4000 (ORW020)
0918 (134)

August 17, 2010

CERTIFIED MAIL - Return Receipt Requested

[redacted]

Notice of Field Manager's Proposed Decision for Renewal of Grazing Allotment Number 0918

Dear [redacted]:

Introduction
The Bureau of Land Management grazing lease on allotment 0918 expired on February 28, 2009. The lease was then renewed in 2009 under provisions of Section 116 of Public Law 106-291, which allowed for the renewal of the lease under the terms and conditions of the expiring lease until the lease was processed in compliance with all applicable laws and regulations. This processing, which has been completed, included an interdisciplinary review of the potential impacts of the grazing lease in accordance with the National Environmental Policy Act (NEPA). The interdisciplinary review has been completed as documented in Documentation of Land Use Plan Conformance and NEPA Adequacy DNA # OR-134-2010-013 signed July 21, 2010.

Proposed Decision:
Therefore, under the authority of 43 Code of Federal Regulations (CFR) 4130.2a, 43 CFR 4130.2d and 43 CFR 4160.1a, **it is my proposed decision to renew the grazing lease for allotment 0918 for a period of 10 years (3/2010 – 2/2020) with the same terms and conditions as the lease that expired February 28, 2009**. The mandatory terms and conditions of the lease are:

Number of Livestock	Kind	Begin Period	End Period	Acres Public Land	Type Use	AUMS
9	Cattle	04/01	11/15	80	Custodial	13

Other terms and conditions of the lease are: BLM is in the process of implementing the Standards for Rangeland Health and Guidelines for Livestock Management. This lease is subject to modification as necessary to achieve compliance with these standards and Guidelines (43 CFR 4180).

Rationale for the Proposed Decision:
Renewal of the grazing lease is in conformance with the applicable Land Use Plans (LUP) because it is specifically provided for in the following LUP decisions:

- Spokane District Resource Management Plan (RMP)/Final EIS (August 1985) and its Record of Decision (ROD)/Rangeland Program Summary (May 1987)
- Proposed Spokane RMP Plan Amendment/Final EIS (June 1992) and its ROD (December 1992)

This grazing allotment is addressed in the Spokane RMP/ROD/RPS (page 52) for use of 13 AUMs, which is the same as the proposed renewal. The environmental impacts of grazing for all alternatives are discussed in Chapter 4 (Environmental Consequences, pages 79-92) of the Spokane RMP/FEIS. As discussed in the Allotment Categorization section of the Spokane RMP/FEIS (pages 53 – 55), allotments were categorized as Custodial (C) according to the following criteria:

- Present range condition is not a factor.
- Allotments have low resource production potential, and are producing near their potential.
- Limited resource use conflicts/controversies may exist.
- Opportunities for positive economic return on public investment do not exist or are constrained by technological or economic factors.
- Present management appears satisfactory or is the only logical practice under existing resource conditions.
- Manageability is limited because public lands are intermingled with much larger acreages of non-public lands. Cooperation of intermingled landowners in management has not been obtained.

As is the case with this grazing allotment, most of the C allotments are unfenced, small tracts which are intermingled with larger acreages of non-BLM rangelands, thus limiting the BLM's management opportunities.

An interdisciplinary team conducted a review for any new information concerning the proposed lease renewal. No significant information was identified in the review. As stated above, the results of the interdisciplinary review are documented in DNA # OR-134-2010-013. Conformance with the Spokane RMP, as amended, is also documented in the DNA.

BLM issued consultation letters regarding grazing lease #0918, on May 30, 2008. Letters were sent to the Washington State Department of Archaeology and Historic Preservation (DAHP), the Colville Confederated Tribes (CCT) and the Confederated Tribes and Bands of the Yakama

Nation (Yakama Nation). On June 4, 2008 DAHP responded, concurring with the definition of the area of potential effect (APE) and the proposed cultural resource survey areas. Responses were not received from either the Colville Confederated Tribes or the Yakama Nation. Final consultation letters requesting concurrences with a determination of "no effect" were sent on June 4, 2010. Washington State DAHP concurrence with the determination of effect was received in a letter dated June 8, 2010. Tribal Historic Preservation Offices were asked for concerns or comments. Responses were not received from any of the tribes consulted.

Authority

43 CFR 4130.2(a) states: "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the Bureau of Land Management that are designated as available for livestock grazing through land use plans. Permits or lease shall specify the types and levels of use authorized, including livestock grazing, suspended use and conservation. These grazing permits and leases shall also specify terms and conditions pursuant to §§4130.3, 4130.3-1, and 4130.3-2".

43 CFR 4130.2(d) states: "The term of the grazing permits or leases authorizing livestock on the public lands and other lands under the administration of the Bureau of Land Management shall be 10 years…"

43 CFR 4160.1(a) states: "Proposed decisions shall be served on any affected applicant, permittee or lessee and any agent and lien holder of record, who is affect by the proposed actions, terms or conditions, or modifications relating to applications, permits and agreements (including range improvement permits) or leases, by certified mail or personal delivery. Copies of the proposed decisions shall also be sent to the interested public."

Protest and/or Appeal

Any applicant, permittee, lessee or other affected interest may protest a proposed decision under Sec. 43 CFR 4160.1 and 4160.2, in person or in writing to Karen Kelleher, Wenatchee Field Office Manager, Bureau of Land Management, 915 Walla Walla Ave., Wenatchee, Washington 98801 within 15 days of the proposed decision. The protest, if filed, should clearly and concisely state the reason(s) as to why the proposed decision is in error.

In accordance with 43 CFR 4160.3 (a), *in the absence of a protest*, this proposed decision will become the final decision of the Authorized Officer without further notice. In accordance with 43 CFR 4160.3 (b) *upon a timely filing of a protest*, after a review of protests and statement of reasons received and other information pertinent to the case, the Authorized Officer shall issue a final decision.

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal in accordance with 43 CFR 4.470 and 4160.4. The appeal must be filed within 30 days following receipt of the final decision, or within 30 days after the date the proposed decision becomes final. The appeal may be accompanied by a petition for a stay of the decision in accordance with 43 CFR 4.471. The appeal and petition for a stay must be filed with the Wenatchee Field Office Manager, Bureau of Land Management, 915 Walla Walla Ave, Wenatchee, WA. 98801. The person/party must also serve a copy of the appeal with U.S.

Department of the Interior, Office of the Regional Solicitor, 805 SW Broadway, Suite 600, Portland, OR 97205 and any person sent a copy of this decision (see cc list following the signature line) [43 CFR 4.421(h)].

The appeal shall state the reasons, clearly and concisely, why the appellant thinks the final decision is in error and otherwise complies with the provisions of 43 CFR 4.470.

Should you wish to file a petition for a stay, see 43 CFR 4.471 (a) and (b). In accordance with 43 CFR 4.471(c), a petition for a stay must show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied.
(2) The likelihood of the appellant's success on the merits.
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

As noted above, the petition for stay must be filed in the office of the authorized officer and serviced in accordance with 43 CFR 4.473. Any person named in the decision from which an appeal is taken (other than the appellant) who wishes to file a response to the petition for a stay may file with the Hearings Division, Office of Hearings and Appeals, Salt Lake City, Utah a motion to intervene in the appeal, together with the response, within 10 days after receiving the petition 43 CFR 4.472 (b). Within 15 days after filing the motion to intervene and response, the person must serve copies on the appellant, the Office of the Solicitor and any other person named in the decision [43 CFR 4.472(b)].

If you have any questions, contact Angela Link at (509) 665-2100.

/s/ Karen Kelleher 7/22/2010

Karen Kelleher, Field Manager Date

Copies sent to: [redacted]:
Grazing Allotment # 0918

Determination of NEPA Adequacy (DNA)

Department of the Interior
Bureau of Land Management, Spokane District
1103 North Fancher Road
Spokane Valley, WA 99212

A. Background

BLM Office: Wenatchee Field Office

Lease/Serial/Case File No.: 3600918

NEPA Log Number: DOI-BLM-OR-134-2010-013

Proposed Action Title: Grazing Lease Renewal

Location of Proposed Action: Grant County, Washington

T22N R30E: Sec 6: E½SE¼

Description of Proposed Action: The proposed action is to address a grazing lease renewal for grazing allotment # 3600918 for a period of 10 years (3/2010-3/2020). This allotment is a "Custodial" allotment with 80 acres of public land intermingled with private land owned or leased by the lessee. The allotment was renewed in 2009 under provisions of Section 116 of Public Law 106-291, which provided for renewal based on allowed use being the same as the previous lease period, and also contingent on completion of environmental analysis.

B. Land Use Plan Conformance

Land Use Plan Name: Spokane Resource Management Plan
Date Approved/Amended: Approved 1987/Amended 1992

☒*Option 1 (conforms with LUP):* The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s): This grazing allotment is addressed in the Spokane RMP/ROD under allotment number 0918 on page 52 for the use of 13 AUMs, which is the same as the proposed renewal.

OR

☐*(Option 2: not explicitly provided for in the LUP)* The proposed action is in conformance with the applicable LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decision(s) (*objectives, terms, and conditions)*:

C. Identify applicable National Environmental Policy Act (NEPA) document(s) or other related document(s) that cover the proposed action

Name and date of NEPA document(s):
Spokane Resource Management Plan(RMP)/Final Environmental Impact Statement (EIS), 1985

Name and date of other relevant document(s):

- Washington Department of Fish and Wildlife Priority Habitats and Species - 1997 Databases
- Washington Natural Heritage - 1998 Database
- Washington Office of Archaeological and Historical Preservation - 2003 Database
- Spokane District 2003 Archaeological Survey Database and files

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?
Yes, This allotment is identified on page 52 of the Spokane RMP/ROD, authorizing grazing. This proposed action is the same as the RMP/FEIS proposed action.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?
Yes, the proposed action is the same as that analyzed in the Spokane RMP/Final EIS.

3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?
Yes, there is no new information that would change the analysis of the Spokane RMP/Final EIS.

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?
Yes, the anticipated effects are the same as those analyzed in the existing NEPA document.

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?
The Spokane RMP/FEIS and its ROD (including the Rangeland Program Summary) were distributed to all interested publics and other government agencies for review. Since the subject grazing leases are identified in the land use plan, which went through all of the appropriate and legally required public/agency review at that time, public involvement is considered adequate. The Bureau of Indian Affairs (BIA) was consulted, but individual tribes were not.

BLM issued consultation letters regarding grazing lease #0918, on May 30, 2008. Letters were sent to the Washington State Department of Archaeology and Historic Preservation (DAHP), the Colville Confederated Tribes (CCT) and the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation). On June 4, 2008 DAHP responded, concurring with the definition of the area of potential effect (APE) and the proposed cultural resource survey areas. Responses were not received from either the Colville Confederated Tribes or the Yakama Nation. Final consultation letters requesting concurrences with a determination of “no effect” were sent on

June 4, 2010. Washington State DAHP concurrence with the determination of effect was received in a letter dated June 8, 2010. Tribal Historic Preservation Offices were asked for concerns or comments. Responses were not received from any of the tribes consulted.
No other specific public involvement, or interested public status (under the grazing regulations at 43 CFR 4100.0-5), has been requested for these allotments, except from the grazing lessee who has been involved in all planning processes pertaining to this allotment.

E. Persons/Agencies/Consulted (BLM Staff Consulted are listed on the coversheet attached to this document, or available at the BLM office identified in Section A, above).

Name	Title	Resource/Agency Represented

F: Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of the NEPA.

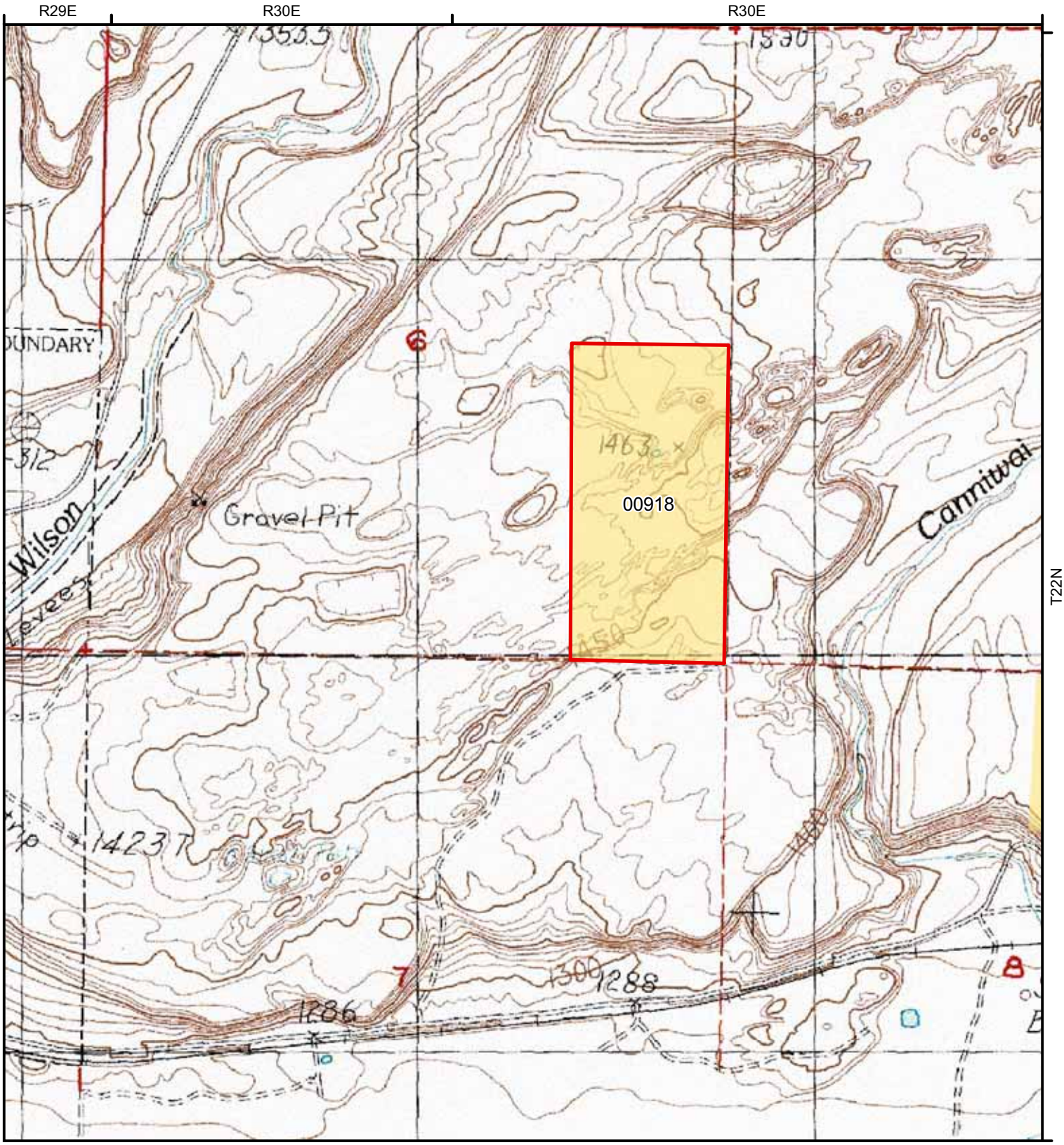
/s/ Karen Kelleher _____ 7/21/2010 _____
(Signature of Responsible Official) (Date)

Name: Karen Kelleher
Title: Field Manager

G. Contact Person
For additional information concerning this DNA, contact Angela Link

Note: The signed Conclusion on this worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal under 43 CFR Part 4 and the program-specific regulations.

Allotment 00918



Allotment Boundary

BLM Administered Land

Private Land

0 0.1 0.2 0.4

Miles

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

BIOLOGICAL ASSESSMENT OF THE EFFECTS OF CURRENT AND PROPOSED LIVESTOCK GRAZING ON THE GRAY WOLF, GRIZZLY BEAR AND CANADA LYNX IN WESTERN OKANOGAN AND NORTHERN CHELAN COUNTIES

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SPOKANE DISTRICT

JULY 2010

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BIOLOGICAL ASSESSMENT:

Western Okanogan and Northern Chelan County Livestock Grazing Effect on Gray Wolf, Grizzly Bear and Canada Lynx

I. Introduction

A Biological Assessment (BA) is required under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended, for federal actions that could potentially affect listed and proposed species and designated and proposed critical habitat. In 2002, The Bureau of Land Management (BLM) completed a BA in consultation with U. S. Fish and Wildlife Service (USFWS) that analyzed the potential effects of the Spokane District Land Use Plan (LUP) on federally listed, proposed, and candidate species and designated critical habitat (USDI BLM 2002). A variety of BLM actions, including livestock grazing throughout eastern Washington, were analyzed in the 2002 BA and USFWS concurred that these actions "may affect," but would be "unlikely to adversely affect" a number of species, including gray wolf, grizzly bear, northern spotted owl and bull trout with no adverse modification of designated critical habitat. This BA did not cover Canada lynx or its designated critical habitat, however.

Recently, a breeding population of gray wolves was documented in the Methow Valley of Okanogan County. In light of this new information, it was determined that the previous BA's (USDI BLM 2002) assessment of livestock grazing for this geographical area was not current and a new assessment is needed. This BA provides a batched analysis of livestock grazing on all BLM managed lands west of U.S. Highway 97 in Okanogan County and north of Lake Chelan in Chelan County, Washington. This entire area is considered highly likely to be used by wolves based on geographical features and the likelihood of dispersal of individuals from breeding wolves both within and adjacent to the assessment area. Portions of the North Cascades Grizzly Bear Recovery Unit and designated critical habitat for Canada lynx lie within this assessment area. The assessment area encompasses 84 existing grazing allotments but also considers any new allotments for which grazing permits may be issued in the future. Affected allotments are listed in Appendix 1. Species considered in this programmatic BA will include gray wolf, grizzly bear and Canada lynx. Consultation for all other listed species will occur at the time of lease renewal.

A. Purpose and Need

The purpose of this federal action is to address requests to continue current livestock grazing and renew and/or issue new livestock grazing authorizations while providing for multiple uses and protection of public lands and resources in accordance with federal laws and regulations, and the Spokane District RMP (USDI BLM 1897, 1992). Some of these allotments lie within the Okanogan Management Area where the RMP identified recreation, wildlife habitat, grazing management and forestry as priority resources. The rest of the allotments are managed as scattered parcels with the greatest emphasis placed on land administration/real estate management, grazing management, recreation and forestry.

For management of BLM-administered public lands in Eastern Washington, the Spokane District RMP established the goal of providing "a variety of uses within the sustained yield capability of the resource." One of the general objectives identified in this plan was to allocate forage for livestock if it was not needed to sustain existing or target wildlife populations.

The Federal Lands Policy and Management Act (FLPMA) of 1976 declares that it is the policy of the United States that "the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use."

Federal rangeland management regulations (43 CFR Part 4100) established the objectives to "promote healthy sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; to promote the orderly use, improvement, and development of the public lands; to establish efficient and effective administration of grazing of public rangelands; and to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands." In 1997, BLM developed the *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington* (Rangeland Health Standards &Guidelines) to help meet these objectives.

B. Species and Critical Habitat Considered

Table 1. Species and Critical Habitat Considered

Gray wolf (*Canis lupus*)	Endangered	None
Grizzly bear (*Ursus arctos*)	Thretened	None
Canada lynx (*Lynx canadensis*)	Threatened	Yes

C. Summary of Determinations

Table 2. Summary of Determinations

Species	Effects Determination
Gray wolf (*Canis lupus*)	May Affect, Not Likely to Adversely Affect
Grizzly bear (*Ursus arctos*)	May Affect, Not Likely to Adversely Affect
Canada lynx (*Lynx canadensis*)	May Affect, Not Likely to Adversely Affect

II. Project Description

A. Location and Background Information

This assessment addresses all BLM managed lands (approximately 58,140 acres) lying west of U.S. Highway 97 and north of Lake Chelan in Okanogan and Chelan counties, Washington. BLM managed lands account for approximately two percent of the analysis area. Much of the BLM managed lands lie within the Okanogan Management Area, the rest is managed as scattered parcels outside of this management area. The analysis area contains 84 existing grazing leases totaling approximately 46,493 acres. These allotments are authorized for grazing, but actual use or non-use of some allotments varies each year. These parcels range in size from small parcels that may only be 20 acres surrounded by private property, to large, actively managed blocks that may be thousands of acres. Roughly one half of the allotments are 200 acres or less and most (88%) are less than 1,000 acres. With a few exceptions, all of the allotments are within pastures that also contain private or state owned lands. Appendix 1 provides legal descriptions of BLM managed lands within the analysis area and describes the current authorized livestock use on each parcel, as well actual current use/non-use of the allotment. Appendix 2 provides maps of the lands described in Appendix 1.

The Spokane District RMP assigned grazing allotments to one of three management categories based on present resource conditions, potential for improvement of resource conditions, economic feasibility of investments in range improvements, resource conflicts, and the landownership pattern as it affects the BLM's ability to manage the allotment. The three categories are "I" (Improve), "M" (Maintain), and "C" (Custodial). The category name refers to the management objective. The objective for the "I" category is to improve conditions; for the "M" category, to maintain conditions; and for the "C" category, to manage in a custodial manner. The "I" allotments are usually areas which have a potential for resource improvement where BLM controls enough land to implement

changes. Other "I" allotments have ongoing intensive management planning efforts which are being cooperatively developed by all landowners in the allotment. The "M" allotments are usually those where satisfactory management has already been achieved through conservation plans, coordinated resource management plans, or cooperative agreements with adjoining landowners. Most of the "C" allotments are small, unfenced tracts which are intermingled within much larger acreages of non-BLM rangelands, thus limiting the BLM's management opportunities. Approximately 80% of the allotments, but less than 50% of the total leased acres within the analysis area were categorized as "C" allotments (Table 3). Categorization, however, is an ongoing process and allotment categorization is revisited as resource conditions change and issues arise.

Table 3. Number of Allotments and BLM Acres by Categorization.

Category	# of Allotments	% of Allotments	BLM Acres	% of Total Acres
C	66	79	21,291	46
M	7	9	12,698	27
I	11	12	12,504	27
Total	**84**	**100**	**46,493**	**100**

B. Proposed Action

The term of this programmatic analysis will be ten years. The Proposed Action is to continue to authorize grazing on BLM managed land under currently existing grazing leases and to consider renewal or permitting of new grazing leases as requested. Approximately 11,651 acres of BLM managed land within the analysis area is currently not leased for livestock grazing. These lands may potentially be leased grazing in the future Leases would only be issued or renewed after completion of environmental review under the National Environmental Policy Act (NEPA) and in accordance with all other federal and state laws, Bureau guidance, and the Spokane District RMP.

Allotment stocking rates are determined using site productivity information and are designed to limit utilization of key forage species to 50%. The Spokane District RMP places the highest priority for monitoring on "I" category allotments. Table 4 shows the type and timing of monitoring that will be conducted. Riparian and spring exclosures are maintained annually. In addition to the monitoring described in Table 4, every allotment is reviewed by an interdisciplinary team (IDT) prior to lease renewal (10 year interval) to ensure that resource objectives for wildlife, botanical and cultural values continue to be met. Allotments to be renewed are analyzed for their potential to support sensitive species using various data sources and habitat models. During field visits, the habitat conditions for these species are examined and targeted surveys and habitat inventories are conducted where appropriate. Initial stocking levels are adjusted based on monitoring data, IDT review or other information, such as communications with the lessee. Most allotments would be renewed without range improvements or major changes to the grazing system if resource objectives are being met. Range improvements and/or modification of the grazing system would occur on allotments where resource objectives are not being met or where other needs arise. Allotments categorized as "I" or "M" are more likely to be renewed with management changes or proposed range improvements.

Table 4. Allotment monitoring type and schedule.

Allotment Number	Allotment Name	BLM Acres	Type of Monitoring and Schedule		
			Actual Use Schedule	Utilization Schedule	Trend (Photo Plot) Schedule
10700	LENTON FLAT	819	Annual	5 years	5 years
10701	LITTLE CHOPAKA MTN.	1,851	Annual	5 years	5 years
10704	KRUGER-ELLEMEHAN	4,607	Annual	5 years	5 years
10705	OR10705	2,332	Annual	Annual	Annual
10707	NIGHTHAWK	698	Annual	5 years	5 years
20704	ELLEMEHAM WEST	833	Annual	5 years	5 years
00734	CHILIWIST BUTTE	930	Annual	5 years	5 years
10709	CHOPAKA LAKE	1,357	Annual	Annual	Annual
10711	GRANDVIEW MTN	1,524	Annual	5 years	5 years
10712	PALMER MOUNTAIN	7,072	Annual	Annual	Annual
20702	OR20702	200	Annual	5 years	5 years

When resource objectives are not met, grazing systems may be modified through reduction in stocking rates, change of season of use, alteration of pasture rotations and construction of range improvements. Range improvements that are likely to occur include construction of fences for pastures, holding corrals, and riparian and spring exclosures, spring and trough development, and rehabilitation of ground disturbed by range improvement installation. Installation of range improvements may involve the use of heavy equipment such as backhoes and tractors as well as hand power tools and work crews. Rehabilitation of disturbed ground would usually consist of broadcast seeding by hand or ATV using a native seed mix when sufficient stock is available, but may also include the use of some non-native cultivar species when necessary.

III. Data Sources

Data sources used to conduct effects analysis included:

- US Fish and Wildlife endangered species lists, recovery plans, and website (http://westernwashington.fws.gov/)
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database
- WDFW Species of Concern list, status reviews, and recovery plans
- Washington Natural Heritage Database
- BLM fish, wildlife, and rare plant records and GIS data
- BLM policy manuals and memoranda
- Scientific and agency publications
- Personal communications with research scientists and agency biologists

IV. Effects of Action

Gray Wolf

Existing Condition

Wolves were historically present throughout the Cascade Mountains of Washington and the northeastern part of the state (Laufer and Jenkins 1989). Breeding wolves have recently been documented in both of these areas in Washington State and occur throughout all surrounding states and Canada. The ESA currently provides protection to gray wolves occurring west of Highway 97, but does not provide protection to wolves east of Highway 97. The Lookout Pack in the Methow Valley occupies a home-range within close proximity to several BLM grazing allotments and dispersing individuals from this pack and other areas are likely to use BLM managed land within the assessment area from time to time. However, no denning or rendezvous sites are currently known to occur on BLM managed land. BLM will coordinate with USFWS, Washington Department of Fish and Wildlife (WDFW) and other cooperating agencies to maintain current information on locations of denning sites and rendezvous areas. Grazing allotments within the wolf assessment area are shown in Appendix 1a and 2a.

Gray wolves are generalists that use a broad spectrum of elevations and habitats. Mortality is higher for wolves when road densities are greater than one linear mile of road per square mile of land because of the increased human presence in those areas (Thiel 1985, Wisdom et al. 2000). However, they may inhabit areas with greater road densities if those habitats are adjacent to relatively un-roaded areas (Mech 1989). Wolves den in areas near forest cover that are away from human activity and provide ungulates for prey. Denning typically occurs from mid-April to July and wolves are sensitive to disturbance during that time. They use rendezvous sites for resting and gathering areas after the pups are mobile enough to leave the den. Rendezvous sites are often around meadows near forested stands that provide resting areas under trees. Home ranges have been estimated to range from 19 to 687 square miles, and probably depend on the availability of ungulates for food (Wisdom et al. 2000). Ungulates comprise 85-95% of their diet, while beaver, snowshoe hare and other small animals may make up the remainder. Carrion may be an additional food source (Mech 1970, Witmer et al. 1998).

Wisdom et al. (2000) described the broad-scale trends in source habitats for species within the Interior Columbia River Basin. The 145 million acre area was divided into thirteen Ecological Reporting Units (ERUs). BLM managed lands analyzed in this BA fall within the North Cascades ERU 1 and the Northern Glaciated Mountains ERU 7. Source habitats were defined as those characteristic of macro-vegetation that contribute to stationary or positive population growth for a species in a specified area and time. At the broad scale, the gray wolf uses forest and range mosaics as habitat. Source habitats for wolves include a broad elevation range and all terrestrial vegetative community groups except exotic herbland and agriculture. Source habitats include suitable denning and rendezvous sites with a sufficient ungulate prey base. Habitat for the gray wolf within the Columbia River Basin has declined from 83.82% to 70.71%. Within the North Cascades ERU 1, habitat for the gray wolf has declined from 81.92% to 71.18%. Within the Northern Glaciated Mountains ERU 7, habitat for the gray wolf has declined from 73.64% to 70.73%. Roads and other non-vegetative factors may decrease the suitability of these source habitats.

Mule deer are the primary prey for wolves present in the analysis area, however, some parts of the analysis area also support white-tailed deer populations that serve as prey for wolves. Where available, elk, moose, mountain goats, big horn sheep, beavers, wild turkeys, marmots and other small mammals would also be likely prey items for gray wolves. Deer, however, are by far the most abundant and accessible prey item for wolves in the analysis area. Mule deer and white-tailed deer forage on a variety of shrubs, grasses and forbs, and have been known to eat mushrooms as well (NatureServe 2005). Deer habitat consists not only of forage, but also important cover components for hiding and thermal cover. The arrangement of these habitats on the landscape is important in determining habitat suitability (Thomas 1979).

The Spokane District RMP states that terrestrial wildlife habitat will be managed to provide sufficient forage and cover for wildlife on seasonal habitat to maintain existing populations or target populations established by the Washington Department of Fish and Wildlife (WDFW). Forage and cover requirements would be incorporated into allotment management plans and would be specific to areas of primary wildlife use. Interdisciplinary review of range conditions will ensure that each allotment is meeting these requirements as well as Rangeland Health Standards when the leases are renewed.

Roads on BLM managed land within the project area are for the most part either maintained gravel roads or unmaintained two track roads. Many of these roads are closed to the general public and are only used administratively by BLM employees and grazing permit holders. Some BLM parcels are adjacent to or bisected by paved roads and highways. Approximately 5,518 acres of BLM managed land within the analysis area is designated as the Chopaka Mountain Wilderness Study Area (WSA). The WSA has one old road, but the entire area is currently closed to motorized or wheeled vehicles. The WSA designation ensures that this area will remain road-less and off limits to motorized or wheeled travel.

Direct and Indirect Effects

The continuation of livestock grazing on the allotments would affect the quantity and quality of mule deer habitat compared to no grazing. Although it has been found that periodic cattle grazing, if properly managed, may improve forage for mule deer, long-term grazing or improper management can negatively affect deer habitat (Irwin et al. 1994). This is primarily the result of livestock grazing increasing competition for available forage while reducing the availability of cover necessary for fawning. Additionally, grazing may impede conifer and shrub growth within burned and harvested areas and can also reduce native vegetation and cause ground disturbance that facilitates invasion by noxious weeds.

Some allotments will be renewed without major changes in authorized uses. Interdisciplinary review for changes in resource conditions or new resource conflicts will be completed prior to renewing grazing leases on these allotments. There is no expected change in forage and cover availability for deer on these allotments. If significant changes in resource conditions or resource conflicts are identified, renewal of the grazing lease would include changes to the grazing system and/or habitat improvements. These allotments will be renewed with proposed alternatives that would be designed to improve range conditions by increasing livestock distribution and limiting their use of the riparian areas, and therefore would be expected to eventually provide more forage and cover availability for deer. However, as an exotic herbivore introduced to these ecosystems, domestic livestock would still have some effect on native ungulates and their habitats. Some habitat degradation may occur in areas that are not currently grazed if new grazing authorizations are issued.

Range improvement projects such as water development or fence construction could also disturb wolves. Range improvement construction projects would be short in duration and focused in specific locations. For most improvements, disturbance is likely to last one or two days in each location. This includes activities such as the arrival of a small excavator via truck, unloading the excavator, walking the excavator into the work site, using the excavator to develop the site, installation of pipes, installation of fences, and loading the excavator back onto the truck and departing. Disturbance may also occur from human activity associated with herding and other management of the livestock by the lessees.

The Proposed Action has the potential to result in wolf depredation of livestock authorized to graze on BLM managed land. Any wolf control actions associated with depredation can only be initiated by USFWS and would be considered a separate federal action.

The Proposed Action would have no effect on road densities within the analysis area. Road use associated with livestock grazing operations would typically consist of checking cattle, moving cattle from pasture to pasture and hauling supplies. Actual use of many roads may be only a few days each year, and some roads may not be used for several years. Road use associated with grazing operations would cause temporary disturbance to wolves if they are present in the area.

Burned areas would be rested from livestock grazing for at least two growing seasons in order to allow

vegetation regeneration and to minimize the spread of invasive species. Harvested areas will be rested as necessary to achieve vegetation objectives. This will help protect habitat important for deer and elk foraging, fawning and calving.

Cumulative Effects

Gray wolf habitat within the analysis area has historically been affected and continues to be affected by land conversion for agriculture and residential development, roads, livestock grazing, timber harvest, wildfire and wildfire suppression. Land conversion removes habitat for both prey animals and wolves themselves. Agricultural conversion on a large scale is not likely in the future, but historic conversion has removed habitat once useful to wolves. Residential development has resulted in direct loss of habitat and increased potential for human/wolf conflict, and is more likely to occur in the future than agricultural conversion. The Proposed Action of continuing livestock grazing on BLM managed lands could help prevent future conversion of adjacent private property to agriculture by providing continued income from livestock grazing to the permitees.

Roads have been constructed throughout many parts of the analysis area. Other areas, such as the Pasayten Wilderness, have been designated as road-less. Road densities are variable, but in general, most of the area has roads present. Wolf mortality would be higher in areas where road densities exceed one mile per square mile of land than in areas with lower road density. This project would not result in a change in road densities and therefore would not contribute to cumulative effects associated with road construction. Administrative use of roads associated with livestock management would continue as would the potential for human-wolf conflicts. This would contribute to the effects of other roads throughout the analysis area.

Many portions of the analysis area, both public and private, have been grazed historically and continue to be grazed. Some areas that have been heavily grazed for long periods of time provide much less forage than un-grazed or lightly grazed areas. This reduction of forage affects wolves by reducing the overall carrying capacity of their prey base. Livestock grazing on BLM managed land within the analysis area will contribute to the effects of grazing on adjacent private, State and other Federally managed lands. It is expected that the continuation of grazing on these allotments combined with the improved management of livestock would only result in a small incremental cumulative effect for wolves given the relatively small percentage of BLM managed lands in the analysis area (2%). This is due to maintaining or improving conditions for deer, the primary prey item for wolves.

Much of the analysis area has been harvested for timber historically and continues to be used for timber production today. Timber management may alter deer cover quantity and distribution, typically increasing foraging habitat and decreasing hiding and thermal cover. The Proposed Action would not affect forest structure and therefore would not contribute to cumulative effects associated with timber harvest.

Gray wolf habitat throughout the analysis area has been affected by wildfire both historically and recently, and will continue to be in the foreseeable future. Wildfires, under natural conditions, tend to create mosaics of burned and unburned habitat that are useful for both wolves and their prey by providing foraging areas adjacent to cover. More recently, wildfire suppression has resulted in areas of increased stand densities and fuel loads. When these areas ignite they tend to create hotter burning fires that cover larger areas. Habitat recovery may be slower where fires burned hot. The Proposed Action of continuing livestock grazing on BLM managed land may reduce fuel loads, but could also contribute to the spread of noxious weeds that may increase the likelihood of fire.

Conservation Measures

1. Livestock carcasses found on areas of the allotment where they would attract wolves to a potential conflict situation with other livestock (such as a salting ground, water source, or holding corral), must be removed or otherwise disposed of such that the carcass will not attract wolves.

2. Obviously sick or injured livestock must be removed from the allotment, so they are not targeted by wolves.

3. Allotment management activities by humans will not be allowed near active wolf den sites during the denning period (late April to late June), to avoid human disturbance of the site. The distance will be determined on a site-specific basis and will depend primarily on topography around the den site.

4. Salt or other livestock attractants will not knowingly be placed near wolf dens or rendezvous sites to minimize cattle use of these sites. If a new den or rendezvous site is discovered, any previously established salt or attractant location may need to be relocated.

Effects Determination: May Affect, but is Not Likely to Adversely Affect. Habitat conditions for deer, the primary prey species for wolves, would be maintained or improved compared to current conditions for most of the area, although there may be some habitat degradation associated with potential new grazing authorization. The Proposed Action would use interdisciplinary review and application of Rangeland Health Standards and Guidelines along with water developments, exclosures, and holding pens to improve livestock distribution and reduce impacts to riparian and other habitats. Road densities would not be altered by the Proposed Action. The presence of livestock would still increase the potential for conflicts with wolves compared to a no grazing alternative.

Grizzly Bear

Existing Condition

The current range and population of grizzly bears is only one percent of historic levels (Witmer et al. 1998), and their decline can be attributed to a variety of causes (Mattson and Merrill 2002). Historically, they were recorded on the east slope of the North Cascades and down towards the Okanogan and Columbia rivers (Almack et al. 1993). Grizzly bears not only use forested habitats, but historically used open habitats such as the Great Plains (Finch 1991). Grizzly bears are sensitive to habitat fragmentation from roads, which allow human access and consequently increase disturbance and persecution. High densities of open roads and associated human activity may limit bear use of the area, even though the habitat may remain high quality (Mace et al. 1996, McLellan and Shackleton 1988, Wielgus et al. 2002). The most important limiting factor for grizzly bears is mortality due to humans (Wisdom et al. 2000).

Grizzly bears are omnivores and generalists that use a broad spectrum of elevations and habitats. Their habitat varies depending on food availability and may change between seasons and between years. Wisdom et al. (2000) summarized several factors that affect grizzly habitat selection: abundance and quality of foods; reproductive status of females and concerns about security of dependent young; presence and identity of other bears, especially adult males; and presence of humans and prior contact with humans. Dens for hibernation, birth, and rearing of young may be excavated by bears, or may occur naturally in montane, subalpine, and rocky areas (Wisdom et al. 2000).

Grizzlies den for nearly half the year, so they must consume food high in energy (fats, carbohydrates) and protein in order to survive hibernation. The seasonal availability of food sources largely determines grizzly bear habitat use. In the spring, after bears emerge from the den, they will forage on carrion, grass, ground squirrels, and other burrowing animals. Summer diets generally consist of grasses, forbs, and ferns. Fruits from trees and shrubs, grasses, and insects are eaten in the fall. In some ecosystems, ungulates may be an important prey source and bears may play a large role in determining ungulate population levels (Witmer et al. 1998). This is not the case in this area. Higher elevations can have talus areas that are known to provide foraging habitats for bears in summer (mid-June through mid-September) searching for concentrations of insects (Mattson et al. 1991). Anadromous fishes, such as chinook salmon and steelhead, likely provided a historical food source for bears within these watersheds, although these fishes are now restricted from much of their former range.

Foraging habitats consist of open forest, riparian areas, shorelines of lakes, meadows, seeps, and avalanche chutes. They are generally located adjacent to security cover that is made up of uneven-aged forests with a well developed understory and limited human disturbance (Witmer et al. 1998). The availability of cover partially determines how a bear will respond to disturbance (McLellan and Shackleton 1989). Forbs may be selected over grasses because they provide more protein and greater digestibility (Rode et al. 2001).

Wisdom et al. (2000) described the broad-scale trends in source habitats for the grizzly bear within the Interior Columbia River Basin. At the broad scale, the grizzly bear uses forest and range mosaics as habitat. Source habitats for grizzlies include a broad range of elevations and all terrestrial vegetative community groups except exotic herbland and agriculture. Habitat for the grizzly bear has declined from 81.27% to 67.63% of the entire basin. Within the North Cascades ERU 1, habitat for the grizzly bear has increased from 72.53% to 75.07%. Within the Northern Glaciated Mountains ERU 7, habitat for the grizzly bear has declined from 70.39% to 58.27%. Roads and other non-vegetative factors may decrease the suitability of these source habitats.

The Spokane District RMP states that terrestrial wildlife habitat will be managed to provide sufficient forage and cover for wildlife on seasonal habitat to maintain existing populations or target populations established by the Washington Department of Fish and Wildlife (WDFW). Forage and cover requirements would be incorporated into allotment management plans and would be specific to areas of primary wildlife use. Interdisciplinary review of range conditions will ensure that each allotment is meeting these requirements as well as Rangeland Health Standards when the leases are renewed.

Roads on BLM managed land within the project area are for the most part either maintained gravel roads or unmaintained two track roads. Many of these roads are closed to the general public and are only used administratively by BLM employees and grazing permit holders. Some BLM parcels are adjacent to or bisected by paved roads and highways. Approximately 5,518 acres of BLM managed land within the analysis area is designated as the Chopaka Mountain Wilderness Study Area (WSA). The WSA has one old road, but the entire area is currently closed to motorized or wheeled vehicles. The WSA designation ensures that this area will remain road-less and off limits to motorized or wheeled travel.

Approximately 10,687 acres of BLM managed land in the analysis area lies within Bear Management Units (BMUs) of the North Cascades Grizzly Bear Recovery Zone (NCGBRZ) (USDI USFWS 1993, 1997). Approximately 7,531 acres of this is currently leased for livestock grazing in 27 allotments (Appendices 1b, 2b, 2c and 2d). BLM managed lands lie within the Libby Creek, Lower Chelan, Lower Chewuch, Middle Methow, Salmon, Toats, Upper Methow and Upper Twisp River BMUs (Table 5). Core areas within BMUs are defined as areas at least 500 meters from high use roads and trails, and BMUs with less than 55% core area are considered to have a high level of human influence (Gaines et al 2003). Core area averaged 45% in BMUs containing BLM managed land and ranged from 18% to 84%. Half of the BMUs containing BLM managed land had less than 55% core area (Table 5).

Table 5. BLM managed land within Bear Management Units (BMUs).

BMU Name	Total BLM land (acres)	BLM land currently leased (acres)	Percent Core Area in BMU
Libby Creek	1,007	678	47
Lower Chelan	485	148	84
Lower Chewuch	39	38	41
Middle Methow	502	263	18
Salmon	21	8	34
Toats	8,190	6,187	69
Upper Methow	149	37	64
Upper Twisp River	294	172	66
Total/Average	**10,687**	**7,531**	**45**

Grizzly bear occurrences have been documented in all but the Libby Creek and Middle Methow BMUs, and grizzlies would be likely to use these areas as well. In addition, a grizzly bear was positively identified through DNA analysis northeast of Tonasket in 2003 near the town of Chesaw, approximately 20 miles east of the analysis area. Big game winter range occurs within the analysis area and on BLM managed lands, and would provide a source of carrion for bears emerging from hibernation. Additionally, other forage habitat for bears exists in the form of riparian areas, talus slopes, and other herbland/shrubland habitats.

Direct and Indirect Effects

This project would be consistent with interim direction for management within the NCGBRZ. The Interagency Grizzly Bear Guidelines were used to develop the mitigation measures found later in this BA (IGBG 1986).

The Proposed Action of continued grazing in areas currently grazed would generally maintain or improve habitat over current conditions for grizzly bears within the allotments. Habitat in areas that are not currently grazed would be degraded if new grazing authorizations are issued. The use of water developments, fencing, exclosures and holding pens would improve livestock distribution and reduce the potential for over-utilization. However, grizzly bears would still potentially be negatively affected by livestock use in the event that over-utilization occurs within riparian areas and other bear foraging sites. RMP standards and the IGBG would be followed to limit and/or remove the potential for grizzly-human-livestock conflicts. However, the presence of livestock still creates competition for forage between wildlife and livestock.

Additionally, livestock would still be present and the potential for competition with native ungulates for forage would still exist. The establishment of new water developments, fencing, exclosures and holding pens would aid in achieving better livestock distribution and would improve habitat conditions for ungulate prey species. Administrative use of roads associated with livestock management would still occur and the potential for human-bear interaction would exist.

Range improvement projects such as water development or fence construction could also disturb grizzlies. Range improvement construction projects would be short in duration and focused in specific locations. For most projects, disturbance is likely to last one or two days in each location. This includes activities such as the arrival of a small excavator via truck, unloading the excavator, walking the excavator into the work site, using the excavator to develop the site, installation of pipes, installation of fences, and loading the excavator back onto the truck and departing. Disturbance may also occur from human activity associated with herding and other management of the livestock by the lessees.

The Proposed Action would have no effect on road densities within the analysis area. Road use associated with livestock grazing operations would typically consist of checking cattle, moving cattle from pasture to pasture and hauling supplies. Actual use of many roads may be only a few days each year, and some roads may not be used for several years. Road use associated with grazing operations would cause temporary disturbance to grizzlies if they are present in the area.

Burned areas would be rested from livestock grazing for at least two growing seasons in order to allow vegetation regeneration and to minimize the spread of invasive species. Harvested areas will be rested as necessary to achieve vegetation objectives. This will help protect habitat important for grizzly bear foraging and deer and elk foraging, fawning and calving.

Cumulative Effects

Grizzly bear habitat within the analysis area has historically been affected, and continues to be affected, by land conversion for agriculture and residential development, roads, livestock grazing, timber harvest, wildfire and wildfire suppression. Land conversion directly removes habitat for both grizzlies and potential prey animals. Agricultural conversion on a large scale is not likely in the future, but historic conversion has removed habitat once useful to grizzlies. Residential development has resulted in direct loss of habitat and increased potential for human/grizzly conflict, and is more likely to occur in the future than agricultural conversion. The Proposed Action of continuing livestock grazing on BLM managed lands could help prevent future conversion of adjacent private property to agriculture by providing continued income from livestock grazing to the lessees.

Roads have been constructed throughout many parts of the analysis area. Other areas, such as the Pasayten Wilderness, have been designated as road-less. Road densities are variable, but in general, most of the area is has roads present. This action would not result in a change in road densities and therefore would not contribute to cumulative effects associated with road construction. Administrative use of roads associated with livestock management would continue as would the potential for human-grizzly conflicts. This would contribute to the effects of other roads throughout the analysis area.

Many portions of the analysis area, both public and private, have been grazed historically and continue to be grazed. Some areas that have been heavily grazed for long periods of time provide much less forage than un-grazed or lightly grazed areas. This affects grizzly foraging habitat, as well as that of potential prey animals. Livestock grazing on BLM managed land within the analysis area will contribute to effects of grazing on adjacent private, State and Federal lands. It is expected that the continuation of grazing on these allotments combined with the improved management of livestock would only result in a small incremental cumulative effect for grizzlies. This is due to maintaining or improving foraging habitat conditions for grizzlies and potential prey animals.

Much of the analysis area has been harvested for timber historically and continues to be used for timber production today. Timber management may alter deer cover quantity and distribution, typically increasing

foraging habitat and decreasing hiding and thermal cover. The Proposed Action would not affect forest structure and therefore would not contribute to cumulative effects associated with timber harvest.

Grizzly bear habitat throughout the analysis area has been affected by wildfire both historically and recently, and will continue to be in the foreseeable future. Wildfires, under natural conditions, tend to create mosaics of burned and unburned habitat that are useful for both grizzlies and potential prey by providing foraging areas adjacent to cover. More recently, wildfire suppression has resulted in areas of increased stand densities and fuel loads. When these areas ignite they tend to create hotter burning fires that cover larger areas. Habitat recovery may be slower where fires burned hot. The Proposed Action of continuing livestock grazing on BLM managed land may reduce fuel loads, but could also contribute to the spread of noxious weeds that may increase the likelihood of fire.

The IGBG would be followed so that human-bear conflicts are reduced, including those associated with livestock carcasses and human foods/sanitation. Therefore, the Proposed Action would be expected to have only a small incremental cumulative effect to grizzlies and their habitat.

Conservation Measures:

1. Some of the allotments fall within the North Cascades Grizzly Bear Recovery Zone. For these allotments, the Interagency Grizzly Bear Guidelines (1986) would be followed. These would be added to the lessees' lease instructions and discussed every year by the District Range Management Specialist.

2. Livestock carcasses found on areas of the allotment where they would attract grizzlies to a potential conflict situation with other livestock (such as a salting ground, water source, or holding corral), must be removed or otherwise disposed of such that the carcass will not attract bears.

3. Allotments will be rested from grazing for at least two growing seasons following wildfire or prescribed burning. Portions of allotments may be rested or excluded following timber treatments as necessary to meet vegetation objectives.

Effects Determination: May Affect, but is Not Likely to Adversely Affect. The Proposed Action would maintain or improve bear foraging habitat over current conditions on most of BLM managed lands in the analysis area, although there may be some habitat degradation associated with issuing new grazing authorizations in areas not currently grazed. The Proposed Action would use Rangeland Health Standards and Guidelines along with water developments, exclosures, and holding pens to improve livestock distribution and reduce impacts to riparian and other habitats. Road densities would not be altered by the Proposed Action. The presence of livestock would still increase the potential for conflicts with grizzlies compared to a no grazing alternative.

Canada Lynx

Existing Condition

In Washington, lynx habitat generally consists of Engelman spruce, subalpine fir, and lodgepole pine (seral species) stands above approximately 4000 feet in elevation. Other vegetation that is intermixed with the above forest types and considered lynx habitat may include: cool, moist Douglas-fir, grand fir, western larch, and aspen (Ruediger et al. 2000, Ruggiero et al. 1994, Wisdom et al. 2000). Lynx need habitat with abundant prey, primarily snowshoe hare (Butts 1992). Early-seral and mid-seral forests provide understories capable of supporting snowshoe hare populations in the winter. Late-seral forests provide denning habitat as well as alternate prey sources (red squirrels) and a high density of hares. Riparian areas also support snowshoe hare populations. Downed logs are important for lynx denning or resting (Wisdom et al. 2000). Lynx have been known to move long distances (>370 miles) in Washington (Ruggiero et al. 1994) and lynx may travel 3-6 miles in a day in search of food (Ruediger et al. 2000, Witmer 1998).

Snowshoe hare and hare habitat are important components of lynx habitat. Foraging habitat may result from fire, timber harvest, wind-throw, or insects/disease. Hares are most often found in young (15-30 years old) lodgepole pine stands in north-central Washington. They are also found in mature, multi-storied conifer stands with dense understories, particularly where branches would be within reach of hares in the snow during winter to provide cover and forage. Dense tree and shrub stems are preferred (1 inch diameter at breast height, >4500 stems/acre) (Ruediger et al. 2000, Ruggiero 1994). Winter foraging habitat is an important feature of lynx habitat. Stem height must be above snow depth, so stems should be 1-2.5 meters high, depending on local conditions. During snow-free months, hare may use areas with less stem density that provide more herbaceous food. Denning habitat consists of mature, dense stands of timber with large accumulations of downed woody material that provide kittens with thermal and security cover. Stands are greater than 200 year old Engelman spruce, subalpine fir, and lodgepole pine stands on north-northeast aspects. Downed wood is at high densities and supported 0.3-1.2 m above the ground. This is necessary to provide vertical and horizontal structural diversity. Stands are generally greater than 2.5 acres in size, have minimal human disturbance, and are near foraging areas. Travel corridors between denning and foraging areas are important. Alternate den sites are also important to allow the female to move kittens away from threats (Ruggiero 1994).

Wisdom et al. (2000) described the broad-scale trends in source habitats for Canada lynx within the Interior Columbia River Basin. At the broad scale, the Canada lynx uses forest mosaics as habitat. Primary habitat for the lynx was defined as subalpine and montane forests that are cold or moist forest types. Within the montane forest types, only the Pacific silver fir-mountain hemlock, red fir, and Sierra Nevada mixed conifer do not provide source habitat within the basin. Only Engelmann spruce-subalpine fir provides source habitat within the subalpine forest types. Source habitats include several structural stages for foraging and denning. Habitat for the Canada lynx has increased from 43.30% to 49.58% of the entire basin. Within the North Cascade ERU 1, habitat for the Canada lynx has declined from 50.53% to 46.72%. Within the Northern Glaciated Mountains ERU 7, habitat for the Canada lynx has increased from 47.43% to 56.88%. Roads and other non-vegetative factors may decrease the suitability of these source habitats.

Designated Critical Habitat for the Canada Lynx

Critical habitat for lynx was designated in 2006 and revised in 2009 (USDI USFWS 2009). This designation defines the primary constituent element for lynx critical habitat as:

1. Boreal forest landscapes supporting a mosaic of differing successional forest stages and containing:
    a. Presence of snowshoe hares and their preferred habitat conditions, which include dense understories of young trees, shrubs or overhanging boughs that protrude above the snow, and mature multistoried stands with conifer boughs touching the snow surface;
    b. Winter snow conditions that are generally deep and fluffy for extended periods of time;
    c. Sites for denning that have abundant coarse woody debris, such as downed trees and root wads; and
    d. Matrix habitat (e.g., hardwood forest, dry forest, non-forest, or other habitat types that do not support snowshoe hares) that occurs between patches of boreal forest in close juxtaposition (at the scale of a lynx home range) such that lynx are likely to travel through such habitat while accessing patches of boreal forest within a home range.

Approximately 1,347 acres of BLM managed land within the analysis area are within Lynx Analysis Units (LAUs) in designated critical habitat. Approximately 1,057 acres of this are leased for livestock grazing on five allotments (Appendices 1c, 2e, 2f, and 2g). BLM managed lands lie within the Loomis North, North Fork Salmon Creek and West Fork Salmon Creek LAUs (Table 6). Canada lynx have been documented in all of these LAUs. However, only a small amount (less than 100 acres) of BLM managed land within LAUs supports suitable lynx habitat.

Table 6. BLM managed land within Lynx Analysis Units (LAUs).

LAU Name	Total BLM Acres	BLM Acres Leased for Grazing
Loomis North	590	458
North Fork Salmon Creek	552	395
West Fork Salmon Creek	205	204
Total	**1,347**	**1,057**

Direct and Indirect Effects

Livestock grazing may impact lynx indirectly through the degradation of snowshoe hare habitat, one component of the primary constituent element of lynx critical habitat. The Proposed Action would have no effect on the other components of the primary constituent element of lynx critical habitat described above. Grazing would not occur in lynx habitat in the winter, so there would be no effect on snow conditions. Livestock grazing would have limited effect on coarse woody debris for denning sites or the structural matrix of habitat.

Cattle and wild ungulates may compete directly with snowshoe hares for herbaceous forage during the summer. Additionally, livestock may browse shrubs that provide winter forage for hares. Vegetative changes can occur if livestock are not properly managed, thereby altering the composition of plant species present for hare use. The Proposed Action would generally maintain or improve habitat conditions, although allowing continued livestock grazing would still create competition for forage between livestock and snowshoe hare. Most BLM managed land within LAUs is already leased for livestock grazing, so there is little potential for additional habitat degradation associated with new grazing authorizations.

Burned areas would be rested from livestock grazing for at least two growing seasons in order to allow vegetation regeneration and to minimize the spread of invasive species. Harvested areas will be rested as necessary to achieve vegetation objectives. This will help protect habitat important for snowshoe hare and Canada lynx foraging. Water developments, fencing, exclosures and livestock holding pens would

assist in livestock distribution. This would improve conditions and limit over-utilization in places that provide hare habitat such as riparian areas.

Range improvement projects such as water development or fence construction could also disturb lynx. Proposed range improvement construction projects would be short in duration and focused in specific locations. For each trough, disturbance is likely to last one or two days in each location. This includes activities such as the arrival of a small excavator via truck, unloading the excavator, walking the excavator into the work site, using the excavator to develop the site, installation of pipes, installation of fences, and loading the excavator back onto the truck and departing. Disturbance may also occur from human activity associated with herding and other management of livestock by the lessees.

Cumulative Effects

Lynx habitat within the analysis area has historically been affected, and continues to be affected, by livestock grazing, timber harvest, wildfire and wildfire suppression. Land conversion for agricultural and residential development within lynx habitat is not likely to be significant.

Many portions of the analysis area, both public and private, have been grazed historically and continue to be grazed. Some areas that have been heavily grazed for long periods of time provide much less forage than un-grazed or lightly grazed areas. This affects foraging habitat for snowshoe hare, the primary prey of lynx. Livestock grazing on BLM managed land within the analysis area will contribute to effects of grazing on adjacent private, State and Federal lands. It is expected that the continuation of grazing on these allotments combined with the improved management of livestock would only result in a small incremental cumulative effect for lynx. This is due to maintaining or improving foraging habitat conditions for snowshoe hare.

Much of the analysis area has been harvested for timber historically and continues to be used for timber production today. Timber management may alter cover quantity, quality and distribution for both lynx and snowshoe hare, typically increasing foraging habitat and decreasing hiding and thermal cover. The Proposed Action would not affect forest structure and therefore would not contribute to cumulative effects associated with timber harvest.

Canada lynx habitat throughout the analysis area has been affected by wildfire both historically and recently, and will continue to be in the foreseeable future. Wildfires, under natural conditions, tend to create mosaics of burned and unburned habitat that are useful for both Canada lynx and their prey by providing foraging areas adjacent to cover. More recently, wildfire suppression has resulted in areas of increased stand densities and fuel loads. When these areas ignite they tend to create hotter burning fires that cover larger areas. Habitat recovery may be slower where fires burned hot. The Proposed Action of continuing livestock grazing on BLM managed land may reduce fuel loads, but could also contribute to the spread of noxious weeds that may increase the likelihood of fire.

Conservation Measures:

1. Allotments will be rested from grazing for at least two growing seasons following wildfire or prescribed burning. Portions of allotments may be rested or excluded following timber treatments as necessary to meet vegetation objectives.

2. In lynx habitat, livestock can overgraze shrub/steppe habitat, riparian areas and willow carrs. To prevent this, these areas will be assessed for grazing impacts by an interdisciplinary team prior to lease renewal and adjustments will be made as necessary.

Effects Determination: May Affect, but is Not Likely to Adversely Affect. The Proposed Action would maintain or improve lynx habitat over current conditions on most of BLM managed lands in the analysis area, although there may be some habitat degradation associated with issuing new grazing authorizations in areas not currently grazed. The Proposed Action would use Rangeland Health Standards and Guidelines along with water developments, exclosures, and holding pens to improve livestock distribution

and reduce impacts to riparian and other habitats. Road densities would not be altered by the Proposed Action. The presence of livestock would still increase the potential for conflicts with lynx compared to a no grazing alternative.

Interrelated and Interdependent Actions

There are no other actions that are interrelated or interdependent to this action. Denial of grazing authorization on BLM managed lands would not preclude grazing on adjacent private lands. No other potentially interrelated or interdependent actions were identified.

Conclusion

The Proposed Action "May Affect, but is Unlikely to Adversely Affect" gray wolf and grizzly bear, as well as Canada lynx and its designated critical habitat. The conservation measures outlined above will minimize the effects of the Proposed Action on these species and will ensure that adverse effects do not occur. A monitoring and range improvement report will be filed annually with USFWS and consultation will be re-initiated if new information arises or adverse effects occur.

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Appendix 1a. Legal Description, Categorization, Authorization and Current Use of Allotments within the Analysis Area.

Management Category	Allotment Number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	00722	549	93	5/1 – 7/15	Yes	T38N R27E: Sec 5: LOTS 1,2,3, SE¼NE¼ T39N R27E: Sec 31: E½SE¼, Sec 32: S½
C	00723	518	84	6/1 -10/31	Yes	T35N R24E: Sec 1: LOTS 1,2,6, SW¼NE¼, Sec 2: LOTS 1,2,3,4,5,6,7,10, SW¼NW¼, SW¼SE¼ T36N R25E: Sec 31: LOT 6 T35N R25E: Sec 6: LOTS 4,5 (EXCLUDING MINING CLAIMS)
C	00724	632	107	4/20-6/20	Yes	T38N R27E: Sec 4: LOTS 2,3,4, SW¼NE¼, NW¼SE¼, SW¼NW¼; Sec 5: NW¼SE¼, SEC 8: NE¼NE¼, S½NE¼, SE¼; T39N R27E: Sec 33: S½SW¼
C	00725	262	55	5/15-10/14	Yes	T35N R24E: Sec 13: S½N½NE¼, NE¼NW¼, T35N R25E: Sec 18: LOT 4, SE¼SW¼, E½SE¼SE¼, Sec 20: SW¼SE¼, SE¼SW¼, Sec 29: LOT 1
C	00726	493	104	5/15–10/14	Yes	T36N R24E: Sec 34: NE¼NW¼, Sec 35: LOTS1-6,W½NE¼,E½NW¼,NW¼NW¼,NE¼SW¼,NW¼SE¼
C	00727	711	120	5/1-8/1	Yes	T35N R25E: Sec 19: W½SE¼, SE¼SW¼, Sec 30: LOTS 1,7,8,12, NE¼, NE¼NW¼, Sec 31: LOTS 1,4,5,7,8,13,14, SW¼NE¼*, NW¼SE¼*
C	00728	139	31	5/1-10/31	Yes	T36N T25E: Sec 31: LOTS 1,2,10,11
C	00729	56	17	5/15-10/9	No	T35N R25E: Sec 6: Lot 1, T36N R25E: Sec 31: Lots 4,5,& 7
C	00730	39	7	3/1-5/31	Yes	T38N R27E: Sec 8: NW1/4NW1/4
C	00736	76	16	4/1-5/31 10/1-12/31	Yes	T33N R25E: Sec 14: SW¼SW¼, Sec 15: SE¼SE¼
C	00738	181	21	4/1-10/31	Yes	T33NR25E: Sec 29: SW¼SW¼*, SE¼SW¼*, Sec 32: NW¼NW¼*, Sec 33: NW¼SW¼
C	00740	415	113	4/15-9/30	No	T34N R25E: Sec 24: E½SE¼, T34N R26E: Sec18: Lots 2,3,4, NE¼NW¼, E½SE¼, Sec 19: Lots 1,3,4, NE¼SW¼, NW¼SE¼, T35N R25E: Sec10: SW¼NE¼, NW¼SE¼, SE¼SE¼, Sec14: SE¼NE¼
C	00741	1256	148	4/1-9/30	Yes	T34N R25E: Sec 25: NE¼NE¼, T34N R26E: Sec 19: SW¼SE¼, SE¼SW¼, Sec 29: NW¼SE¼, SW¼SW¼, Sec 30: LOT 1, E½, E½SW¼, Sec 31: NE¼, NE¼NW¼, NE¼SE¼, Sec 32: NW¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	00742	89	10	3/16-9/30	Yes	T34N R26E Sec 17: E½NE¼
C	00743	148	23	3/1-10/31	No	T34N R26E: Sec32: E½NE¼, NE¼SE¼,W½SE¼SE¼
C	00747	479	27	3/15-1015	Yes	T28N R23E: Sec 22: NE¼, SE¼SW¼, W½SE¼, Sec 27: E½W¼, SE¼SW¼, W½SE¼
C	00755	1256	138	4/1-9/30	Yes	T28N R23E: Sec 1: LOTS 3,4, S½NW¼, N½SW¼, SW¼SW¼, Sec 2: LOTS 1-4, S½N½, N½SW¼, NW¼SE¼, Sec 11: E½NE¼, Sec 12: NW¼NW¼, T29N R23E: Sec 34: E½SE¼, Sec 35: S½
C	00762	635	66	5/1-5/31 10/15-11/15	Yes	T28N R23E: Sec 4: PORTION OF SW1/4, Sec 5: Lots 4, 8 AND PORTIONS OF LOTS 2,3,7 SE¼NE¼, Sec 6: Lot 6, SE¼NW¼, S1/2NE¼, NW¼SE¼, NE¼SW¼, Sec 7: Lot 4
C	00866	43	7	1-5/31	Yes	T35N R26E: Sec 27: SE¼SE¼
C	00872	1165	121	5/15-10/31	Yes	T30N R24E: Sec 2: NW¼, N½SW¼, SW¼SW¼, Sec 3: S½SE¼, Sec 10: N½NE¼, NE¼SE¼, Sec 11: S½NW¼, NW¼NW¼, NW¼SW¼, T31N R24E Sec 15: Lot 6, Sec 27: W½NW¼, Sec 35: LOT 3, SW¼NW¼, NE¼NE¼, T32N R24E: Sec 35: SE¼, W½NE¼
C	00873	73	13	5/15-5/30	Yes	T34N R21E: Sec 1: NE¼SE¼, T34N R22E: Sec 18: SE¼NW¼, Sec 20: LOT 2
C	00894	423	69	5/1-7/15	Yes	T40N R27E: Sec 29: SW¼SW¼, Sec 30: SE¼SE¼, Sec 32: N½NW¼, S½SW¼, NW¼SE¼, W½NE¼, E½NE¼-E½E½E½NE¼
C	00919	44	6	4/15-10/14	Yes	T32N R25E: Sec 30: SE¼SW¼
C	00921	121	20	5/1-9/30	Yes	T30N R23E: Sec 29: SW¼NE¼, NW¼SE¼, NE¼SE¼, SW¼SE¼
C	00922	259	42	5/1-9/30	Yes	T30N R23E: Sec 33: LOTS 3-6, NW¼SW¼, S½SW¼, SW¼SE¼
C	00927	336	53	4/16-9/30	Yes	T39N R27E: Sec 17: SE¼SW¼, Sec 20: NW¼SE¼, Sec 30: SE¼NE¼, E½SE¼, Sec 31: NE¼NE¼, Sec 32: W½NW¼
C	00931	85	12	5/1-10/15	No	T32N R22E: Sec 27: NE¼NW¼, SW¼SW¼
C	00937	159	26	5/10-6/15	Yes	T37N R26E: Sec 8: E½SW¼, W½SE¼
C	00943	203	28	5/1-6/30	Yes	T32N R22E: Sec 8: SE¼SE¼, Sec 17: NE¼
C	00946	38	8	4/10-6/1	No	T36N R27E: Sec 6: SW¼SW¼
C	00947	39	6	4/15-10/15	Yes	T34N R25E: Sec 23: NE¼NE¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	00951	35	5	5/1-9/30	No	T37N R27E: Sec 4: Lot 6
C	00952	79	20	3/1-2/28	Yes	T32N R22E: Sec 17: E½NW¼
C	00955	737	66	4/1-10/31	No	T28N R21E: Sec 12: E½NE¼, SE¼, Sec 13: NE¼ T28N R22E: Sec 5:W½NW¼, NW¼SW¼, Sec 7: Lots 1,2,3, S½NE¼, NW¼SW¼
C	00957	103	17	5/1-9/31	Yes	T33N R21E: Sec 13: SE¼SE¼NE¼, NE¼SE¼, T33N R22E: Sec 19: SE¼SW¼
C	00959	39	8	3/1-10/31	Yes	T35N R26E: Sec 30: SE¼NE¼
C	00969	40	6	3/1-8/31	Yes	T31N R25E: Sec 18: SE¼SW¼
C	10703	1432	240	6/1-10/15	Yes	T40N R25E: Sec 17: LOT 1, SW¼NW¼, Sec 18: E½SE¼, Sec 20: W½E½, W½, Sec 29: W½E½, W½, Sec 32: W½NE¼, NW¼
C	10706	478	45	4/15-10/30	Yes	T40N R26E: Sec 11: SE¼SE¼, Sec 12: LOTS 2,5,6, Sec 13: LOTS 2,3,8, Sec 14: SE¼NE¼, Sec 24: N½SE¼, S½NE¼, NE¼NE¼
C	10708	758	124	4/1-10/31	Yes	T39N R26E: Sec 3: LOTS 5-9, E½SW¼, Sec 4: LOTS 4,5,6,9,10,11,12, Sec 10: LOTS 4,5, NE¼NW¼, Sec 14: 12 UNPATENTED MINING CLAIMS, Sec 21: NW¼NW¼, Sec 22: 1 UNPATENTED MINING CLAIM, Sec 23: LOTS 4,6, Sec 27: 1 UNPATENTED MINING CLAIM
C	10710	156	37	6/1-9/30	Yes	T40N R25E: Sec 20: SE¼SE¼, Sec 21: SW¼SW¼, Sec 27: SW¼SW¼, Sec 28: LOTS 1,2,5,11
C	10713	287	33	6/1-10/31	Yes	T39N R26E: Sec 5: Lots 3,4, SE¼NW¼, Sec 6: Lot 1, T40N R26E: Sec 32: S½SW¼, Sec 33: SE¼SE¼
C	10714	358	67	5/1-10/31	Yes	T40N R26E: Sec 28: NW¼NW¼, Sec 31: LOTS 1,2,3, E½W½, W½E½, SE¼SE¼
C	10830	40	7	5/1-9/30	Yes	T34N R22E: Sec 28: SE¼NE¼
C	10832	153	20	4/15-10/31	Yes	T35N R26E: Sec 22: E½SW¼, Sec 27: N½NE¼
C	10835	129	24	3/15-6/15	No	T32N R22E: Sec 29: SE¼SE¼, SW¼SE¼, Sec 32: E½SE¼, NE¼SW¼
C	10840	41	6	5/15-10/30	Yes	T32N R22E: Sec 27: SE¼SW¼
C	10842	42	8	3/1-10/31	No	T33N R21E: Sec 10: NW¼NW¼
C	10844	831	133	4/1-10/31	No	T30N R23E: Sec 23: SE¼SW¼, Sec 25: SW¼NW¼, NW¼SW¼, Sec 26: W½E½, E½W½, NW¼NW¼, Sec 27: SW¼NE¼, SE¼NW¼, E½SE¼, Sec 35: N½NE¼, NE¼NW¼, SW¼NE¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	10845	80	16	4/15-10/15	Yes	T30N R23E: Sec 9: W1/2NE1/4
C	10849	118	20	6/1-9/30	Yes	T31N R22E: Sec 21: SE¼NW¼, SW¼SE¼, NE¼SW¼
C	10851	937	210	6/1-10/15	Yes	T34N R25E: Sec 5: All, Sec 6: LOTS 1,2,6,7,10,15,18, SWNE,SENW,NWSE,NESW, Sec 8: LOT 1, NE¼NW¼, S½NW¼
C	10852	76	16	6/1-7/31	Yes	T31N R22E: Sec 7: NW¼SE¼, SW¼NE¼
C	10853	95	16	5/1-11/31	Yes	T32N R25E: Sec 10: NW¼NW¼, Sec 15: SE¼NE¼
C	10854	562	93	4/15-6/30	Yes	T30N R22E: Sec 13: Lot 7, Sec 24: Lots 1,4, T30N R23E: Sec 19: Lots 1-3, E½NW¼, NE¼SW¼, NW¼NE¼, NE¼SE¼, Sec 20: N½SW¼, Sec 21: SE¼SE¼, Sec 22: W½SW¼, Sec 28: Lot 1
C	10878	39	6	5/1-10/31	Yes	T35N R25E: Sec 5: Lot 2
C	10885	187	33	5/1-7/31	Yes	T33N R22E: Sec 35: SE¼SW¼, S½NE¼, E½SE¼
C	10886	116	20	9/1-11/30	Yes	T29N R23E: Sec 32: SE¼SE¼, SW¼SE¼, Sec 33: SW¼SW¼
C	10888	138	20	5/1-9/30	Yes	T28N R22E: Sec 1: SW¼SE¼, Sec 12: W½NE¼
C	10890	898	142	4/15-6/1	Yes	T38N R25E: Sec 1: Lot 9, SE¼SE¼, Sec 2 :E½SE¼ (Lots 7,8), Sec 12: NE¼, T38N R26E; Sec 6: Lot 7, Sec 7: Lots 1-4, E½SW¼, SW¼SE¼, Sec 17: Lot 2, SW¼SW¼, NW¼SW¼, SW¼NW¼, Sec 20: W½NW¼, NW¼SW¼, T39N R25E: Sec 35: Lots 5,6
C	10906	372	26	5/1-10/31	Yes	T28N R23E: Sec 4: S1/2NW1/4, portion of SW1/4 north of ridge, Sec 5: Lot1, portions of Lots 2,3,7 and SENE north of ridge, T29N R23E: Sec 33: SE¼SE¼, Sec 34: N½SW¼, SW¼SW¼
C	10910	66	8	5/15-9/14	Yes	T33N R21E: Sec 13: NW¼SE¼NE¼, NW¼SE¼
C	10914	158	25	5/15-10/15	Yes	T30N R22E: Sec 12: SW1/4NE1/4, SW1/4SE1/4, Sec 13: Lots 2, 5, NW1/4NE1/4
C	10915	37	6	4/1-11/30	Yes	T34N R21E: Sec 9: SW¼NW¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	20904	320	45	9/1-11/30	Yes	T30N R24E: Sec 19: Lots 5,6, NW¼NE¼, S½NE¼, N½SE¼, SW¼SE¼, Sec 20: Lots 1,2
C	30902	430	61	4/15-6/14 11/1-11/30	Yes	T37N R27E: Sec 4: E½SW¼, SW¼NE¼, NW¼SE¼ T38N R27E: Sec 20: SW¼SE¼, Sec 29: NE¼NE¼, SW¼NE¼, SE¼SE¼, Sec 30: NE¼SE¼, Sec 32: SW¼NE¼
M	00716	97	8	10/1-11/30	Yes	T40N R25E: Sec 13: LOT 13, MS115B, MS118B, MS119B, Sec 23: LOT 1, 22, 23, 24, Sec 24: LOT 2, MS116B
M	00734	903	124	4/20-6/19	Yes	T32N R24E: Sec 24: NE¼SW¼, T32N R25E: Sec 5: Lots2,3,4, S½NW¼, W½SW¼, S½SE¼, Sec 6: E½SW¼, W½SE¼, Sec 7: Lot 2, SE¼SW¼, SW¼SE¼, Sec 8: Lots 2,3,4, Sec 18: NE¼NW¼, Sec 19: SW¼NE¼, Sec 30: NE¼NW¼
M	00752	525	36	4/15-10/15	Yes	T27N R23E: Sec 7: S½NE¼, N½SE¼, Sec 8: NW¼, N½NE¼, SW¼NE¼, E½SW¼, NW¼SE¼
M	10709	1422	159	6/1-8/31	Yes	T40N R25E: Sec 28: Lots 3,4,8,9,10, W½SW¼, Sec 29: Lot 1, SE¼NE¼, E½SE¼, Sec 32: E½E½, Sec 33: All, Sec 34: W½W½, E½SW¼, W½SE¼
M	10711	1549	175	5/20-7/1 10/15-11/15	Yes	T39N R25E: Sec 12: L.3, S½NW¼, SW¼, W½SE¼, NW¼NW¼,W½SESE,W½NENW, Sec 13: L.5-8, W½SW¼,W½NE¼SW¼,N½NW¼NE¼,SW¼NW¼NE¼, Sec 14: L.1-8, N½S½, S½SE¼, SE¼SW¼, E½SW¼SW¼, N½NW¼SW¼SW¼, Sec 23: N½NE¼NE¼, NW¼NE¼, E½NW¼,N½SW¼NE¼,SW¼SW¼NE¼, T39N R26E: Sec 7: Lot 5, Sec 18: Lot 2
M	10712	7210	1543	4/15-10/31	Yes	T38N R26E: Sec 4: Lots 1-4, SE¼NE¼, Sec 5: Lots 1-4, S½NE¼, NE¼SE¼, S½NW¼, NW¼SW¼, Sec 6: Lots 1-5, S½NE¼, SE¼NW¼, NE¼SE¼, T39N R25E: Sec 24: Lots 3,4, Sec 25: Lots 1-4, W½E½, E½SW¼, NW¼SW¼, T39N R26E: Sec 17: S½, Sec 18: Lots 4,7,8, SE¼SE¼, Sec 19: All, Sec 20: N½, Sec 21: Lottie claim, Lots 3,4, SW¼NE¼,S½NW¼,NW¼SW¼,E½SW¼,SE¼, Sec 22: SW¼SW¼, Sec 27: W½, Sec 28: Lots 1,2, NE¼, S½, E½NW¼, Sec 29: Lots 1,3,4,5,6, S½NW¼, NW¼SW¼, E½W¼,SW¼SW¼, SE¼, Sec 30: All, Sec 31: Lots 1,2,3, NW¼NE¼,E½NW¼,E½NE¼,SW¼NE¼,E½SW¼,SE¼, Sec 32: NE¼NW¼, NE¼, W½NW¼, SE¼NW¼, S½ Sec 33: All, Sec 34: W½NW¼NW¼
M	20702	204	40	4/15-5/31 10/16-11/15	Yes	T39N R26E Sec 17: NE¼, SE¼NW¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
I	00733	640	120	5/1-8/30	Yes	T33N R25E: Sec 13: W½SW¼, SW¼NW¼, Sec 14: SE¼SW¼, W½SE¼, Sec 23: NW¼, N½SW¼, N½SE¼, SW¼SW¼
I	00735	122	24	9/1-10/31	Yes	T33N R25E: Sec 12: W½SE¼, SW¼NE¼
I	00737	607	112	4/1-10/31	No	T33N R25E: Sec 23: S½SE¼, SE¼SW¼, Sec 24: SW¼SW¼, Sec 25: NW¼NW¼, Sec 26: N½, NW¼SW¼
I	00739	182	26	11/15-12/15	Yes	T33N R26E: Sec 18: Lots 1,2,3, NE¼SE¼
I	10700	935	51	5/1-11/30	Yes	T40N R25E: Sec 1: Lots 3,4, SWNW, E1/2SW, Sec 2: Lots 1, 4, SE¼NE¼*, Sec 3: Lots 1-4, SW¼NW¼, NW¼SW¼, S½SE¼, Sec 4: Lots 1,2,6, SE¼NE¼, E½SE¼, Sec 9: S½NE¼, Sec 10: S½N½, N½NE¼246
I	10701	1820	246	5/15-6/14	Yes	T40N R25E: Sec 9: SE¼, Sec 10: SW¼, SW¼SE¼, Sec 14: Lots 1,2,3,4,6, NW¼SW¼, SW¼NW¼, NW¼SE¼ Sec 15: All, Sec 22: Lot 1, N½NE¼, SW¼NE¼, NW¼SE¼ Sec 23: Lots 3,4,5,6,7,8,12,13,20, E½SW¼
I	10704	4597	479	4/1-10/15	Yes	T40N R25E: Sec 1: Lot 2, E½SE¼, Sec 5: Lots7,8,9,10 Sec 6: Lots 1-7, E½SE¼, S½NE¼, SE¼NW¼, Sec 20: SE¼NE¼, NE¼SE¼, T40N R26E: Sec 2: Lots 5,6,9, SE¼, SE¼SW¼, Sec 3: Lots 7,8,9, SW¼, N½SE¼, SW¼SE¼, Sec 4: Lots 6,8,9,10,11, N½S½, S½SE¼, Sec 5: Lots 8, 9, 10, 11,12, N½S½, Sec 6: Lots 5,6,7, SE¼, E½SW¼, Sec 7: Lot 7, Sec 8: Lot 1, E½NE¼, S½, Sec 9: Lots 1,2,3,6, 9,10,12, NE¼NW¼, NW¼NE¼, Sec 10: Lots 1, 2, 3, 6, 9, 10,12, NE¼NW¼, NW¼NE¼, Sec 11: Lots 1,2,3,9,10,12, NE¼NW¼, N½NE¼, Sec 17: E½NE¼, NW¼NE¼
I	10705	2656	283	4/15-11/30	Yes	T40N R26E: Sec 1: Lots 5,6,7,8, S1/2, Sec 12: Lots 1,3,4,7, NE¼NW¼, W1/2NE1/4, Sec 13: Lots 1,5,6, NE¼NE¼, T40N R27E: Sec 6: Lots 7-12, N1/2SW¼, SW¼SE¼, Sec 7: Lots 5,6,8,7,10, SE¼SE¼, SW¼SE¼, Sec 8: Lots 3,4 5, SW¼NE¼, N½SW¼, SW¼SW¼, Sec 17: Lots 1,2, SW¼NE¼, W½NW¼, Sec 18: Lots 1,3,4,8,9,10, NW¼NE¼,NE¼NE¼,NW¼NW¼, Sec 19: Lots 1,10,11,12

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
I	10707	735	87	4/8-7/15	Yes	T40N R25E: Sec 13: Lots 5, 6, 7, 11, 12,13, E½NE¼, SW¼NE¼,NW¼SE¼,SE¼SW, T40N R26E: Sec 7: Lot 6 SE¼, Sec 18: Lots 1,2,3,4, NW¼NE¼, NE¼NW¼
I	10846	211	39	4/1-6/15	Yes	T36N R26E: Sec 1 Lots 3, 4, SE¼SW¼, Sec 12: SW¼NW¼,W½SE¼, W½SW¼,
I	20704	788	78	5/1-7/31	Yes	T40N R25E: Sec 23: SE¼SE¼, Sec 24: Lots 1, 2, 4, 5,7 ,8, 9, MS 116A,NE¼SE¼,S½SE¼,S½SW¼, Sec 25: N½NW¼ Sec 26: Lots 1,8,9,10, E½E½

Appendix 1b. Allotments within Grizzly Bear Management Units.

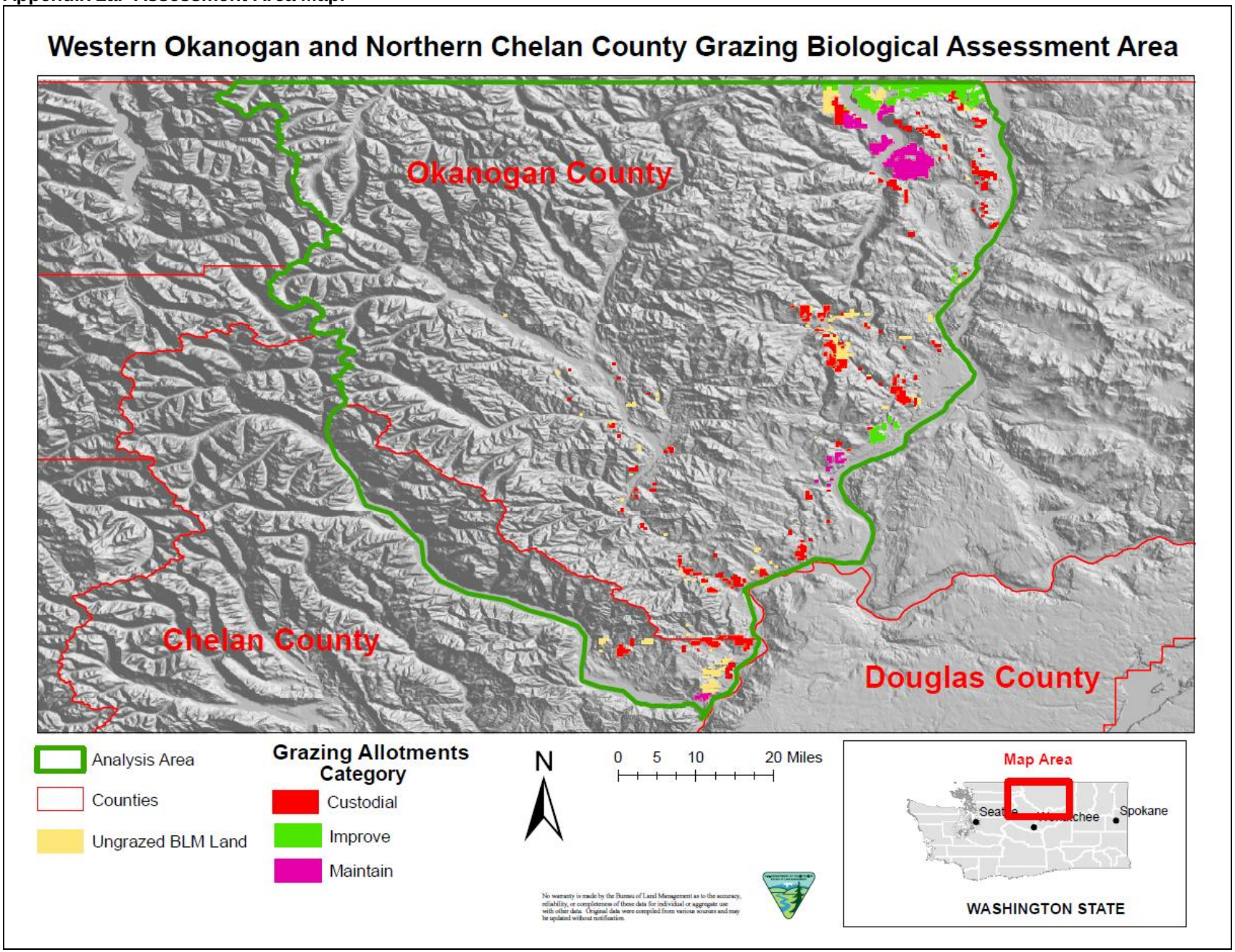
Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	00726	493	104	5/15–10/14	Yes	T36N R24E: Sec 34: NE¼NW¼, Sec 35: LOTS1-6,W½NE¼,E½NW¼,NW¼NW¼,NE¼SW¼,NW¼SE¼
C	00728	139	31	5/1-10/31	Yes	T36N T25E: Sec 31: LOTS 1,2,10,11
C	00755	1256	138	4/1-9/30	Yes	T28N R23E: Sec 1: LOTS 3,4, S½NW¼, N½SW¼, SW¼SW¼, Sec 2: LOTS 1-4, S½N½, N½SW¼, NW¼SE¼, Sec 11: E½NE¼, Sec 12: NW¼NW¼, T29N R23E: Sec 34: E½SE¼, Sec 35: S½
C	00873	73	13	5/15-5/30	Yes	T34N R21E: Sec 1: NE¼SE¼, T34N R22E: Sec 18: SE¼NW¼, Sec 20: LOT 2
C	00922	259	42	5/1-9/30	Yes	T30N R23E: Sec 33: LOTS 3-6, NW¼SW¼, S½SW¼, SW¼SE¼
C	00931	85	12	5/1-10/15	No	T32N R22E: Sec 27: NE¼NW¼, SW¼SW¼
C	00937	159	26	5/10-6/15	Yes	T37N R26E: Sec 8: E½SW¼, W½SE¼
C	00943	203	28	5/1-6/30	Yes	T32N R22E: Sec 8: SE¼SE¼, Sec 17: NE¼
C	00952	79	20	3/1-2/28	Yes	T32N R22E: Sec 17: E½NW¼
C	00955	737	66	4/1-10/31	No	T28N R21E: Sec 12: E½NE¼, SE¼, Sec 13: NE¼ T28N R22E: Sec 5:W½NW¼, NW¼SW¼, Sec 7: Lots 1,2,3, S½NE¼, NW¼SW¼
C	00957	103	17	5/1-9/31	Yes	T33N R21E: Sec 13: SE¼SE¼NE¼, NE¼SE¼, T33N R22E: Sec 19: SE¼SW¼

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	10703	1432	240	6/1-10/15	Yes	T40N R25E: Sec 17: LOT 1, SW¼NW¼, Sec 18: E½SE¼, Sec 20: W½E½, W½, Sec 29: W½E½, W½, Sec 32: W½NE¼, NW¼
I	10704	4597	479	4/1-10/15	Yes	T40N R25E: Sec 1: Lot 2, E½SE¼, Sec 5: Lots7,8,9,10 Sec 6: Lots 1-7, E½SE¼, S½NE¼, SE¼NW¼, Sec 20: SE¼NE¼, NE¼SE¼, T40N R26E: Sec 2: Lots 5,6,9, SE¼, SE¼SW¼, Sec 3: Lots 7,8,9, SW¼, N½SE¼, SW¼SE¼, Sec 4: Lots 6,8,9,10,11, N½S½, S½SE¼, Sec 5: Lots 8, 9, 10, 11,12, N½S½, Sec 6: Lots 5,6,7, SE¼, E½SW¼, Sec 7: Lot 7, Sec 8: Lot 1, E½NE¼, S½, Sec 9: Lots 1,2,3,6, 9,10,12, NE¼NW¼, NW¼NE¼, Sec 10: Lots 1, 2, 3, 6, 9, 10,12, NE¼NW¼, NW¼NE¼, Sec 11: Lots 1,2,3,9,10,12, NE¼NW¼, N½NE¼, Sec 17: E½NE¼, NW¼NE¼
M	10709	1422	159	6/1-8/31	Yes	T40N R25E: Sec 28: Lots 3,4,8,9,10, W½SW¼, Sec 29: Lot 1, SE¼NE¼, E½SE¼, Sec 32: E½E½, Sec 33: All, Sec 34: W½W½, E½SW¼, W½SE¼
C	10710	156	37	6/1-9/30	Yes	T40N R25E: Sec 20: SE¼SE¼, Sec 21: SW¼SW¼, Sec 27: SW¼SW¼, Sec 28: LOTS 1,2,5,11
M	10711	1549	175	5/20-7/1 10/15-11/15	Yes	T39N R25E: Sec 12: L.3, S½NW¼, SW¼, W½SE¼, NW¼NW¼,W½SESE,W½NENW, Sec 13: L.5-8, W½SW¼,W½NE¼SW¼,N½NW¼NE¼,SW¼NW¼NE¼, Sec 14: L.1-8, N½S½, S½SE¼, SE¼SW¼, E½SW¼SW¼, N½NW¼SW¼SW¼, Sec 23: N½NE¼NE¼, NW¼NE¼, E½NW¼,N½SW¼NE¼,SW¼SW¼NE¼, T39N R26E: Sec 7: Lot 5, Sec 18: Lot 2
C	10830	40	7	5/1-9/30	Yes	T34N R22E: Sec 28: SE¼NE¼
C	10842	42	8	3/1-10/31	No	T33N R21E: Sec 10: NW¼NW¼
C	10849	118	20	6/1-9/30	Yes	T31N R22E: Sec 21: SE¼NW¼, SW¼SE¼, NE¼SW¼
C	10852	76	16	6/1-7/31	Yes	T31N R22E: Sec 7: NW¼SE¼, SW¼NE¼
C	10885	187	33	5/1-7/31	Yes	T33N R22E: Sec 35: SE¼SW¼, S½NE¼, E½SE¼
C	10888	138	20	5/1-9/30	Yes	T28N R22E: Sec 1: SW¼SE¼, Sec 12: W½NE¼
C	10890	898	142	4/15-6/1	Yes	T38N R25E: Sec 1: Lot 9, SE¼SE¼, Sec 2 :E½SE¼ (Lots 7,8), Sec 12: NE¼, T38N R26E; Sec 6: Lot 7, Sec 7: Lots 1-4, E½SW¼, SW¼SE¼, Sec 17: Lot 2, SW¼SW¼, NW¼SW¼, SW¼NW¼, Sec 20: W½NW¼, NW¼SW¼, T39N R25E: Sec 35: Lots 5,6
C	10906	372	26	5/1-10/31	Yes	T28N R23E: Sec 4: S1/2NW1/4, portion of SW1/4 north of ridge, Sec 5: Lot1, portions of Lots 2,3,7 and SENE north of ridge, T29N R23E: Sec 33: SE¼SE¼, Sec 34: N½SW¼, SW¼SW¼
C	10910	66	8	5/15-9/14	Yes	T33N R21E: Sec 13: NW¼SE¼NE¼, NW¼SE¼
C	10914	158	25	5/15-10/15	Yes	T30N R22E: Sec 12: SW1/4NE1/4, SW1/4SE1/4, Sec 13: Lots 2, 5, NW1/4NE1/4
C	10915	37	6	4/1-11/30	Yes	T34N R21E: Sec 9: SW¼NW¼

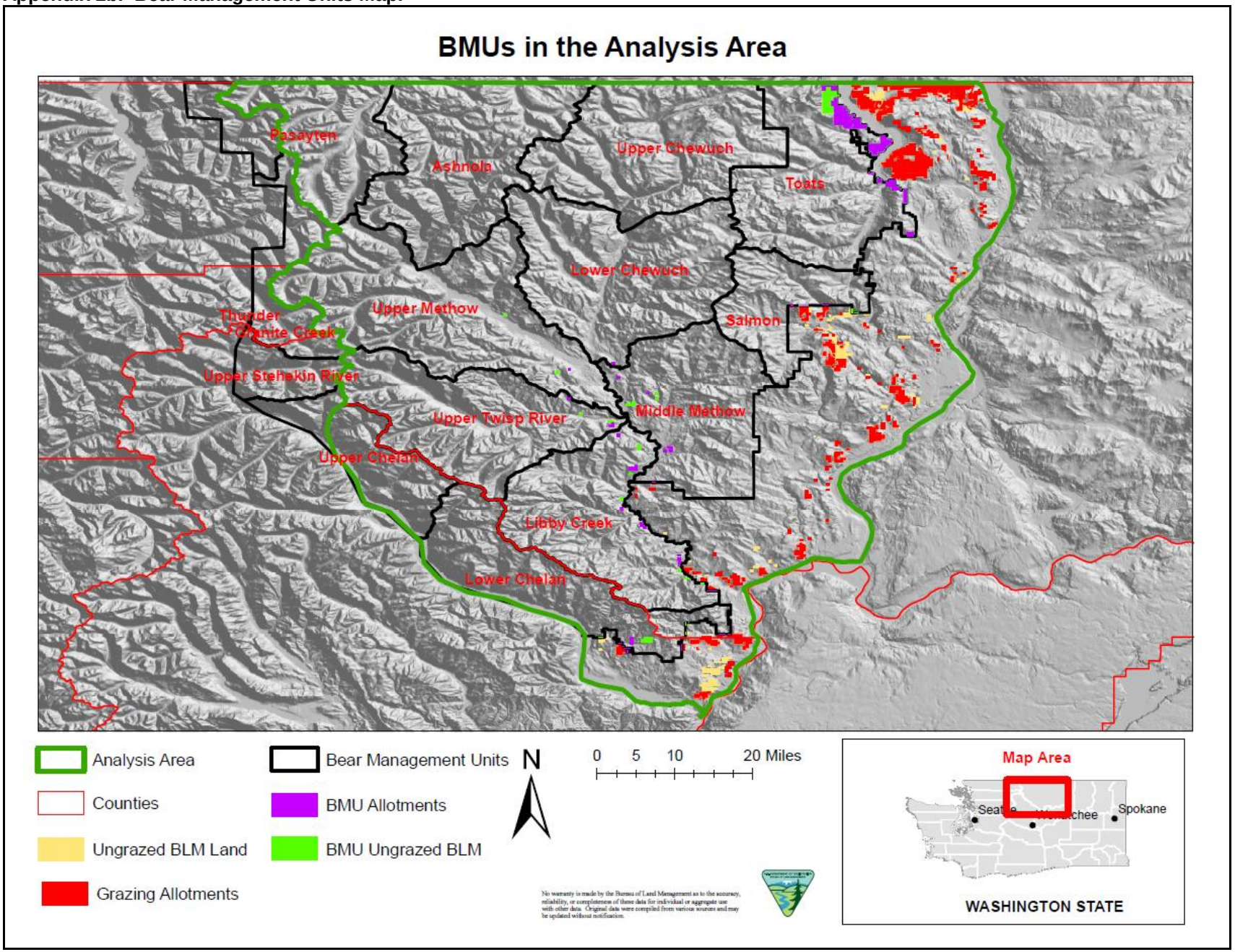
Appendix 1c. Allotments within Lynx Analysis Units.

Management Category	Allotment number	BLM Acres	Authorized AUMs	Authorized Grazing Period	Currently grazed	Legal Description
C	00723	518	84	6/1 -10/31	Yes	T35N R24E: Sec 1: LOTS 1,2,6, SW¼NE¼, Sec 2: LOTS 1,2,3,4,5,6,7,10, SW¼NW¼, SW¼SE¼ T36N R25E: Sec 31: LOT 6 T35N R25E: Sec 6: LOTS 4,5 (EXCLUDING MINING CLAIMS)
C	00726	493	104	5/15–10/14	Yes	T36N R24E: Sec 34: NE¼NW¼, Sec 35: LOTS1-6,W½NE¼,E½NW¼,NW¼NW¼,NE¼SW¼,NW¼SE¼
C	10703	1432	240	6/1-10/15	Yes	T40N R25E: Sec 17: LOT 1, SW¼NW¼, Sec 18: E½SE¼, Sec 20: W½E½, W½, Sec 29: W½E½, W½, Sec 32: W½NE¼, NW¼
I	10704	4597	479	4/1-10/15	Yes	T40N R25E: Sec 1: Lot 2, E½SE¼, Sec 5: Lots7,8,9,10 Sec 6: Lots 1-7, E½SE¼, S½NE¼, SE¼NW¼, Sec 20: SE¼NE¼, NE¼SE¼, T40N R26E: Sec 2: Lots 5,6,9, SE¼, SE¼SW¼, Sec 3: Lots 7,8,9, SW¼, N½SE¼, SW¼SE¼, Sec 4: Lots 6,8,9,10,11, N½S½, S½SE¼, Sec 5: Lots 8, 9, 10, 11,12, N½S½, Sec 6: Lots 5,6,7, SE¼, E½SW¼, Sec 7: Lot 7, Sec 8: Lot 1, E½NE¼, S½, Sec 9: Lots 1,2,3,6, 9,10,12, NE¼NW¼, NW¼NE¼, Sec 10: Lots 1, 2, 3, 6, 9, 10,12, NE¼NW¼, NW¼NE¼, Sec 11: Lots 1,2,3,9,10,12, NE¼NW¼, N½NE¼, Sec 17: E½NE¼, NW¼NE¼
M	10709	1422	159	6/1-8/31	Yes	T40N R25E: Sec 28: Lots 3,4,8,9,10, W½SW¼, Sec 29: Lot 1, SE¼NE¼, E½SE¼, Sec 32: E½E½, Sec 33: All, Sec 34: W½W½, E½SW¼, W½SE¼

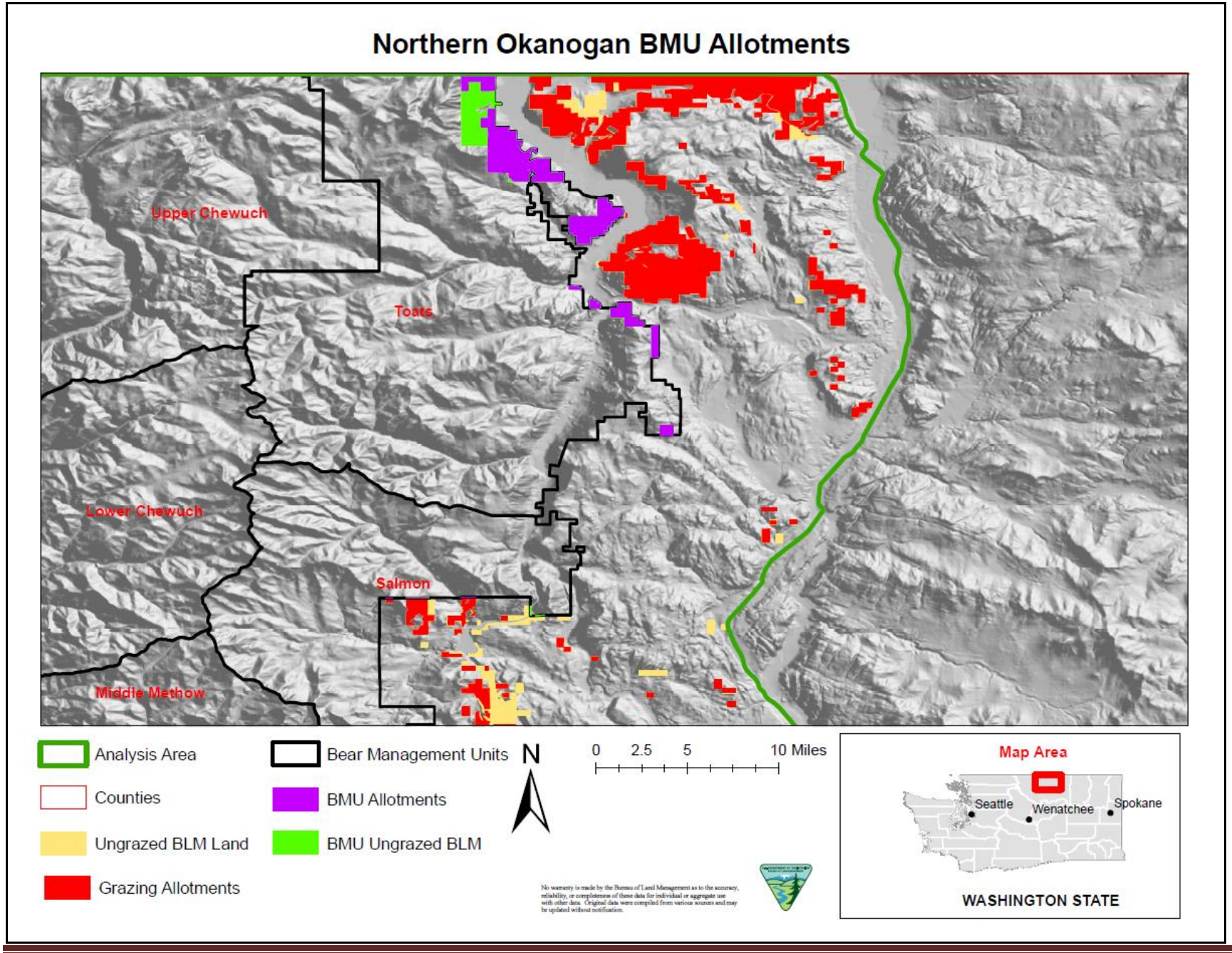
Appendix 2a. Assessment Area Map.



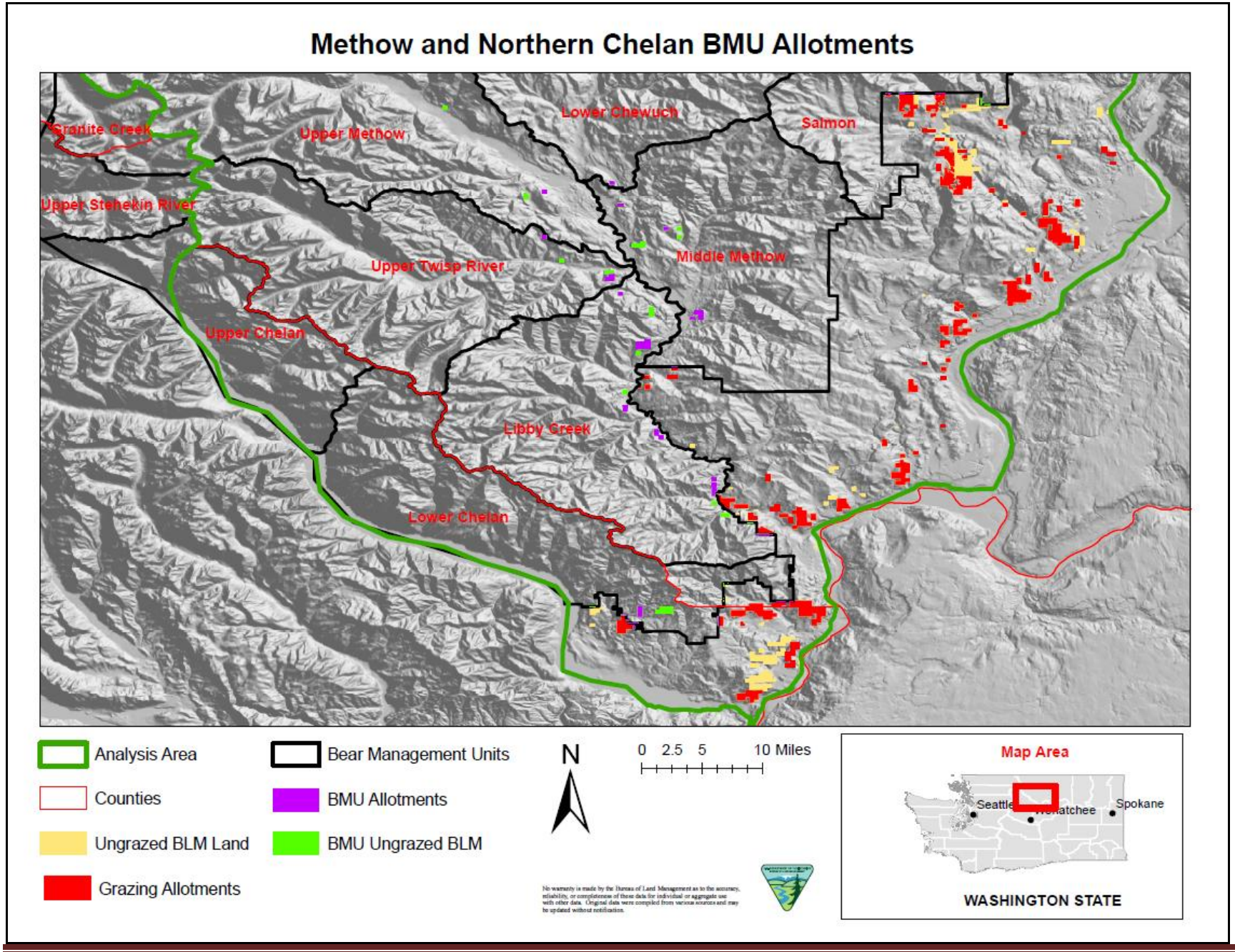
Appendix 2b. Bear Management Units Map.



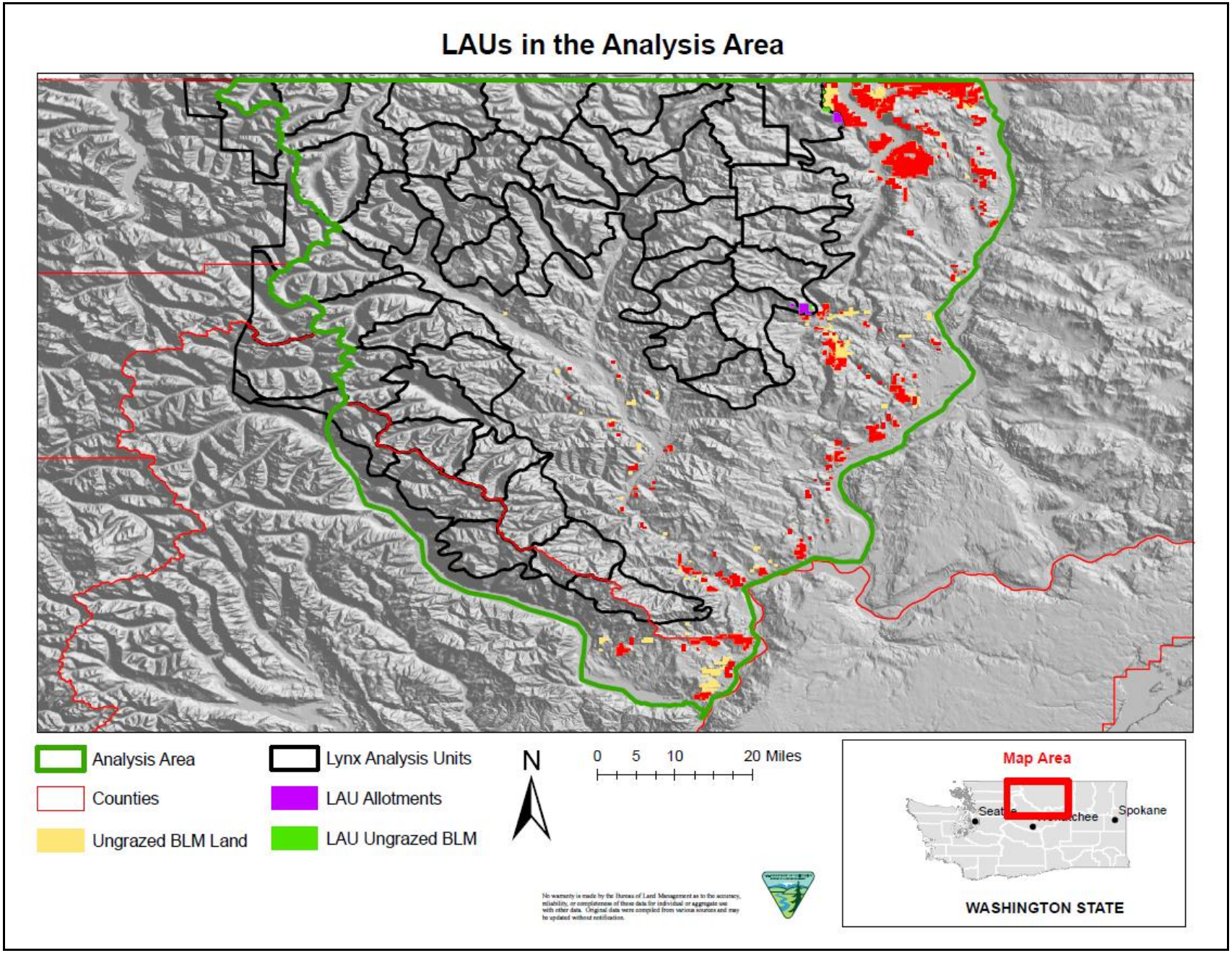
Appendix 2c. Northern Okanogan County Bear Management Units Map.



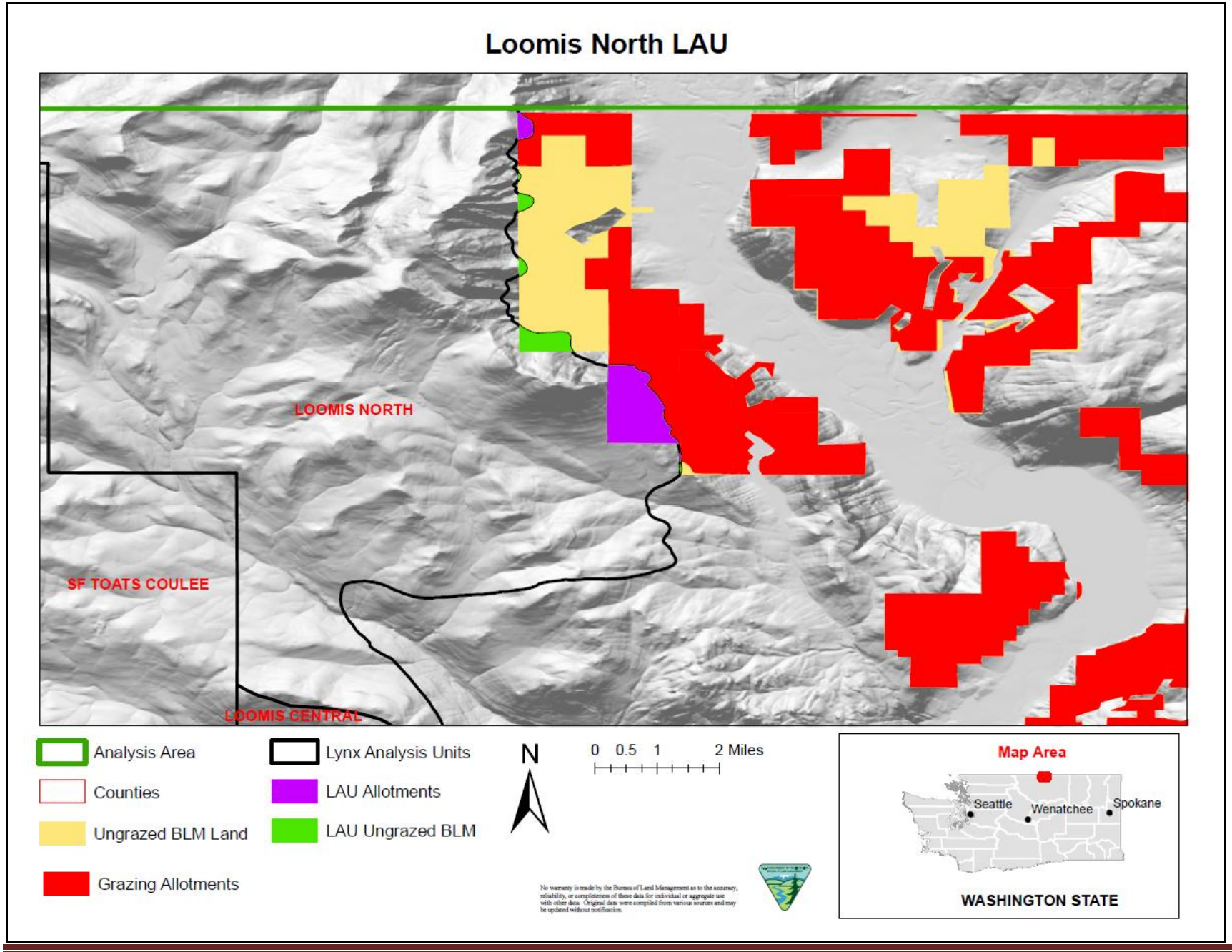
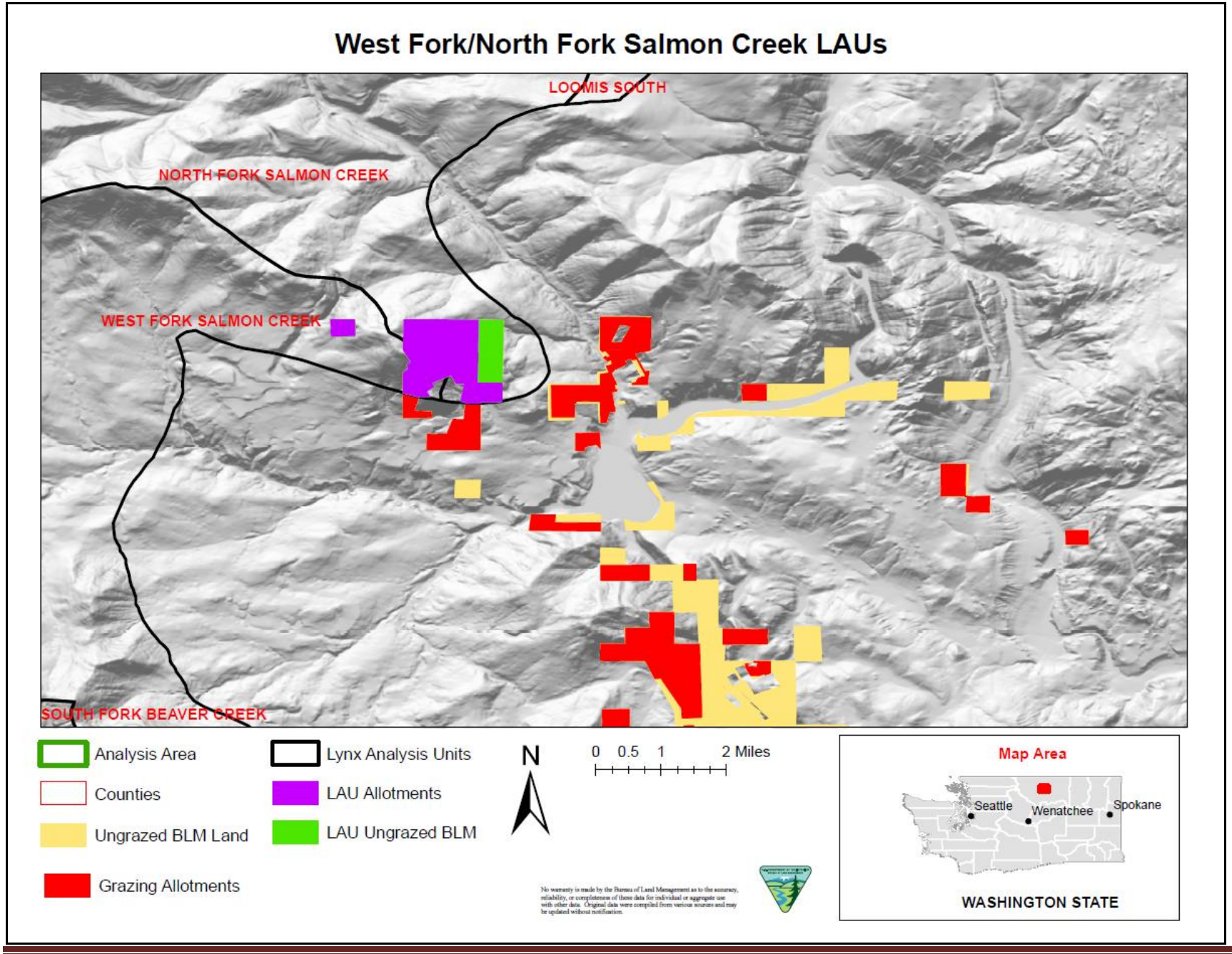
Appendix 2d. Methow Valley Bear Management Units Map.



Appendix 2e. Lynx Analysis Units Map.



Appendix 2f. Loomis North Lynx Analysis Unit Map.



Appendix 2g. West and North Fork Salmon Lynx Analysis Units Map