrubland, and upland herbland community groups. Alpine and subalpine community groups are primarily summer range and upland herbland and shrubland are used in both seasons, depending on elevation (Wisdom et al. 2000). Old-forest and stand initiation stage of whitebark pine and stand initiation stage of other forested cover types are other source habitat.

To assess the current source habitat available for bighorn sheep, the existing vegetation layer from the national LANDFIRE layer (The National Map LANDFIRE 2006) was used. This information was utilized since it goes beyond the boundaries of the Payette National Forest and is useful for analyzing wildlife habitat and corridors across landscapes. The vegetative cover types used by the Hells Canyon Restoration Committee (Hells Canyon Bighorn Sheep Restoration Committee 2004) and Wisdom et al. (2000) were crosswalked into the LANDFIRE ecological systems (NatureServe 2004) to identify summer and winter source habitat. Winter source habitat is a subset of summer source habitat in that it encompasses only those areas below 4,500 feet on southerly aspects.

Overall Risk Model

These three components were then "added" to each other to produce a map of the relative risks of contact across the Payette National Forest—the potential for the risk of contact is a function of where bighorn sheep are (the GPR), where they may interact with domestic sheep (the allotments), and where habitat occurs (the presence or absence of source habitat). When these are added together, incremental relative risk ratings can be applied across the Payette National Forest. The components are added to evaluate the influence of all three of them together. Adding is just a simplified way of evaluating the three together; multiplying or some other function would not change the relative risks of each alternative, just the scale at which they are evaluated. Using the relative risk, a risk ratio of the relative risk remaining on the landscape to the amount removed from the landscape was developed. The higher the absolute value of the ratio, the less risk posed by an alternative.

The Payette National Forest developed different options using the above products to result in a range of alternatives that vary in their degree of protection for bighorn sheep. The Payette National Forest also identified areas suitable for domestic sheep grazing based on bighorn sheep lambing areas, known occurrences or current occupancy, travel corridors, and potential barriers to bighorn sheep movement.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Alternative 7A

Alternative 7A was developed by the Payette National Forest after carefully considering the risk analysis (USDA Forest Service 2006a). According to the analysis, a portion of the Smith Mountain Allotment is rated as very high risk and a portion of the Curren Hill Allotment is rated as high risk. The risk analysis rated the following entire allotments as

high risk: French Creek, Bear Pete, and Marshall Mountain (USDA Forest Service 2006a). Alternative 7A designates the very high risk portion of the Smith Mountain Allotment and the high risk portion of the Curren Hill Allotment as unsuitable for domestic sheep grazing.

This alternative utilizes only one component of the Salmon River GPR—a map provided by IDFG biologists showing the GPR based on best professional judgment and the known data at the time. The portions of the following allotments that fall within the IDFG delineation are determined to be unsuitable for domestic sheep grazing: Shorts Bar, Hershey Lava, French Creek, North Fork Lick Creek, Little French Creek, Vance Creek, Marshal Mountain, Bear Pete, Josephine, Victor-Loon, Twenty Mile, Fall/Brush, and Lake Fork.

Trailing routes that fall within the Smith Mountain and Curren Hill allotments and those allotments within the IDFG delineation are determined to be closed to use by domestic sheep.

Alternative 7A was removed from detailed consideration by the DSEIS IDT and Cooperators in lieu of Alternative 7G, which used all components of the Salmon River GPR. The DSEIS IDT and cooperators believed that Alternative 7A did not utilize all available and pertinent data.

Alternative 7B

The risk analysis was also used to develop Alternative 7B, which designates the following areas as unsuitable for domestic sheep grazing: the very high rated portion of the Smith Mountain Allotment and all allotments that were rated as high risk, including Curren Hill, French Creek, Bear Pete, and Marshall Mountain. This alternative also designates some lands outside of the GPRs as unsuitable for domestic sheep grazing. Finally, this alternative removes trailing route use inside of closed areas identified by either allotment closure or GPR closure.

When first developed, the Forest Service believed Alternative 7B accurately reflected current grazing practices on the Payette National Forest for 2007. However, on further examination, the Forest Service learned that Alternative 7B only reflected how the west side of the Payette National Forest was grazed in 2007, not the east side. Therefore, this alternative was removed from detailed consideration by the DSEIS IDT and Cooperators in lieu of Alternative 7K, which more closely though not exactly reflected how the west and east sides of the Payette National Forest were grazed in 2007.

Alternative 7C

The HCNRA Act and the HCNRA Comprehensive Management Plan (CMP) were considered when developing this Alternative. The HCNRA Act states "Where domestic livestock grazing is incompatible with protection, restoration, or maintenance of fish and wildlife or their habitats;…the livestock use shall be modified as necessary to eliminate or avoid the incompatibility. In the event an incompatibility persists after modification or modification is not feasible, the livestock use shall be terminated." Wildlife Standard Wld-S8 in the CMP states "Prevent the spread of diseases from domestic sheep by maintaining separation of the two species. Vacant allotments would not be stocked with domestic sheep unless a vaccine or other technique is found that eliminates the incompatibility." Alternative 7C designates all Payette National Forest lands within the HCNRA as unsuitable

for domestic sheep grazing. Alternative 7C also removes trailing route use within the HCNRA.

Two Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*) (bighorn sheep) metapopulations currently exist on the Payette National Forest, one within the Hells Canyon of the Snake River and the other among the Salmon River Mountains (USDA Forest Service 2006a). This alternative was removed from detailed consideration by the DSEIS IDT and Cooperators because it did not address domestic sheep grazing on areas utilized by the Salmon River metapopulation.

Alternative 7D

Alternative 7D considers all lands within the modeled Hells Canyon GPR on the west side of the Payette National Forest unsuitable for domestic sheep grazing. Portions of the following allotments that fall within the Hells Canyon GPR are considered unsuitable: Curren Hill, Smith Mountain, Boulder Creek, and Price Valley.

Similar to Alternative 7A, this alternative utilizes one component of the Salmon River GPR—a map provided by IDFG biologists showing the GPR based on best professional judgment and the known data at the time. Utilizing this component, this alternative designates portions of the following allotments that fall within the IDFG delineation as unsuitable for domestic sheep grazing: Shorts Bar, Hershey Lava, French Creek, North Fork Lick Creek, Little French Creek, Vance Creek, Marshal Mountain, Bear Pete, Josephine, Victor-Loon, Twenty Mile, Fall/Brush, and Lake Fork.

This alternative was removed from consideration by the DSEIS IDT and Cooperators in lieu of Alternative 7G, which removed domestic sheep grazing from both the modeled Hells Canyon GPR and the Salmon River GPR. Alternative 7D does not utilize all available and pertinent data.

Alternative 7F

Current Bureau of Land Management (BLM) guidelines (Desert Bighorn Council Technical Staff 1990) recommend a minimum 8.4-mile wide buffer strip between ranges used by domestic and bighorn sheep. This alternative utilizes those management guidelines for the Hells Canyon metapopulation and designates lands within modeled and mapped ranges of individual rams and within 8.4 miles of known locations on the west side of the Payette National Forest as unsuitable for domestic sheep grazing. For the west side of the Payette National Forest, this alternative designates portions of the following allotments that fall within the bighorn sheep ram home range as unsuitable for domestic sheep grazing: Curren Hill, Smith Mountain, Boulder Creek, and Price Valley. The ram home range was created by merging the home range analysis for all collared rams that came onto the Payette National Forest.

The Forest Service took a slightly different approach for the Salmon River metapopulation when developing this alternative. Instead of using the BLM guideline of 8.4 miles, the Forest Service used the 9-mile buffer recommended by WAFWA. This alternative designates areas within 9 miles of all known bighorn sheep locations identified prior to August 2007 as

unsuitable for domestic sheep grazing, which affects portions of the following allotments: Marshall Mountain, Bear Pete, Brundage, Jug Handle, and Victor-Loon.

In addition, this alternative designates trailing routes that fall within this alternative as closed to domestic sheep use.

The DSEIS IDT and Cooperators removed this alternative from detailed consideration because domestic sheep suitability was determined according to two different standards: a 9-mile buffer within the Salmon River metapopulation and the ram GPR for the Hells Canyon metapopulation. The ram GPR was developed as described above, but included the telemetry points for rams only.

Alternative 7I

This alternative designates lands within all modeled source habitat and all areas within 1 mile of modeled source habitat within the entire Payette National Forest as unsuitable for domestic sheep grazing.

The DSEIS IDT and Cooperators removed this alternative early in the process because experts believed it would be difficult for the wildlife managers to implement and the modeled GPRs already included the suitable source habitat currently known to be used by bighorn sheep.

ALTERNATIVES CONSIDERED IN DETAIL

The Appeal Reviewing Officer instructed the Regional Forester to further analyze and evaluate the viability of bighorn sheep for all the alternatives in the Forest Plan (USDA Forest Service 2003). As such, in addition to analyzing the new alternative, the original alternatives are also reviewed.

Elements Common to All Alternatives

The alternatives considered in detail all pertain exclusively to lands within the Payette National Forest, not to the other Ecogroup Forests or to the surrounding National Forests or BLM lands.

Alternatives 1B, 2, 5, 7

The seven alternatives evaluated in the FEIS could be combined into two categories based on how they affected the risk of contact between domestic and bighorn sheep. The first category contains Alternatives 1B, 2, 5, and 7, which did not designate any acres on the Payette National Forest as unsuitable for grazing by domestic sheep. All trailing routes remained open in these alternatives.

Alternative 7 was chosen as the alternative to be implemented. To meet the appeal requirements related to the potential impacts of disease transmission from domestic sheep on the Forest, modifications to Alternative 7 are analyzed in Chapter 3. Because this alternative was found to not be compliant with the NFMA, it cannot be selected as the final decision.

For Alternative 7, zero acres are identified as unsuitable for domestic sheep grazing and 100 percent of the total relative risk remains on the landscape, with a risk ratio of zero.

Alternatives 3, 4, 6

These alternatives were also proposed in the FEIS and are grouped together as the second category of alternatives that determined suitable rangeland portions of the Smith Mountain Allotment overlapping current bighorn sheep habitat was unsuitable for domestic sheep grazing. MA #1 outside of grazing allotments was also determined to be unsuitable for domestic sheep grazing. No trailing routes are closed.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: These alternatives address disease transmission from domestic sheep to bighorn sheep by determining 6,113 acres as unsuitable for domestic sheep grazing.

Rangeland Resources: These alternatives affect rangeland resources by determining 6,113 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: Alternatives 3, 4, and 6 greatly reduce the harvest ability for tribal members.

Alternative 7E

Alternative 7E designates no area within the Payette National Forest as suitable for domestic sheep grazing, and leaves no trailing routes open to use within the entire Payette National Forest. The following allotments are affected by this Alternative: Smith Mountain, Curren Hill, Boulder Creek, Price Valley, Surdam, Shorts Bar, Hershey-Lava, French Creek, Bear Pete, Marshall Mountain, Vance Creek, Little French Creek, Josephine, Victor-Loon, Grassy Mountain, Slab Butte, Cougar Creek, Twenty Mile, Brundage, Bill Hunt, Fall/Brush Creek, North Fork Lick Creek, Lake Fork, and Jughandle.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: This alternative addresses disease transmission from domestic sheep to bighorn sheep by determining 2,300,253 acres unsuitable for domestic sheep grazing and closing all trailing routes within the Payette National Forest.

Rangeland Resources: This alternative has the greatest affect on rangeland resources by determining 100,310 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: Because Alternative 7E removes all risk for contact between bighorn and domestic sheep on the Payette National Forest; it may provide the greatest long–term ability to harvest bighorn sheep in all traditional locations influenced by the Payette National Forest.

Alternative 7G (Agency Preferred Alternative)

Alternative 7G utilizes the GPRs as boundaries and designates all land within the Hells Canyon and Salmon River GPRs as unsuitable for domestic sheep grazing. The following allotments are affected by this Alternative: Smith Mountain, Curren Hill, Boulder Creek, Price Valley, Shorts Bar, Hershey-Lava, French Creek, Bear Pete, Marshall Mountain, Vance Creek, Little French Creek, Josephine, Victor-Loon, Twenty Mile, Fall/Brush Creek, North Fork Lick Creek, and Lake Fork. This alternative also closes all trailing routes within the GPRs.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: This alternative addresses disease transmission from domestic sheep to bighorn sheep by determining 1,172,564 acres unsuitable for domestic sheep grazing and closing all trailing routes within the GPRs.

Rangeland Resources: This alternative affects rangeland resources by determining 61,842 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: Alternative 7G considers no land within the GPRs as suitable for domestic sheep grazing, thus reducing contact between the two species and potentially providing for greater tribal harvest opportunity.

Alternative 7H

Similar to Alternative 7G, this alternative considers the portions of allotments that exist within the Hells Canyon and Salmon River GPRs as unsuitable for domestic sheep grazing. However, this alternative also designates the area contained within a 9-mile buffer around each GPR as unsuitable. The following allotments are affected by this Alternative: Smith Mountain, Curren Hill, Boulder Creek, Price Valley, Surdam, Shorts Bar, Hershey-Lava, French Creek, Bear Pete, Marshall Mountain, Vance Creek, Little French Creek, Josephine, Victor-Loon, Grassy Mountain, Slab Butte, Cougar Creek, Twenty Mile, Brundage, Bill Hunt, Fall/Brush Creek, North Fork Lick Creek, Lake Fork, and Jughandle.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: This alternative addresses disease transmission from domestic sheep to bighorn sheep by determining 2,039,586 acres unsuitable for domestic sheep grazing.

Rangeland Resources: This alternative affects rangeland resources by determining 94,231 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: This alternative greatly increases the potential area for tribal members to hunt in traditional areas since it has only a minimal potential for the risk of contact between bighorn and domestic sheep.

Alternative 7J

This alternative was developed by the Cooperators and presented to the Forest Service during an DSEIS IDT and Cooperators meeting. The intent of this alternative was to locate

landmarks, such as watershed divides, from which to manage separation. The thought was that stray domestic sheep tend to wander downhill when separated from the band. Keeping the permitted sheep from going over a divide may be a way to manage them and avoid "downhill drift" into bighorn sheep herds. Areas considered unsuitable for domestic sheep grazing were altered to adjust for expected animal behavior (downhill movement patterns) and to include a portion of the Little Salmon River 4th hydrologic unit. This alternative determines the following areas to be unsuitable for domestic sheep grazing: the Brownlee 4th field hydrologic unit, the Hells Canyon 4th field hydrologic unit, a portion of the Little Salmon 4th field hydrologic unit, a portion of the Weiser 4th field hydrologic unit, the combination of 4th field west side and 4th and 6th on the east side near Lick Creek, the Lower Salmon 4th field hydrologic unit, the Middle Salmon/Chamberlain 4th field hydrologic unit, the South Fork Salmon 4th field hydrologic unit, the Lower Middle Fork Salmon 4th field hydrologic unit, the Upper Middle Fork Salmon 4th field hydrologic unit, and two 6th field hydrologic units of the North Fork Payette 4th field hydrologic unit around Lick Creek summit. Trailing routes within the hydrologic units listed above and the entire Salmon River driveway were also considered closed to domestic sheep use. The following allotments are affected by this alternative: Smith Mountain, Curren Hill, Boulder Creek, Price Valley, Shorts Bar, Hershey-Lava, French Creek, Bear Pete, Marshall Mountain, Little French Creek, Josephine, Victor-Loon, North Fork Lick Creek, Lake Fork, and Jughandle.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: This alternative addresses disease transmission from domestic sheep to bighorn sheep by determining 1,837,441 acres unsuitable for domestic sheep grazing and by closing trailing routes within the area considered unsuitable for domestic sheep use and the entire Salmon River driveway.

Rangeland Resources: This alternative affects rangeland resources by determining 58,785 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: While this alternative provides for greater opportunity for tribal harvest, it does still retain some risk.

Alternative 7K

Alternative 7K implements recent court settlements to determine the areas that are unsuitable for domestic sheep grazing and represents similar use patterns as approved for the 2007 and 2008 grazing seasons. In this alternative, the following areas are considered unsuitable for domestic sheep grazing: all of the Curren Hill Allotment; the Smith Mountain Allotment in the 6th field hydrologic units rated as very high in the risk analysis (USDA Forest Service 2006a); the Shorts Bar Allotment, the northern portion of the Hershey Lava Allotment; and the entire French Creek Allotment. In addition to trailing routes within the areas noted above, this alternative designates the Salmon River Driveway south of the intersection with the Hornet Creek Road and Marshal Mountain as closed to domestic sheep use.

Issues Used to Develop this Alternative

Terrestrial Wildlife Habitat and Species Issue 2: This alternative addresses disease transmission from domestic sheep to bighorn sheep by determining 122,231 acres unsuitable for domestic sheep grazing and by closing the trailing routes within the areas considered unsuitable for domestic sheep use and the Salmon River Driveway south of the intersection with the Hornet Creek Road and Marshall Mountain.

Rangeland Resources: This alternative affects rangeland resources by determining 24,981 suitable acres as unsuitable for domestic sheep grazing.

Tribal Rights and Interests: Alternative 7K greatly reduces the harvest ability for tribal members since this alternative continues to have a high risk for the potential risk of contact between domestic and bighorn sheep.

COMPARISON OF ALTERNATIVES

Comparison of Alternative Effects on Resource Issue and Indicators

Terrestrial Wildlife Habitat and Species

Issue Statement 2: Forest Plan alternatives and direction may affect disruption, vulnerability, and disease risk to terrestrial wildlife species.

Indicator 3 for Issue 2: Acres of suitable domestic sheep range within bighorn sheep habitat.

Effects on Bighorn Sheep: To meet appeal requirements related to the potential impacts of disease transmission from domestic sheep on the Payette National Forest, modifications were made to Alternative 7 (the implemented alternative), which affected the amount of suitable domestic sheep range within bighorn sheep habitat (Table 2-19a).

Alternatives 3, 4, and 6 designate 82,003 acres as unsuitable for domestic sheep grazing, all from within the Hells Canyon GPR. This alternative designates 8 percent of summer source habitat (231,410 fewer acres than Alternative 7G) and 13 percent of winter source habitat (113,359 fewer acres than Alternative 7G) as unsuitable for domestic sheep grazing. Finally, no trailing routes were considered closed to domestic sheep. The risk model indicates that 89 percent of the total relative risk remains on the landscape for these alternatives, and these alternatives have a risk ratio of 0.12.

Compared to Alternative 7G, Alternative 7E designates no area within the Payette National Forest as suitable for domestic sheep grazing, thus reducing the risk of contact to the maximum extent possible as shown by the relative risk rating that approaches infinity. Alternative 7E designates 2,300,253 acres (100 percent of the Payette National Forest) as unsuitable for domestic sheep grazing, and similar to Alternative 7G, this alternative designates all land (1,172,564 acres) within both GPRs as unsuitable for domestic sheep grazing. This alternative designates 100 percent of summer source habitat (119,178 more acres than Alternative 7G) and 100 percent of winter source habitat (56,989 more acres than Alternative 7G) as unsuitable for domestic sheep grazing. Finally, all trailing routes are

considered closed to domestic sheep use. The risk model indicates that zero percent of the total relative risk remains on the landscape for this alternative.

Alternative 7G designates 100 percent of both the Hells Canyon and the Salmon River GPRs, or 1,172,564 acres, as unsuitable for domestic sheep grazing. As such, 69 percent (260,431 acres) of summer source habitat and 71 percent (139,183 acres) of winter source habitat are considered unsuitable for domestic sheep grazing. Finally, trailing routes within the GPRs are not considered open to domestic sheep use. The risk model indicates that 20 percent of the total relative risk remains on the landscape for this alternative, and the alternative has a risk ratio of 3.92.

Similar to Alternative 7G, Alternative 7H considers 100 percent of both the Hells Canyon and the Salmon River GPRs (1,172,564 acres) as unsuitable for domestic sheep grazing; however, this alternative also designates the area within a 9-mile buffer surrounding both GPRs as unsuitable. Alternative 7H designates 2,039,586 acres as unsuitable for domestic sheep grazing. Finally, this alternative designates 92 percent of summer source habitat (87,132 more acres than Alternative 7G) and 93 percent of winter source habitat (42,485 more acres than Alternative 7G) as unsuitable for domestic sheep grazing. Trailing routes that fall within the GPRs or the 9-mile buffer are closed to domestic sheep use. The risk model indicates that 4 percent of the total relative risk remains on the landscape for this alternative, and this alternative has a risk ratio of 25.63.

Alternative 7J utilizes watershed boundaries to determine areas unsuitable for domestic sheep grazing compared to Alternative 7G. Alternative 7J determines 1,837,441 acres as unsuitable for domestic sheep grazing. Unlike Alternative 7G, Alternative 7J determines only 93 percent (1,087,933 acres) of both GPRs unsuitable for domestic sheep grazing—84,631fewer acres than Alternative 7G. Thus, 15 percent of the Hells Canyon GPR and 5 percent of the Salmon River GPR remain suitable for domestic sheep grazing. This alternative designates 87 percent of summer source habitat (70,079 more acres than Alternative 7G) and 90 percent of winter source habitat (37,832 more acres than Alternative 7G) as unsuitable for domestic sheep grazing. Finally, trailing routes within the areas determined unsuitable for domestic sheep grazing and the Salmon River Driveway are closed. The risk model indicates that 17 percent of the total relative risk remains on the landscape for this alternative, and this alternative has a risk ration of 4.92.

Compared to the Alternative 7G, Alternative 7K designates 122,231 acres as unsuitable for domestic sheep grazing. All but 33 acres considered unsuitable by this alternative are within current domestic sheep allotments. Alternative 7K designates 10 percent (122,231 acres) within both GPRs as unsuitable for domestic sheep grazing: 27 percent within the Hells Canyon GPR and 6 percent within the Salmon River GPR. Finally, this alternative considers 7 percent of summer source habitat (235,086 fewer acres than Alternative 7G) and 8 percent of winter source habitat (123,977 fewer acres than Alternative 7G) as unsuitable for domestic sheep grazing. All trailing routes that intersect with the unsuitable areas are closed to domestic sheep use, except for the Salmon River Driveway, which remains open to the junction with Hornet Creek Road. The risk model indicates that 72 percent of the total relative risk remains on the landscape for this alternative, and this alternative has a risk ratio of 0.39.

Table 2-19a. Percentage of Bighorn Sheep Habitat Remaining Outside of Each Alternative

Alternative	Hells Canyon GPR (%)	Salmon River GPR (%)	Summer Source Habitat (%)	Winter Source Habitat (%)
1B, 2, 5, and 7	100	100	100	100
3, 4, and 6	68	100	92	87
7E	0	0	0	0
7G	0	0	31	29
7H	0	0	8	7
7J	15	5	13	10
7K	73	94	93	92

Rangeland Resources

Issue Statement: Forest Plan management strategies may affect rangeland resources, including lands considered suitable for livestock grazing and the level of livestock grazing authorized under permit for the Forests.

Indicator 1: Estimated suitable rangeland acres by Forest.

The Alternatives vary by suitable rangeland acres (Table 2-44a).

Alternative 7 considers all areas as suitable for domestic sheep grazing. Alternative 7E considers no areas and no trailing routes within the boundaries of the Payette National Forest as open to domestic sheep; thus, 100,310 suitable acres—38,468 more than Alternative 7G—are removed from suitability under this alternative. The alternative that removes the second largest area of suitable acres from suitability is Alternative 7H. Alternative 7H considers 94,231 suitable acres—32,389 more than Alternative 7G—to be unsuitable for domestic sheep grazing. Alternatives 7G and 7J consider intermediate amounts of suitable acres as unsuitable. Alternative 7G designates 61,842 suitable acres as unsuitable for domestic sheep grazing. Alternative 7J considers 58,785 suitable acres—3,057 fewer acres than Alternative 7G—as unsuitable for domestic sheep grazing. The alternatives that remove the fewest suitable acres from suitability are Alternative 7K (24,981 acres—36,861 fewer acres than Alternative 7G) and Alternatives 3, 4, and 6 (6,113 acres—1,090,561 fewer acres than Alternative 7G).

Table 2-44a. Suitable Acres Determined Unsuitable by Alternative

Criteria	Alt. 7	Alt. 7E	Alt. 7G	Alt. 7H	Alt. 7J	Alt. 7K	Alts. 3, 4, 6
Capable Acres [1]	233,672	233,672	233,672	233,672	233,672	233,672	233,672
Bighorn Habitat Acres Deducted	0	100,310	61,842	94,231	58,785	24,981	6,113
Total Suitable Acres	**233,672**	**133,362**	**171,830**	**139,441**	**174,887**	**208,691**	**227,559**

[1] Includes all suitable rangeland, both for cattle and domestic sheep.

Tribal Rights and Interests

Issue Statement: Forest Plan management strategies may affect the availability of resources and the use of traditional places important to American Indian rights and interests.

Indicators: The indicators used to describe effects on the issue are: (2) the relationship of species viability to tribal harvest ability.

Effects to Harvest Ability: The risk of disease transmission is a concern that may affect harvest ability. Alternatives 3, 4, and 6 greatly reduce the harvest ability for tribal members since these alternatives continue to have a high risk for the potential risk of contact between bighorn and domestic sheep. Because Alternative 7E removes all risk for contact between bighorn and domestic sheep on the Payette National Forest, it may provide the greatest long-term ability to harvest bighorn sheep in all traditional locations influenced by the Payette National Forest. Alternative 7G considers no land within the GPRs as suitable for domestic sheep grazing, thus reducing contact between the two species and potentially providing for greater tribal harvest opportunity. However, this alternative still retains some risk. Alternative 7H greatly increases the potential area for tribal members to hunt in traditional areas since it has only a minimal potential for the risk of contact between bighorn and domestic sheep. Although Alternative 7J does consider all currently known occupied bighorn sheep habitat as unsuitable for domestic sheep habitat, the potential grazing of domestic sheep within the GPRs provides a greater risk of contact. Therefore, while this alternative provides for greater opportunity for tribal harvest, it does still retain some risk. Alternative 7K greatly reduces the harvest ability for tribal members since this alternative continues to have a high risk for the potential risk of contact between domestic and bighorn sheep.

Compliance with the Hells Canyon National Recreation Area Act (P.L. 94-199)

The HCNRA Act was signed into law on December 31, 1975. The following sections of the Act are applicable when considering whether or not to graze domestic livestock in the HCNRA:

Section 7. (3) Preservation, especially in the area generally known as Hells Canyon, of all features and peculiarities believed to be biologically unique including, but not limited to, rare and endemic plant species, rare combinations of aquatic, terrestrial, and atmospheric habitats, and the rare combinations of outstanding and diverse ecosystems and parts of ecosystems associated therewith;

(4) Protection and maintenance of fish and wildlife habitat;

> (7) Such management, utilization, and disposal of natural resources on federally owned lands, including, but not limited to, timber harvesting by selective cutting, mining and grazing and the continuation of such existing uses and developments as are compatible with the provisions of this Act.

Section 13. Ranching, grazing, farming, timber harvesting, and the occupation of homes and lands associated therewith, as they exist on the date of enactment of this Act, are recognized as traditional and valid uses of the recreation area.

Further, regulations governing the use of public lands in the HCNRA were promulgated on July 19, 1994. HCNRA Public Lands Use Regulations at 36 CFR §292.48:

"The following standards and guidelines apply only to domestic livestock grazing activities on Other Lands, Wild and Scenic Rivers, and Wilderness Lands in the HCNRA:

> (b) Where domestic livestock grazing is incompatible with the protection, restoration, or maintenance of fish and wildlife or their habitats; public outdoor recreation; conservation of scenic, wilderness, and scientific values; rare combinations of outstanding ecosystems, or the protection and enhancement of the values for which a wild and scenic river was designated, the livestock use shall be modified as necessary to eliminate or avoid the incompatibility. In the event in incompatibility persists after modification or modification is not feasible, livestock use shall be terminated."

HCNRA Comprehensive Management Plan

In addition to the above sections of the Act, the HCNRA is managed under the guiding direction of the HCNRA CMP. The Revised CMP was completed and signed in July 2003. It includes the following standard:

"Wld-S8: Prevent the spread of diseases from domestic sheep to wild sheep by maintaining separation of the two species. Vacant allotments will not be stocked with domestic sheep unless a vaccine or other technique is found that eliminates the incompatibility."

Compatibility with the Hells Canyon National Recreation Area Act

In consideration of the above information, the following determinations have been made regarding compatibility with the HCNRA Act and the HCNRA CMP for the action alternatives analyzed for the DSEIS.

Alternatives 7G, 7E, and 7H

All three of these alternatives eliminate domestic sheep grazing from the Payette National Forest system lands within the boundary of the HCNRA. They also eliminate domestic sheep grazing at least 6 air miles from the boundary of the HCNRA.

Elimination of domestic sheep grazing in HCNRA and surrounding area is compatible with the HCNRA Act and its implementing regulations by providing for the protection, restoration, and maintenance of bighorn sheep and their habitat. All three alternatives are in compliance with the HCNRA CMP by maintaining a separation between bighorn and

domestic sheep that is likely to keep the two species apart at the current population levels (Table 2-84).

Alternatives 7J and 7K

These alternatives eliminate domestic sheep grazing from the Payette National Forest system lands within the boundary of the HCNRA. However, both alternatives allow grazing within 3 air miles of the boundary of the HCNRA in the Lick Creek Lookout area. Mixing of the two species in this area is likely over a 5 year period, if bighorn sheep occupy habitats they have in the recent past. This represents at least a moderate risk to bighorn sheep. Consequently, alternative 7J and 7K are not in compliance with the compatibility requirements of the HCNRA Act beyond the immediate future (Table 2-84).

Alternatives 1B, 2, 3, 4, 5, 6, and 7

All of these alternatives allow domestic sheep grazing in the Payette National Forest system lands within the boundary of the HCNRA. Mixing of the two species in this area is very likely over a 5 year period. This represents at least a high risk to bighorn sheep, if bighorn sheep occupy habitats they have in the recent past. All of these alternatives are not in compliance with the compatibility requirements of the HCNRA Act (Table 2-84).

Table 2-84. Compatibility with the Hells Canyon National Recreation Area Act for each Alternative

Alternative	Compatible	Compatible Only in Immediate Future	Not Compatible
7G, 7E,7H	No grazing in HCNRA, or within 6 air miles of HCNRA		
7J, 7K		No grazing in HCNRA, or within 3 air miles of HCNRA, contact likely within 5 years	
1B, 2, 3, 4, 5, 6,7			Grazing in and adjacent to HCNRA, contact very likely within 5 years