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Region

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National Forest

Methow Valley, Chelan, and  
Tonasket Ranger Districts

Chelan, Okanogan,  
Whatcom, and Skagit  
Counties, Washington



**October 2016**

# Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance

## Draft Supplemental Environmental Impact Statement



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**Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance  
Draft Supplemental Environmental Impact Statement  
Okanogan, Chelan, Skagit, and Whatcom Counties, Washington**

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**Abstract:** The USDA Forest Service is proposing to issue 10-year term special use permits to pack and saddle stock outfitter-guides. The permits would be issued to the existing holders who are in good standing at the time of the decision, or replacements who meet term permit requirements. The project area is located in Okanogan, Skagit, Whatcom, and Chelan Counties, Washington, on the Tonasket, Methow Valley, and Chelan Ranger Districts. Four alternatives, including a No Action alternative, are analyzed in this FEIS. Alternative 1 is the No Action alternative. No pack and saddle stock outfitter-guide permits would be issued under this alternative. Alternative 2 would issue 10-year special use permits to pack and saddle stock outfitter-guides, with a total of 4,620 service days. This alternative would amend the Okanogan and Wenatchee Forest Plans to prohibit pack and saddle stock outfitter-guides from increasing the amount of barren core in any established campsite; and in campsites where the existing amount of barren core exceeds 5,250 square feet, outfitter-guides shall not use more than 5,250 square feet, and use the same area on successive visits. A second amendment would allow pack and saddle stock outfitter-guides to use existing campsites within 200 feet of meadows, lakes, streams, and key interest areas. Alternative 3 would also issue 10-year term special use permits to pack and saddle stock outfitter-guides, with a total of 2,660 service days. This alternative would amend the forest plans to prohibit the outfitter-guides from increasing the amount of barren core in established campsites; and in campsites where the existing amount of barren core exceeds 2,800 square feet, outfitter-guides shall not use more than 2,800 square feet, and use the same area on successive visits. A second amendment would also limit the party size for outfitter groups to 12 (any combination of people and stock), and a third would prohibit pack and saddle stock outfitter-guides from using campsites within 200 feet of wetlands, lakes, streams, or key interest areas, but would allow use of camps within 200 feet of dry meadows. Alternative 4 would issue 10-year special use permits to pack and saddle stock outfitter-guides, with a total of 6,082 service days. This alternative would amend the Okanogan and Wenatchee Forest Plans to allow pack and saddle stock outfitter-guide to use existing barren core in established campsites, but prohibit them from creating additional barren core. A second amendment would allow pack and saddle stock outfitter-guides to use existing campsites within 200 feet of meadows, lakes, streams, and key interest areas.

This Draft Supplemental EIS incorporates new information based on a revised Needs Assessment and extent necessary determination for commercial services in the Pasayten and Lake Chelan-Sawtooth Wilderness, and information about other changed conditions. It is to be used in conjunction with the 2013 FEIS.

**Website address for electronic copy of the DSEIS and Summary, and FEIS and Summary:**

[www.fs.usda.gov/project/?project=3752](http://www.fs.usda.gov/project/?project=3752)

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# **Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Draft Supplemental Environmental Impact Statement Summary, October 2016**

*This replaces the FEIS Summary, starting on FEIS page Summary-1.*

## **Introduction**

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Pack and saddle stock outfitters have been operating throughout the analysis area for the past 20 to 50 years. Some operated under 5-year term permits, while other operated under short-term permits (lasting less than one year). All the 5-year permits expired around 10 years ago, and since that time, all the businesses have been issued short-term permits annually to allow them to continue operations while the environmental analysis of the proposal to issue 10-year permits was completed.

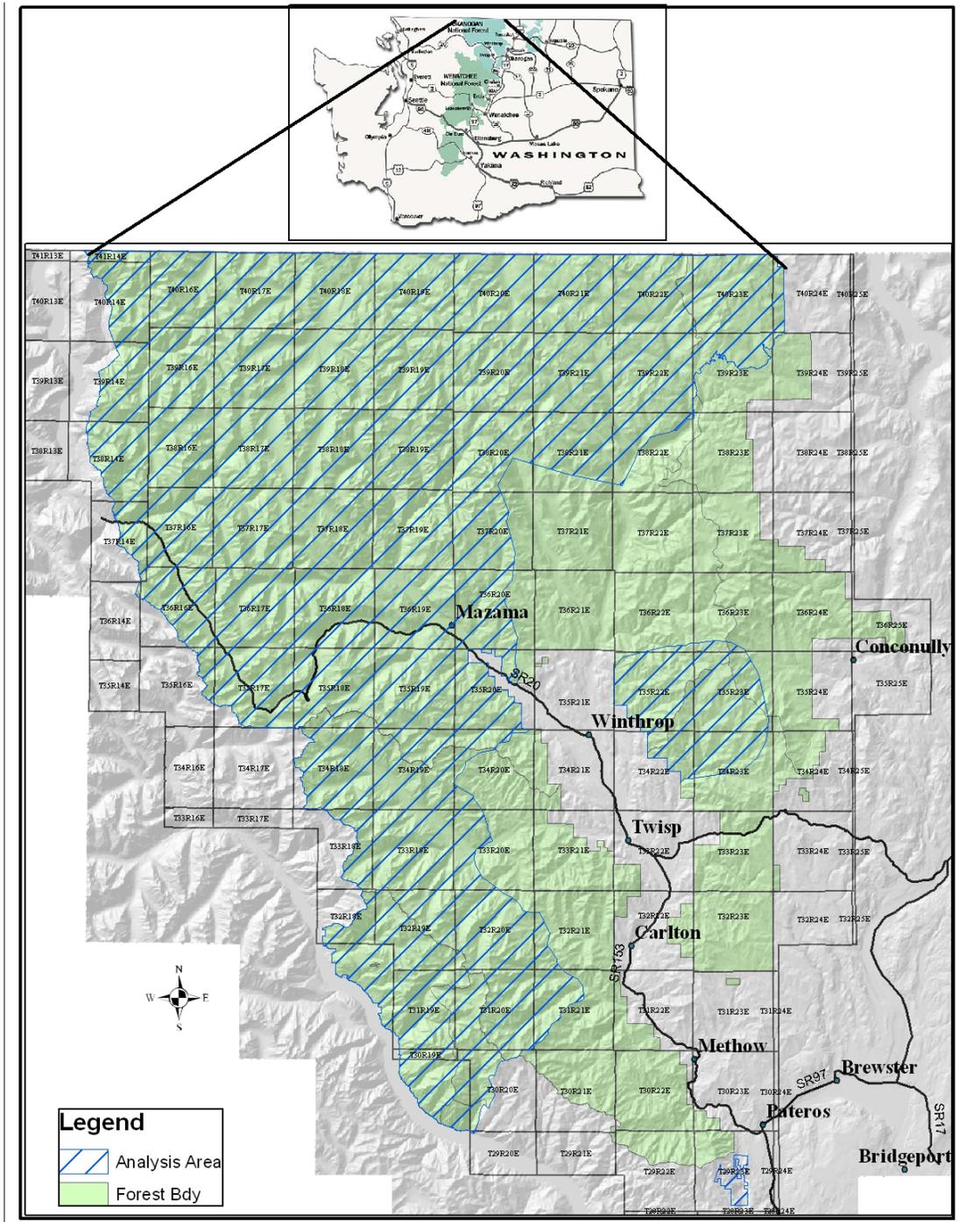
The 2013 Pack and Saddle Stock Outfitter-Guide Special Use Permit EIS displayed the analysis of issuing 10-year term pack and saddle stock outfitter-guide special use permits to these businesses or to other suitable businesses if those listed stop operations. The current combined number of actual service days for all existing short-term permits represents around 3% of the overall outfitted and non-outfitted visitor days (defined as one person for one day) across the analysis area, and approximately 15% of all pack and saddle stock use. The analysis area is shown on the Vicinity Map, page Summary-2 and the Analysis Area Map, page Summary-3.

On March 25, 2013, the Forest Supervisor for the Okanogan-Wenatchee National Forest signed a Record of Decision based on the Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement (FEIS), located on the Chelan, Methow Valley and Tonasket Ranger Districts. The Notice of Availability for the FEIS was published in the Federal Register on March 8, 2013. The project was appealed by both the outfitters and Wilderness Watch. The Forest Supervisor withdrew the Record of Decision in June 2013 after review of the analysis record found additional analysis was warranted.

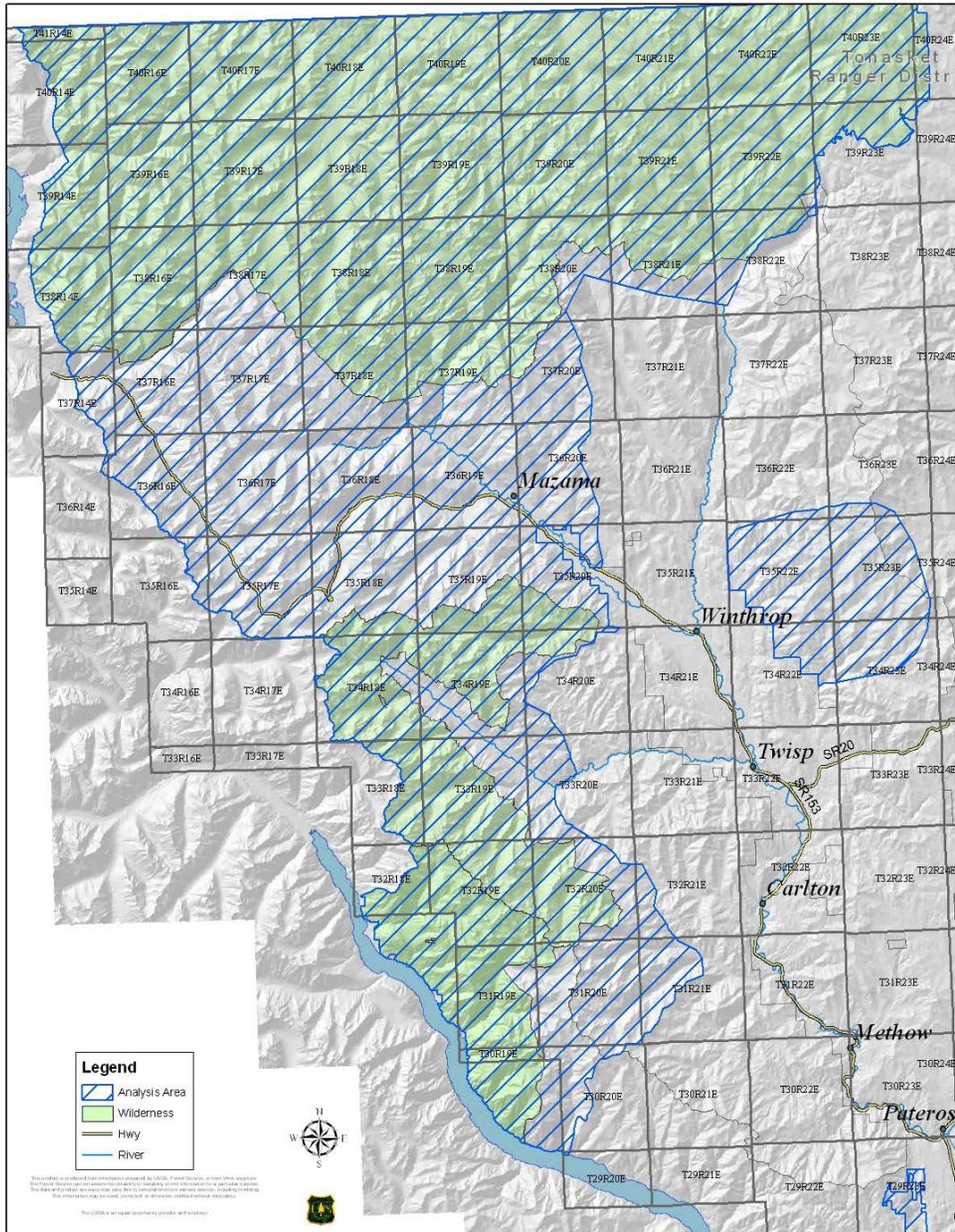
This Draft Supplemental Environmental Impact Statement (DSEIS), incorporates new information based on a revised Needs Assessment completed in 2016, which resulted in new calculations for the extent necessary for commercial service in the Pasayten and Lake Chelan Sawtooth Wilderness areas. The most current version is titled "Determination of the Need and Extent Necessary for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and

Lake Chelan-Sawtooth Wilderness” (2016) and is hereafter referred to as the “2016 Needs Assessment” in this document. The new calculations directly affected the service days for stock outfitter guides in Alternative 4, but did not change the other alternatives. This DSEIS also corrects and clarifies other parts of the FEIS, such as some cumulative effects analyses.

**Map S-1. Pack and Saddle Stock Outfitter Guide Vicinity Map**



**Map S-2 Pack and Saddle Stock Outfitter-Guide Permit Analysis Area**



## **Purpose and Need for the Proposed Action**

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The revision of the Needs Assessment and recalculation of the extent necessary for the pack and saddle stock outfitter guides within wilderness changed the portion of the Purpose and Need included in the FEIS (FEIS page 1-18) pertaining to protecting wilderness character. A Needs Assessment was completed for the analysis area in 1996 that identified a high need for pack and saddle stock outfitter guides. These updated the objectives (purpose and need) of the project. The other components of the FEIS Purpose and Need were not changed or updated.

The purpose and need is the objectives of the project. It provides the underlying reasons for the Forest Service in developing the Proposed Action. The purpose and need for action of this analysis is five-fold:

- respond to special use permit applications from current pack and saddle stock outfitter-guides,
- meet the high public need for pack and saddle stock outfitter-guides
- protect wilderness character in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas while providing necessary pack and saddle stock outfitter-guide commercial services to the extent necessary,
- reconcile inconsistencies between forest plan standards and guidelines for barren core (see Glossary) in wilderness with party size limitations (currently 12 people and 18 head of stock), and the non-degradation policy and the prohibition on camps within 200 feet of meadows, streams, lakes, and special interest areas,
- provide for enough pack and saddle stock outfitter guide days outside of wilderness to help maintain business viability, when considered with service days inside wilderness to meet the extent necessary.

### **Protect Wilderness Character While Allowing Minimum Commercial Services**

FSH 2709.11 also includes the requirement to address the need for and role of outfitters in the Forest Plan. The Wilderness Act prohibits commercial services except “to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.”

The Forest Service completed the analysis for both the need and extent necessary, and documented the findings in a paper titled “Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness”, April 2012 (USDA Forest Service, 2012). This paper is referred to as the “2012 Needs Assessment” in the FEIS.

The 2012 document calculated the extent necessary as a range of service days based on including an anticipated increase in demand due to the demographic shifts in the aging population. This approach was discarded, and the document was revised again following the withdrawal of the 2013 Pack and Saddle Stock Outfitter-Guide Permit Issuance Record of Decision. The most current version is titled Determination of Need and Extent Necessary for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth, 2016, referred to as the “2016 Needs Assessment” in this document.

The 2016 Needs Assessment found there is a need for pack and saddle stock outfitter guides in wilderness. The criteria used for the evaluation included:

- Is the activity allowed in wilderness?
- Does the activity educate clients about the wilderness resource?
- Does the activity promote solitude, or primitive and unconfined recreation?
- Does the activity provide a public purpose, and does the level of skill, knowledge, equipment, and safety required for the activity support the need for commercial services?

Pack and saddle stock use is an appropriate mode of transportation in wilderness, since it does not include any mechanized or motorized equipment. Outfitter-guides teach their clients about wilderness directly in conversations about wilderness, and indirectly through demonstrating how to travel and stay in the wilderness without modern conveniences. Pack and saddle stock outfitter-guides trips promote solitude by taking clients to remote locations within wilderness, and letting them experience primitive and unconfined recreation. The outfitters also serve a public purpose by offering trips for recreation, scenic viewing, and historic use to the public. Their services are needed by an element of the public due to the fact that many people are not skilled in stock handling, do not own stock and equipment, do not have the knowledge of stock handling techniques that minimize resource damage, and would be endangering their lives or the lives of others because of the hazards associated with stock.

The minimum amount of commercial services needed to provide for recreation is not a number that can be precisely calculated. Rather, several factors are considered to establish a range of service days that would provide the minimum extent of commercial service. The factors include the:

- need for commercial services,
- historic number of service days,
- proportional relationship between outfitter and non-outfitted use levels,
- current resource conditions and impacts from recreation use on wilderness character,
- wilderness capacity, and
- anticipated changes in overall number of recreationists and need for outfitter guides.

The 2016 Needs Assessment found a need for pack and saddle stock outfitter guides in wilderness. Considering all the factors, the minimum extent necessary for pack and saddle stock commercial services in the Pasayten is 1,330 priority use service days, with a pool of 310, for a total of 1,640 service days. In the Lake Chelan-Sawtooth, minimum extent necessary is for 530 priority use service days, with a pool of 207, for a total of 737 service days.

## **Proposed Action**

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The proposed action included in the FEIS (FEIS page 1-21) was not changed.

## **Public Involvement**

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In the late 1990s, the Methow Valley Ranger District started receiving comments and concerns from a few individuals and groups about pack and saddle stock outfitter-guide activities in the

Pasayten Wilderness. Field observations from some people indicated that recreation activities in general, and outfitter-guide activities in particular, did not meet Forest Plan standards and guidelines. In response to the concerns, the District developed a “Wilderness Recreation, Stock, and Outfitter Use Strategy and Action Plan”, signed by the Forest Supervisor on April 24, 2000 (USDA Forest Service 2000e). This plan, and subsequent accomplishment reports and action plans were mailed to everyone who expressed concern or interest in the topic, inviting further comments on the situation.

A scoping letter requesting comments on the proposed action to issue pack and saddle stock outfitter-guide special use permits was mailed to persons and organizations on the District mailing list on November 15, 2000. The proposed action included a non-significant amendment to standard and guideline MA15B-22B to allow outfitter campsites in wilderness to exceed 400 square feet of vegetation loss. A total of 110 letters were received in response to the Wilderness Action Plan and the scoping letter.

Following publication of a notice of intent to file an environmental impact statement in the Federal Register on June 22, 2005, an updated scoping letter was mailed on June 23, 2005 to those who provided input on the Wilderness Action Plan or responded to the November 15, 2000 scoping letter, in addition to those on the Tonasket, Chelan, and Methow Valley Ranger District mailing lists. The proposal had changed to increase the number of service days, and to eliminate the Forest Plan amendment. Eleven letters were received in response to the scoping letter and Notice of Intent.

The proposed action was altered when the revised Forest Service Handbook 2709.11 was published, giving specific direction on calculating service days. An updated Notice of Intent was published in the Federal Register on July 21, 2010, correcting the estimated publication date and number of service days, and including specifics about the proposed forest plan amendment. A letter was also sent on July 30, 2010 to those on the project mailing list updating the DEIS release date, and explaining the proposed forest plan amendment.

The DEIS was distributed to approximately 200 people and organizations on August 31, 2010. The original 45-day comment period was extended to 60 days to accommodate requests for additional review time. Two hundred and fifty-eight comment letters were received. All comments were addressed in the FEIS, and additional analysis was added where needed. Alternative 4 was added to respond to concerns about the barren core limitations in Alternative 2, and to a concern that the number of service days in Alternative 2 would not be enough for the pack and saddle stock outfitter-guides if the demand for their services rebounded to levels seen ten years ago. The Forest Service also determined that an amendment of the standard and guideline prohibiting camping within 200 feet of meadows, lakes, streams, would be needed to implement the proposed action. The Notice of Availability for the FEIS was published on March 8, 2013 and the Record of Decision was signed on March 25, 2016. Two appeals to the Record of Decision were filed. The Forest Service withdrew the Record of Decision in June 2013 after review of the analysis record found some additional analysis was needed.

The Issue Tracking Form in the analysis file summarizes and responds to each comment. All letters are included in the analysis file.

Government-to-government letters were mailed to the Yakama Indian Nation and the Confederated Tribes of the Colville Reservation in June, 2005, requesting consultation on the proposal. Neither tribe identified concerns about the proposal. Consultation with the US Fish and Wildlife Service and the National Marine Fisheries Service was completed, and both agencies issued concurrence letters. Consultation with the State Historic Preservation Office was not required because the proposed action and alternatives would be excluded from case-by-case review by the Programmatic Agreement.

The Notice of Availability for the FEIS was published on March 8, 2013 and the Record of Decision was signed on March 25, 2016. Two appeals to the Record of Decision were filed. The Forest Supervisor withdrew the Record of Decision in June 2013 after review of the analysis record found some additional analysis was needed.

## Issues

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The issues used in the analysis, as discussed beginning on FEIS page 1-25, were not changed in this DSEIS, however the following description of how the significant issues were used was added.

The significant issues were used to develop the alternatives to the proposed action. Alternative 3 addressed Significant Issues 1-4 below by reducing party size and camp sizes from the Proposed Action and maintaining current the Forest Plan standard for setbacks from water and wet meadows (it would permit camping within 200 feet of dry meadows); Alternative 4 addressed Significant Issues 1 and 5 by increasing camp sizes and service days from the Proposed Action and allowing outfitters to camp in existing campsites near water and meadows (see full alternative descriptions in Chapter 2, Alternatives Considered in Detail).

## Alternatives Considered in Detail

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The recalculated extent necessary determination from the 2016 Needs Assessment was used to modify FEIS Alternative 4 (found on FEIS page 2-15). No changes were made to Alternative 1 – No Action (found on FEIS page 2-8). The objectives for Alternative 2 (found on FEIS page 2-9) and Alternative 3 (found on FEIS page 2-12) were updated to clarify how the service days were distributed among the areas within the permit. Alternative 2 was retained from the FEIS even though it now exceeds the extent necessary for commercial services identified in the 2016 Needs Assessment for comparison purposes and to provide continuity between the FEIS and this DSEIS.

### ALTERNATIVE 2

#### Objectives

Alternative 2 would:

- Provide pack and saddle stock outfitter-guide services in the analysis area, which includes the Pasayten and Lake Chelan-Sawtooth Wilderness Areas, North Cascades, Sawtooth

Backcountry, Middle Methow, Bear/Ramsey/Volstead, and Alta Lake analysis area sub-units on the Methow Valley, Tonasket, and Chelan Ranger Districts.

- Resolve inconsistencies between Forest Plan standards and guidelines by amending the Okanogan and Wenatchee Forest Plans to allow larger wilderness campsite barren cores to accommodate the established party size (12 people and 18 head of stock), and by allowing outfitter-guides to use existing camps within 200 feet of meadows, streams, lakes, and key interest areas while managing the Wilderness areas to maintain wilderness character.
- Authorize the highest amount of actual use service days of the existing pack and saddle stock outfitter-guides over the past five years increased by 25% to allow for business growth (with adjustments to include prior years where extraordinary circumstances, like fires, affected outfitter guide businesses, here after referred to as “high 5 plus 25%). This follows Forest Service Handbook 2709.11, Chapter 40 direction for determining service days (US Forest Service, 2008a).
- Limit the number of service days within wilderness to the extent necessary determination from the 2012 Needs Assessment. This determination was based on actual use, and projected changes in need, not on business stability or other economic factors. Refer to 2012 Needs Assessment for details.
- Increase available service days outside wilderness, as necessary to provide the high 5 plus 25% service day level for each individual permit (total of wilderness and non-wilderness days).

No other changes were made to Alternative 2.

## **ALTERNATIVE 3**

### **Objectives**

Alternative 3 would:

- Provide pack and saddle stock outfitter-guide services in the analysis area, which includes the Pasayten and Lake Chelan-Sawtooth Wilderness Areas, North Cascades, Sawtooth Backcountry, Middle Methow, Bear/Ramsey/Volstead, and Alta Lake analysis area sub-units on the Methow Valley, Tonasket, and Chelan Ranger Districts.
- Reduce the number of service days to respond to concerns over botany, wetlands, aquatic habitat, wilderness character, and terrestrial wildlife.
- Reduce the number of service days to address concerns about water quality, wilderness, riparian habitat, wildlife, wetlands, and native plant species.
- Resolve inconsistencies between Forest Plan standards and guidelines by amending the Okanogan and Wenatchee Forest Plans to reduce maximum party size to 12 heartbeats, allow large enough campsite barren cores to accommodate the reduced party size, and by allowing outfitter-guides to use existing camps within 200 feet of dry meadows, but prohibiting camping within 200 feet of wetlands, streams, lakes, and key interest areas.
- Authorize the average number of used service days over the past five years, plus 25% for business growth (with adjustments to include prior years where extraordinary circumstances, like fires, affected outfitter-guide business).

No other changes were made to Alternative 3.

## ALTERNATIVE 4

FEIS Alternative 4 was modified to incorporate the recalculated extent necessary displayed in the 2016 Needs Assessment, which reduced the number of service days in the Pasayten and Lake Chelan-Sawtooth wildernesses. The objectives and description for the alternative were updated to reflect these changes.

### Objectives

Alternative 4 would:

- Provide pack and saddle stock outfitter-guide services in the analysis area, which includes the Pasayten and Lake Chelan-Sawtooth wilderness areas, North Cascades, Sawtooth Backcountry, Middle Methow, Bear/Ramsey/Volstead, and Alta Lake analysis area sub-units on the Methow Valley, Tonasket, and Chelan Ranger Districts.
- Resolve inconsistencies between Forest Plan standards and guidelines by amending the Okanogan and Wenatchee Forest Plans to allow large enough campsite barren cores to accommodate the established party size (12 people and 18 head of stock), and by allowing outfitter-guides to use existing camps within 200 feet of meadows, streams, lakes, and key interest areas, while managing the Wilderness Areas to maintain wilderness character.
- Decrease service days in the Pasayten Wilderness, and increase days in the Lake Chelan-Sawtooth Wilderness (compared to current levels) to meet the extent necessary determination in the 2016 Needs Assessment. Limit wilderness use service days to those identified as necessary in the 2016 Needs Assessment. This determination was based on actual use, and projected changes in need, not on business stability or other economic factors. Refer to 2016 Needs Assessment for details.
- Establish the number of authorized service days that matches the highest amount used by the outfitters during 1999 to 2009, plus 25%, except within wilderness, where the number of service days would match the extent necessary determination from the 2016 Needs Assessment.
- Assign service days to individual permits to equal the high 5 plus 25% to meet the Forest Service Handbook 2709.11 direction, placing the remaining days in a pool to cover potential additional business growth opportunities.
- Increase available service days outside wilderness, as necessary to provide the high 10 plus 25% service day total for all available pack and saddle stock outfitter guides (total of wilderness and non-wilderness days).

### Description

This alternative would issue 10-year term special use permits for pack and saddle stock outfitter-guides on the Methow, Chelan, and Tonasket Ranger Districts. Assigned sites (camps and base camps) would allow closer monitoring and modification of operations to reduce the size of the barren core and address other resource concerns. Assigned camp sites would be used for most full-service camps. Appendix A includes a list of authorized campsites. A total of 6,082 annual service days (total inside plus outside wilderness) would be divided among the outfitters, or replacements who meet term permit requirements, and a pool of priority use service days. The outfitters would have a total of 390 animal unit months for authorized grazing.

The service days would be distributed among the different portions of the analysis area, with each business receiving approximately the same proportion of service days in each area it had in the past. **Figure S-1** shows the distribution of service days in the different areas. When the 10-year permits are issued, the total number of service days allocated to each outfitter would be determined by the highest actual use in the past 5 years, plus 25%. The total number of priority use service days assigned to all permit holders within wilderness would not exceed 1,330 days in the Pasayten or 660 in the Lake Chelan-Sawtooth to be consistent with the 2016 Needs Assessment. Any unallocated service days identified in as part of the 2016 Needs Assessment that were beyond the highest 5 years plus 25% would be held in a pool for outfitters to access on a year-to-year basis if and when demand exceeds individually allocated service days. The number of allocated priority use service days would be adjusted at the 5-year mark in the 10-year permits using the same technique, without exceeding 6,082.

**Figure S-1. Alternative 4: Number of Service Days by Area and Total (*Assigned and Pool*)**

Area	Total Service Days
Pasayten Wilderness (Assigned Service Days)	1,330 <sup>1</sup>
Pasayten Wilderness (Priority Use Pool)	310
Lake Chelan-Sawtooth Wilderness (Assigned Service Days)	660 <sup>1</sup>
Lake Chelan-Sawtooth Wilderness (Priority Use Pool)	77
North Cascades	200
Sawtooth Backcountry	805
Bear/Ramsey	100
North Cascades (Day Rides)	1,150
Alta Lake (Day Rides)	1,450
Middle Methow	0
Total	6,082

## ENVIRONMENTAL CONSEQUENCES

### Comparison of Alternatives

**Figure S-2** provides a side-by-side description of each alternative and a summary of how each alternative responds to the Purpose and Need and each Significant Issue. The modification of Alternative 4 changed the projected environmental effects for some resource areas, such as wilderness. There were minor changes to some of the other resources. Changed condition information was also incorporated by this DSEIS, including changes in gray wolf populations and grazing allotment status. Refer to FEIS Chapter 1, beginning on FEIS page 1-25 for background on the issues, and Chapter 3 of this DSEIS (beginning on page 38) for complete descriptions of updates made to corresponding sections in the FEIS. Much of the information in Figure S-2 was not changed from the FEIS version, found beginning on FEIS page 2-30. The entire figure is included here for ease of comparison.

<sup>1</sup> Total service days in wilderness are equal to the extent necessary for assigned priority use service days and priority use pool days, determined in the 2016 Needs Assessment.

**Figure S-2: Comparison of Alternatives**

	<b>Unit of Measure</b>	<b>Current</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
Total Number of Service Days	Service Days	4,460	0	4,620	2,660	6,082
Total Number of Visitor Days (outfitted and private)	Visitor Days	168,300	163,840	168,460	166,500	169,922
Percent of Visitor Days Outfitted by Pack and Saddle Stock Outfitter-Guides	Percent	3%	0%	3%	2%	4%
Percent Change in Total Number of Visitor Days Compared to Current	Percent		-3%	+0.1%	-1%	+1%
Total Number of Pack and Saddle Stock Visitor Days	Visitor Days	28,880	24,420	29,040	27,080	30,502
Percent of Pack and Saddle Stock Visitor Days Outfitted	Percent	15%	0%	16%	10%	20%
Percent Change in Total Pack and Saddle Stock Visitor Days Compared Current	Percent		-15%	+0.6%	-6%	+6%
Percent Change in Service Days Compared to Current	Service Days		-100%	+4%	-40%	+36%
Forest Plan Amendment to Party Size			No Amendment	No Amendment (12 people/18 head of stock)	12 Heartbeats	No Amendment (12 people/18 head of stock)

	<b>Unit of Measure</b>	<b>Current</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
Forest Plan Amendment to Camp Location			No Amendment	Outfitters allowed to use established campsites within 200 feet of meadows, lakes, streams, and special interest areas	Outfitters allowed to use established campsites within 200 feet of meadows. Prohibited from using campsites within 200 feet of wetlands, streams, lakes, and special interest areas.	Outfitters allowed to use established campsites within 200 feet of meadows, lakes, streams, and special interest areas
Forest Plan Amendment to Barren Core			No Amendment	Outfitters would be allowed to use up to 5,250 square feet of barren core. In camps with more, outfitters must reuse the same 5,250 square feet each time. Outfitters would be prohibited from creating additional barren core in any camp. Excess barren core would be restored.	Outfitters would be allowed to use up to 2,800 square feet of barren core. In camps with more, outfitters must reuse the same 2,800 square feet each time. Outfitters would be prohibited from creating additional barren core in any camp. Excess barren core would be restored..	Outfitters would be allowed to use existing barren core in established campsites, but would be prohibited from creating additional barren core.

Purpose and Need	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>1. Respond to Permit Applications for outfitter-guide permits.</b>	Qualitative discussion	Would deny applications, and no pack and saddle stock outfitter-guide permits would be issued.	10-year permits would be issued with service day calculations consistent with FSH 2709.11 – highest actual use in past 5 years plus 25%. Any excess days would be held in a priority use pool.	10-year permits would be issued, but with 40% fewer service days compared to the current allowed use.	10-year permits would be issued with service day calculations consistent with FSH 2709.11 – highest actual use in past 5 years plus 25%. Any excess days would be held in a priority use pool. Service days in wilderness would be capped at the extent necessary calculation.
<b>2. Protect wilderness character in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas while providing necessary pack and saddle stock outfitter-guide commercial services.</b>	Qualitative discussion	The wilderness character would be protected, but no pack and saddle stock commercial services would be provided for realizing recreational or other wilderness proposes.	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. The number of service days would exceed the extent necessary for realizing the recreational purposes in the Pasayten, and only partially meet the extent necessary in the Lake Chelan-Sawtooth.	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. Pack and saddle stock commercial services would be provided, but for less than the minimum amount necessary for realizing the recreational purposes of the areas.	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. extent necessary for commercial services to realize the recreational purposes of the wilderness areas would be provided.

Purpose and Need	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>3. Make standards and guidelines for campsite barren core in wilderness compatible with party size for pack and saddle stock outfitter-guides.</b>	Qualitative discussion	Forest Plans would not be amended, but there would be no pack and saddle stock outfitter-guide activities.	Forest Plan amendment would allow up to 5,250 square feet of barren core in existing camps that exceed that size. In established campsites, barren core would not be allowed to increase. This would be compatible with a party size of 12 and 18, although use patterns at campsites with over 5,250 square feet would be modified.	Forest Plan amendment would allow up to 2,800 square feet of barren core in existing camps that exceed that size. In established campsites, barren core would not be allowed to increase. This would be compatible with a party size of 12 heartbeats, although use patterns at campsites with over 2,800 square feet would be modified.	Forest Plan amendment would allow outfitter-guides to use existing barren core in established campsites, but not increase the amount of barren core. This would be fully compatible with a party size of 12 people and 18 stock.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>1. Current and proposed pack and saddle outfitted use does not comply with some Forest Plan wilderness standards and guidelines or with the Wilderness Act because the party size and amount of use perpetuates large camps and degrades the condition of the wilderness.</b>	See next page	See next page	See next page	See next page	See next page

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>a) Compliance with the Wilderness Act in terms of the qualities that make up wilderness character: untrammelled, undeveloped, , and opportunities for solitude or primitive and unconfined recreation.</p>	<p>Qualitative discussion</p>	<p>Pack and saddle stock outfitter-guides would not operate in wilderness. There would be a 32% reduction in the number of pack and saddle stock users in the Pasayten and a 6% reduction in the Lake Chelan-Sawtooth. The untrammelled and undeveloped qualities of wilderness character would be unaffected. There would be minor, localized beneficial impacts to the natural quality since fewer pack and saddle stock would be grazing, and potentially damaging stream banks at watering sites. Opportunities for solitude would also be beneficially impacted on a local, minor level with the reduced number of pack and saddle stock users.</p>	<p>There would be approximately 4% more pack and saddle stock users in the Pasayten, and no increase in the Lake Chelan-Sawtooth compared to current numbers. The untrammelled and undeveloped qualities would be unaffected. The natural quality of the Pasayten and Lake Chelan-Sawtooth wilderness areas would continue to receive minor, localized impacts. Opportunities for solitude would have minor, localized, negative impacts due to encounters and campsite size and location. Permitted outfitter-guide service days would exceed the extent necessary determination from the 2016 Needs Assessment.</p>	<p>There would be a 14% decrease in the number of pack and saddle stock users in the Pasayten, and a 3% decrease in the Lake Chelan-Sawtooth. The untrammelled and undeveloped qualities would be unaffected. The natural quality would continue to have minor, localized impacts from stock grazing, and damage to stream banks at watering spots. Opportunities for solitude would improve slightly because of the decrease in pack and saddle stock users, but the decrease would be small enough to likely go unnoticed by most users.</p>	<p>There would be a 3% decrease in the number of pack and saddle stock users in the Pasayten and a 0.02% increase in the Lake Chelan-Sawtooth compared to current numbers. The untrammelled and undeveloped qualities would be unaffected. The natural quality of the Pasayten and Lake Chelan-Sawtooth wilderness areas would continue to receive minor, localized impacts. Opportunities for solitude would have minor, localized, negative impacts due to encounters and campsite size and location.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>b)Compliance with Wilderness Management Tool (non-degradation policy)</b></p>	<p>Qualitative discussion</p>	<p>There would be no pack and saddle stock outfitter-guides. The elimination would reduce use at some existing sites, and lead to some natural restoration of barren core areas not used by the non-outfitted pack and saddle stock parties.</p>	<p>Although the extent necessary would be exceeded, the Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would limit the amount of barren core outfitters can use, allowing natural restoration to occur in camps with existing barren cores exceeding 5,250 square feet, and allow use of existing campsites within 200 feet of meadows, lakes, streams and key interest areas. No new campsites would be created. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.</p>	<p>Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would limit the amount of barren core outfitters can use, allowing natural restoration to occur in camps with existing barren cores exceeding 2,800 square feet. The reduced party size would help reduce size of barren core in campsites. Prohibiting camping in camps within 200 feet of wetlands, lakes, streams, and key interest areas would prevent continuing impacts to these campsites from outfitter-guides. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.</p>	<p>Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would allow outfitters to use existing barren core in established campsites, but prohibit creation of additional barren core. Use of existing camps within 200 feet of meadows, lakes, streams and key interest areas would be allowed. No new campsites would be created. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>c) Compliance with standards and guidelines, and the effect the proposed Forest Plan amendments would have on wilderness character</p>	<p>Qualitative discussion</p>	<p>No permits would be issued for pack and saddle stock outfitter-guides, so compliance with standards and guidelines would not be applicable.</p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The forest plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, or using more than 5,250 square feet of barren core in established campsites, so the result will be a slight decrease in the amount of barren core at large, established camps. The second forest plan amendment would allow outfitters to use established campsites within 200 feet of meadows, lakes, streams, and key interest areas.</p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The Forest Plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, or using more than 2,800 square feet of barren core in established campsites, so the result will a larger decrease in the amount of barren core at large, established camps, compared to Alternative 2. They would be prohibited from using campsites within 200 feet of wetlands, lakes, streams, or key interest areas, which would reduce the number of campsites available.</p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The forest plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, or increasing the size of existing barren cores. The existing amount of barren core would remain. The second forest plan amendment would allow outfitters to use established campsites within 200 feet of meadows, lakes, streams, and key interest areas. This would avoid the necessity to create new camps, which would degrade wilderness character.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>d)Total Number of Service Days in Pasayten Wilderness and total number of visitor days (outfitted and private)</b>	Service Days Visitor Days	0 Service Days 16,900 Visitor Days	2,000 Service Days 18,900 Visitor Days	1,000 Service Days 17,900 Visitor Days	1,640 Service Days 18,540 Visitor Days
<b>e) Total Number of Pack and Saddle Stock Visitor Days in Pasayten Wilderness (outfitted and private) and percent outfitted</b>	Visitor Days  Percent Outfitted	3,810 Pack & Saddle Visitor Days  0% outfitted	5,810 Pack & Saddle Visitor Days  34% outfitted	4,810 Pack & Saddle Visitor Days  21% outfitted	5,450 Pack & Saddle Visitor Days  30% outfitted
<b>d)Total Number of Service Days in Lake Chelan-Sawtooth Wilderness and total number of visitor days (outfitted and private)</b>	Service Days Visitor Days	0 Service Days 35,885 Visitor Days	720 Service Days 36,605 Visitor Days	320 Service Days 36,205 Visitor Days	737 Service Days 36,622 Visitor Days
<b>d)Total Number of <u>Pack and Saddle Stock Visitor Days in Lake Chelan-Sawtooth Wilderness and total number of visitor days (outfitted and private)</u></b>	Visitor Days  Percent Outfitted	12,095 Pack and Saddle Visitor Days  0 outfitted	12,815 Pack and Saddle Visitor Days  6% outfitted	12,415 Pack and Saddle Visitor Days  3% outfitted	12,832 Pack and Saddle Visitor Days  6% outfitted
<b>2. Current outfitted use could degrade wetlands and habitat for native plant species.</b>					
<b>a) wetland within 500 feet of pack and saddle stock camps, and percentage of total wetlands in analysis area</b>	Estimated number of acres and percent of total	86 1%	86 1%	25.2 0.3%	86 1%

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>b) effects of activities on wetlands</b>	Qualitative discussion	Pack and saddle stock outfitter-guides would have no impacts on wetlands. 10% reduction in pack and saddle stock would reduce localized impacts of grazing and trampling of vegetation in and around campsites. The damage to vegetation would continue to be isolated in context of all the wetlands in the analysis area.	Localized impacts to the 87 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.	Localized impacts to the 25.2 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.	Localized impacts to the 87 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.
<b>c) Determination statements for threatened endangered and sensitive plant species</b>	Determination rating	“No effect” on any listed plant species. “No impact” on any sensitive plant species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>d) Effects of stock grazing on plant composition</b>	Qualitative discussion	No grazing from outfitter stock, so no impacts on plant composition. The number of pack and saddle stock visitor days would be reduced by 15%. Pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would be virtually the same as the existing, 29,040 visitor days. Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would be reduced by 6%. Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would increase 6%. Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>3. Current outfitted use could degrade some habitat for threatened, endangered or sensitive wildlife species through increased encounters with people or through habitat degradation.</b>					
<b>a) Determination statements from Biological Assessment for threatened, endangered or sensitive wildlife species</b>	Determination rating	“No Effect” on any listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl. “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl. “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>4. Current pack and saddle stock outfitted use could degrade water quality and aquatic resources.</b>					
<b>a) Determination Statements from Biological Assessment for threatened, endangered, and sensitive fish species.</b>	Determination rating	“No effect” on any listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.
<b>b) Compliance with Northwest Forest Plan Aquatic Conservation Strategy (ACS) and PACFISH Riparian Management Objectives (RMO)</b>	Qualitative discussion	No permits would be issued for pack and saddle stock outfitter-guides, so compliance with ACS and RMOs would not be applicable.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized..
<b>c) Compliance with state water quality standards and the Clean Water Act</b>	Qualitative discussion	No permits would be issued for pack and saddle stock outfitter-guides, so compliance with Clean Water Act would not be applicable	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.
<b>d) Effects of loose grazing on riparian areas, streams and lakes</b>	Qualitative discussion	Pack and saddle stock outfitter-guides would have no effect on riparian areas, streams, or lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>e)Stream sedimentation from stock grazing.</b></p>	<p>Qualitative discussion</p>	<p>No outfitter stock grazing, so no effect on stream sedimentation.</p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>g) Localized impacts where trails cross streams or where camps are located near water</b>	Qualitative discussion	No impacts from pack and saddle stock outfitter-guides at trail stream crossings or camps near water. Overall 15% reduction in pack and saddle stock use would reduce impacts, however localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality would occur from non-outfitted use. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	There would be a 4% increase in pack and saddle stock outfitter-guide service days compared to current number, but only a 0.6% increase in all pack and saddle stock use. Small increase would not change conditions from current conditions. There would localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	The 40% reduction in the number of pack and saddle stock service days would reduce impacts from outfitters. There would be an overall reduction in pack and saddle stock use of 6%. Impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality would be reduced. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	The 6% increase in pack and saddle stock visitor days would increase localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality compared to the existing condition or Alternative 2. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.
<b>h. Fecal coliform levels</b>	Qualitative discussion	Outfitters would not operate, so stock would not contribute to background fecal coliform levels. Non-outfitted recreationists and stock, in addition to wildlife would result in fecal coliform in all waterways.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>5. Barren core limitations in Alternative 2 would not be large enough for a party of 12 people and 18 head of stock, and the number of service days in that alternative would not allow the businesses to respond to increases in demand for pack and saddle stock outfitter-guide services.</b>					
<b>a) amount of area needed for a party of 12 people and 18 head of stock</b>	Qualitative discussion	No pack and saddle stock outfitter-guides would operate on National Forest System Land.	Approximately 95% of campsites used by outfitter-guides have less than 5,250 square feet of barren core. The 8 campsites exceeding 5,250 are some of the most frequently used sites, including 3 assigned sites. Altering use patterns in the large camps could be difficult and reduce the quality of the camping experience for the clients.	Approximately 85% of the campsites used by the outfitter-guides have less than 2,800 square feet of barren core. All the campsites most regularly used, including all the assigned sites, have more than 2,800 square feet of barren core. The reduced party size in Alternative 3 would help prevent creation of additional barren core.	Outfitters would be able to use existing barren core in established campsites. This would allow enough room for 12 people and 18 head of stock in every camp without changing the use patterns, or impacting the quality of the camping experience for clients.
<b>b) impacts to the businesses from the number of service days</b>	Qualitative discussion	No pack and saddle stock outfitter-guides would operate on National Forest System Land.	Each outfitter would have enough days to match the highest actual use in the past 5 years plus 25%. If demand increases to highest levels between 1999 and 2009, the outfitters would not be able to meet the demand.	Each outfitter would have the number of service days equal to the average amount of annual use in the past 5 years. This would be a 40% reduction compared to current, and would substantially reduce business profits.	Each outfitter would have enough service days to match the highest actual use in the past 5 years plus 25%. If demand increases to highest levels between 1999 and 2009 the outfitters would partially be able to meet those demands.

Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Pack and saddle stock outfitter-guides could introduce noxious weeds into currently weed-free areas, such as wilderness, in stock manure.</b></p>	<p>Qualitative discussion</p>	<p>There would be no outfitter-guide pack and saddle stock that could potentially introduce weeds. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>
<p><b>Pack and saddle stock outfitter-guides could degrade air quality with smoke from campfires.</b></p>	<p>Qualitative discussion</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. There would be no pack and saddle stock outfitter-guide campfires, therefore no impact on air quality.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>

Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Firewood gathering by pack and saddle stock outfitter-guides could degrade the environment by removing down woody debris and limiting or eliminating this habitat component.</b></p>	<p>Qualitative discussion</p>	<p>No firewood would be gathered by pack and saddle stock outfitter-guides. Non-outfitted recreationists would continue gathering firewood on less than one tenth of one percent of the analysis area. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>
<p><b>Reducing the number of service days allowed could lead to some existing pack and saddle stock outfitters going out of business because of reduced revenues.</b></p>	<p>Qualitative discussion</p>	<p>No pack and saddle stock outfitter-guide permits would be issued, so the existing companies would no longer be able to offer trips into the backcountry or wilderness. Most would likely go out of business.</p>	<p>Enough service days would be authorized to allow the existing businesses, or suitable replacements, to continue roughly the same amount of revenue as they have over the past 5 years, with an additional 25% available for growth.</p>	<p>The reduction in allowable service days and party size could force some businesses to close because of increased operating costs, and decreased opportunities to generate revenue.</p>	<p>The number of authorized service days would allow the existing businesses, or suitable replacements, to increase business to approximately 25% over highest levels experienced between 1999 and 2009. This alternative could lead to increased revenues if demand increases over current levels.</p>

<p><b>Pack and saddle stock outfitter-guides could degrade the experience of other recreation users outside wilderness.</b></p>	<p>Qualitative discussion</p>	<p>There would be no pack and saddle stock outfitter-guides, so no impact on the experience of other recreation users outside wilderness</p>	<p>Approximately 2% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>	<p>Approximately 1% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>	<p>Approximately 3% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>
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Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Pack and saddle stock outfitter-guide activities could lead to soil damage and displacement in meadows and other areas by stock trampling, grazing, and crossing wet areas.</b></p>	<p>Qualitative discussion</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. There would be no impact to soils from pack and saddle stock outfitter-guide activities. There would be approximately 15% fewer pack and saddle stock in the analysis area with this alternative, but the existing areas of damage would continue to be used by non-outfitted pack and saddle stock, so the amount of area with damaged soil would likely not change. The vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would be a small reduction in total barren core with the 5,250 square foot limitation on barren core, but when viewed at a landscape scale this reduction would be inconsequential. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would be a small reduction in total barren core with the 2,800 square foot limitation on barren core, but when viewed at a landscape scale this reduction would be inconsequential. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would no increase in barren core as a result of outfitter-guide activities. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>

<b>Other Issues</b>	<b>Unit of Measure</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
<b>Pack and saddle stock outfitter-guide grazing could exceed Forest Plan standards and guidelines pertaining to forage utilization</b>	Qualitative discussion	There would be no outfitter-guide stock forage use with this alternative. Non-outfitted stock would continue to graze around campsites. Stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would continue to be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.
<b>Pack and saddle stock outfitter-guides are important to the local economy.</b>	Number of Jobs Labor Income Total Sales	0 \$0 \$0	27.6 jobs \$922,451 \$1,340,359	15.9 jobs \$531,108 \$771,722	36.3 jobs \$1,214,360 \$1,764,516

## **PREFERRED ALTERNATIVE**

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The Preferred Alternative is the modified Alternative 4 detailed in this Draft Supplemental EIS.

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# Purpose and Need

## Introduction

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Pack and saddle stock outfitters have been operating throughout the analysis area for the past 20 to 50 years. Some operated under 5-year term permits, while other operated under short-term permits (lasting less than one year). All the 5-year permits expired around 10 years ago, and since that time, all the businesses have been issued short-term permits annually to allow them to continue operations while the environmental analysis of the proposal to issue 10-year permits was completed.

**The 2013 Pack and Saddle Stock Outfitter-Guide Special Use Permit FEIS displayed** the analysis of issuing 10-year term pack and saddle stock outfitter-guide special use permits to these businesses or to other suitable businesses if those listed stop operations. The current combined number of actual service days for all existing short-term permits represents around 3% of the overall outfitted and non-outfitted visitor days (defined as one person for one day) across the analysis area, and approximately 15% of all pack and saddle stock use. The analysis area is shown on **Map 1-1 in the Map Section** of this document.

**On March 25, 2013, the Forest Supervisor for the Okanogan-Wenatchee National Forest signed a Record of Decision based on the Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement (FEIS), located on the Chelan, Methow Valley and Tonasket Ranger Districts. The Notice of Availability for the FEIS was published in the Federal Register on March 8, 2013. Two appeals to the Record of Decision were filed. The Forest Supervisor withdrew the Record of Decision in June 2013 after review of the analysis record found additional analysis was warranted.**

**This Draft Supplemental Environmental Impact Statement (DSEIS), incorporates new information based on a revised Needs Assessment completed in 2016, which resulted in new calculations for the extent necessary for commercial service in the Pasayten and Lake Chelan Sawtooth Wilderness areas. The most current version is titled “Determination of the Need and Extent Necessary for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness” (2016) and is hereafter referred to as the “2016 Needs Assessment” in this document. The new calculations directly affected the service days for stock outfitter guides in Alternative 4, and a few changes to the analysis in other alternatives. This DSEIS also corrects and clarifies other parts of the FEIS.**

**This DSEIS is to be used in conjunction with the 2013 FEIS, and follows the same format as the FEIS. Only paragraphs from the FEIS with changes are disclosed here, along with the FEIS headers (using the original FEIS formatting) and FEIS page number references. These**

*paragraphs show original unchanged text in plain text, deleted text in double-strikethroughs, and new text in underlined bold italics. Unchanged paragraphs between changed paragraphs within sections are show as "..."; the original language in the FEIS remains the same and can be reviewed in that document. These cues should allow the reader to easily discern the changes presented in this DSEIS. All changes also apply to corresponding resource reports.*

*Background information about the project, purpose and need, issues raised through scoping and addressed through project design, descriptions of affected environments, and regulatory requirements are described in the original FEIS, and are not repeated here. Readers may view the original FEIS on-line at: [www.fs.usda.gov/project/?project=3752](http://www.fs.usda.gov/project/?project=3752). Paper copies of the original FEIS are available for review at the Okanogan-Wenatchee National Forest Headquarters in Wenatchee, Washington, the Methow Valley Ranger District in Winthrop, Washington, and the Chelan Ranger District, Chelan, Washington.*

## Document Organization

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*This modifies the document organization discussion found on FEIS page 1-1 to explain the Supplemental Environmental Impact Statement.*

The Forest Service ~~has prepared this a~~ Final Environmental Impact Statement (FEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. A Draft EIS was published for a 45 day public and agency comment period on August 31, 2010. The comment period was extended until November 22, 2010. FEIS ~~discloses~~ **disclosed** the direct, indirect, and cumulative environmental effects that would result from implementing the proposed action and alternatives to the proposed action. The Record of Decision, which is the decision document associated with the FEIS, ~~is~~ **was** a separate document, written after completion of the FEIS. **The Forest Service has prepared this Draft Supplemental Environmental Impact Statement (DSEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations.**

~~This document contains~~ **The FEIS contained** the following:

...

## Outfitter-Guide Background

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*One of the outfitters listed on FEIS page 1-6 is no longer operating, and is deleted from the list.*

### Current Outfitters

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~~Deli Llama Wilderness Adventures has been operating under a special use permit for llama outfitting and guiding since 1993. The current permit is for 151 service days in the Pasayten Wilderness and North Cascades sub-areas.~~

...

## Regulatory Framework

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*The following section is an addition to the Other Policy, Guidance, and Analyses Considered and Incorporated by Reference section beginning on FEIS page 1-16.*

### Other Policy, Guidance, and Analyses Considered and Incorporated by Reference

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#### *Assessment of Need for Outfitting/Guiding Assistance, Okanogan National Forest, Chelan Ranger District Portion of the Wenatchee National Forest North of Lake Chelan, 1996*

*The Okanogan and Wenatchee National Forests completed an assessment of the need for outfitting and guiding services on the Methow Valley, and Tonasket Ranger Districts, and a portion of the Chelan Ranger District. This was prior to the forest combining in the early 2000s. The purpose of the assessment, referred to as the 1996 Needs Assessment, was to provide information regarding the assessment of the need for outfitting/guiding assistance as a component of the process of issuing special use permits for commercial outfitting/guiding operations. It did not meet the requirements for determining the need and extent necessary for commercial services in wilderness. Rather, it assessed the need on a broader basis, using a criteria based perspective. A variety of activities, including pack and saddle stock use, were evaluated as to the skill required, the cost of necessary equipment, knowledge requirements, the safety risk, the uniqueness of the services provided, and if the activity was wilderness dependent.*

*The 1996 Needs Assessment documents that there is a high “public need” for pack and saddle stock outfitting and guiding. This high need category includes activities in which substantial portions of the public would not be able to participate in the activity without outfitting/guiding assistance due to level of skill or knowledge, type/cost of equipment, safety considerations or because of a unique service provided. The analysis in the 1996 Needs Assessment documents that there is a high skill level required for using pack and saddle stock, in addition to a high cost for the stock and equipment. The knowledge level is high to moderate, and there is a high safety risk for extended length trips. The activity is also highly unique for extended length horse, burro and llama trips.*

*As stated earlier, the 1996 Need Assessment did not meet the requirements for determining the need for commercial services in wilderness, nor determine the extent necessary for those services. These requirements were fulfilled in the 2016 Needs Assessment, described below.*

*The Need and Extent Necessary for Commercial Services in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness was revised. The following section, found on FEIS page 1-18, was updated to include the information from the 2016 Needs Assessment.*

...

**Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness, ~~2012 (USDA Forest Service, 2012)~~ 2016**

...

The Forest Service completed the analysis for both the need and extent necessary, and documented the findings in a paper titled “Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness”, August 2012 (USDA Forest Service, 2012). ~~This paper is referred to as the “2012 Needs Assessment” in this document. The following information is summarized from the Needs Assessment. The Needs Assessment is included in Appendix B of this FEIS. **This document calculated the extent necessary as a range of service days based on including an anticipated increase in demand due to the demographic shifts in the aging population. This approach was discarded, and the document was revised again following the withdrawal of the 2013 Pack and Saddle Stock Outfitter-Guide Permit Issuance Record of Decision. The most current version is titled Determination of Need and Extent Necessary for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth, 2016, referred to as the “2016 Needs Assessment” in this document.**~~

~~The 2012 Needs Assessment found there is a need for pack and saddle stock outfitter guides in wilderness. The minimum amount of commercial services needed to provide for recreation is not a number that can be precisely calculated. Rather, several factors are considered to establish a range of service days that would provide the minimum extent of commercial service. Considering all the factors, the minimum extent of pack and saddle stock commercial services in the Pasayten will range from approximately 1,735 to 2,170 service days. In the Lake Chelan-Sawtooth, the range will be approximately 660 to 825 (Needs Assessment, 2012).~~

**The 2016 Needs Assessment found a need for pack and saddle stock outfitter guides in wilderness. Considering all the factors, the minimum extent necessary for pack and saddle stock commercial services in the Pasayten is 1,330 priority use service days, with a pool of 310, for a total of 1,640 service days. In the Lake Chelan-Sawtooth, minimum extent necessary is for 530 priority use service days, with a pool of 207, for a total of 737 service days.**

## Purpose and Need for the Proposed Action

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*The Purpose and Need was updated to include the findings in the 2016 Needs Assessment. The following updates the subsection that begins on FEIS page 1-18.*

The purpose and need is the objectives of the ~~analysis~~ **project**. It provides the underlying reasons for the Forest Service in developing the Proposed Action. The purpose and need for action of this analysis is **five**-fold:

- respond to special use permit applications from current pack and saddle stock outfitter-guides;
- **meet the public need for pack and saddle stock outfitter guides;**
- protect wilderness character in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas while providing pack and saddle stock outfitter-guide commercial services **to the extent necessary.**
- reconcile inconsistencies between forest plan standards and guidelines for barren core (see Glossary) in wilderness with party size limitations (currently 12 people and 18 head of stock), and the non-degradation policy and the prohibition on camps within 200 feet of meadows, streams, lakes, and special interest areas.
- **provide for enough pack and saddle outfitter guide days outside of wilderness to help maintain business viability, when considered with service days inside wilderness to meet the extent necessary.**

...

### Protect Wilderness Character While Allowing Minimum Commercial Services

...

The Forest Service completed the analysis for both the need and extent necessary, and documented the findings in a paper titled “Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness”, April 2012 (USDA Forest Service, 2012). This paper is referred to as the “2012 Needs Assessment” in **the FEIS**. ~~The following information is summarized from the Needs Assessment. Refer to **Appendix B** for the full document.~~

**The ~~is document~~ 2012 Needs Assessment calculated the extent necessary as a range of service days based on including an anticipated increase in demand due to the demographic shifts in the aging population. This approach was discarded, and the document was revised again following the withdrawal of the 2013 Pack and Saddle Stock Outfitter-Guide Permit Issuance Record of Decision. The most current version is referred to as the “2016 Needs Assessment” and is included as Appendix B in this DSEIS.**

The ~~2012~~ **2016** Needs Assessment found there is a need for pack and saddle stock outfitter guides in wilderness. The criteria used for the evaluation included:

...

~~Considering all the factors, the minimum extent of pack and saddle stock commercial services in the Pasayten ranges from approximately 1,735 to 2,170 service days. In the Lake Chelan-Sawtooth, the range is approximately 660 to 825 (Needs Assessment, 2012).~~

**The 2016 Needs Assessment found pack and saddle stock outfitter guides are needed in wilderness to meet the extent necessary. Considering all the factors, the minimum extent of pack and saddle stock commercial services in the Pasayten is 1,330 priority use service days, with a pool of 266, for a total of 1,640 service days. In the Lake Chelan-Sawtooth, the need is 530 priority use service days, with a pool of 207, for a total of 737 service days.**

## Proposed Action

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*No changes were made to the Proposed Action, which begins on FEIS page 1-21.*

## Decision Framework

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*This Decision Factors, found on FEIS page 1-23, was updated relating to outfitters and the extent necessary.*

### DECISION FACTORS

The Responsible Official will determine if the selected alternative is consistent with management direction, ***as amended by this decision***. The decision regarding which action to implement will be determined by comparing how each factor of the purpose and need is met by each of the alternatives and the manner in which each alternative responds to Significant Issues. Concerns of particular relevance to this decision are:

- to what extent each alternative responds to applications for special use permits in a manner that provides stability to outfitter-guide businesses ***es*** to allow financial commitments necessary to continue to provide public service, ***while not exceeding the extent necessary within wilderness***;
- the extent to which each alternative the meets the minimum extent necessary for ***pack and saddle outfitter-guide*** commercial services in Wilderness, to provide for wilderness appropriate activities, and protect wilderness character ~~while providing pack and saddle stock outfitter-guide commercial services in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas,~~

...

## Public Involvement

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*This section, found on FEIS page 1-24, was updated to include the information about the publication of the FEIS and Record of Decision.*

...

The DEIS was distributed to approximately 200 people and organizations on August 31, 2010. The original 45-day comment period was extended to 60 days to accommodate requests for additional review time. Two hundred and fifty-eight comment letters were received. All comments were addressed in the FEIS, and additional analysis was added where needed. Alternative 4 was added to respond to concerns about the barren core limitations in Alternative 2, and to a concern that the number of service days in Alternative 2 would not be enough for the pack and saddle stock outfitter-guides if the demand for their services rebounded to levels seen ten years ago. The Forest Service also determined that an amendment of the standard and guideline prohibiting camping within 200 feet of meadows, lakes, streams, would be needed to implement the proposed action. **The Notice of Availability for the FEIS was published on March 8, 2013 and the Record of Decision was signed on March 25, 2016. Two appeals to the Record of Decision were filed. The Forest Supervisor withdrew the Record of Decision in June 2013 after review of the analysis record found some additional analysis was needed.**

...

## Issues

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*This section, found on page 1-25 of the FEIS, was updated to explain the issues addressed by the alternatives to the Proposed Action.*

### SIGNIFICANT ISSUES

**The significant issues were used to develop the alternatives to the proposed action. Alternative 3 addressed Significant Issues 1-4 below by reducing party size and camp sizes from the Proposed Action and maintaining current the Forest Plan standard for setbacks from water and wet meadows (it would permit camping within 200 feet of dry meadows); Alternative 4 addressed Significant Issues 1 and 5 by increasing camp sizes and service days from the Proposed Action and allowing outfitters to camp in existing campsites near water and meadows (see full alternative descriptions in Chapter 2, Alternatives Considered in Detail).**

...

### ELIMINATED ISSUES

...

**30. I suggest that you start managing your wilderness by establishing use capacities and issuing permits to the number of recreationists that fall within those capacities. Capacity analyses were completed for the Pasayten and Lake Chelan-Sawtooth wildernesses as part of the ~~Needs Assessment and Minimum Extent Necessary Determination (USDA Forest Service, 2012 and Appendix B)~~ **“Determination of Need and Extent Necessary for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth”, 2016, referred to as the “2016 Needs Assessment” in this document (Appendix B).** Any type of limitation on non-outfitted recreationists is outside the scope of this analysis because the purpose and need does not include non-outfitted use....**

## Alternatives

*The alternative development section, found on FEIS pages 2-2 and 2-3, was updated to describe the development of the modified Alternative 4.*

### Alternative Development

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...

**FEIS** Alternative 4 was developed to address concerns about the number of service days and the amount of barren core in campsites, raised during the public review of the Draft Environmental Impact Statement. It would meet the purpose and need by issuing 10-year permits, with an increase in service days compared to the existing condition. It would also resolve the inconsistencies between the party size and barren core standards and guidelines, and address the use of campsites within 200 feet of meadows, lakes, streams, and key interest areas.

**The 2012 Needs Assessment was revised to better reflect past use levels in the Pasayten and Lake Chelan-Sawtooth wildernesses. The revised document is titled “Need Assessment and Extent Necessary Determination for Commercial Services (Outfitter-Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness, Okanogan-Wenatchee National Forest, 2016”. It is included as an appendix to this Draft Supplemental EIS, and referred to as the 2016 Needs Assessment. It includes a new calculation of the extent necessary for commercial services, which is less than the extent necessary determination in the 2012 Needs Assessment.**

**This DSEIS analyzes a modified Alternative 4 which now fully meets the extent necessary identified in the 2016 Needs Assessment in both wilderness areas. Alternative 4 in this DSEIS reduces the number of service days in the Pasayten and Lake Chelan-Sawtooth wilderness area compared to the FEIS Alternative 4. The basis for the total number of service days in FEIS Alternative 4 was the highest use during 1999 to 2009, plus 25%, which totaled 6,700 service days. The number of service days in wilderness in FEIS Alternative 4 exceeded the recalculated extent necessary, so for the modified Alternative 4, the days within the Pasayten and Lake Chelan-Sawtooth wildernesses were reduced to match the extent necessary. This reduced the total number of service days to 6,082.**

**Alternative 2 was not modified, even though the service days in Wilderness exceeded the extent necessary determined in the 2016 Needs Assessment, to provide continuity with the FEIS and display the effects of providing more service days than the 2016 extent necessary determination.**

...

## Alternatives Considered but Eliminated

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*Alternative 4, as displayed in the FEIS was modified and the original Alternative 4 in the FEIS is added to the list of alternatives eliminated from detailed study on page 2-10 of the FEIS.*

The following alternatives were considered by the interdisciplinary team, but eliminated from further consideration for the reasons described below.

1. An alternative was considered but eliminated that would increase party size for outfitter-guides to 20 people and 35 head of stock, and increase annual service days to 8,125. Another alternative would have increased the service days to 13,380. Increasing the party size in wilderness to any of these levels would have resulted in wilderness degradation by increasing the amount of disturbed area in campsites. Since service days are calculated based on actual use, there was no justification for increasing the number to 8,125 or 13,380, since the actual amount of use has never been that high. ~~The highest number of service days actually used during the span of over the past five years, plus 25%, is approximately 4,600. Alternative 4 would authorize 6,700-82 service days.~~ **The basis for the total number of service days in FEIS Alternative 4 was the highest use during 1999 to 2009, plus 25%, which totaled 6,700 service days. The number of service days in wilderness in FEIS Alternative 4 exceeded the recalculated extent necessary, so the days within the Pasayten and Lake Chelan-Sawtooth wildernesses were reduced to match the extent necessary. This reduced the total number of service days to 6,082.** ~~over the span of, which is the highest amount of actual use in the past 10 years plus 25%.~~  
...
3. An alternative was considered that would not amend the Forest Plan to reduce party size and increase camp size for all users (outfitted and non-outfitted). The portion of the alternative pertaining to non-outfitted users was eliminated from further consideration since it was outside the scope of analysis and purpose and need. Decreasing party size and adjusting standards and guidelines pertaining to outfitter-guide camps was developed and analyzed as Alternative 3. Decreasing or not increasing the barren core size for the pack and saddle stock outfitter-guides was considered but eliminated. **The current Forest Plans allow 12 people and 18 head of stock, but restricts barren core to 400 to 1000 feet. These standards and guidelines are incompatible** because it is physically impracticable to fit pack and saddle stock outfitter-guide camps with 12 people and 18 head of stock inside areas of from 400 to 1,000 square feet of bare mineral soil (refer to page C-1 for barren core calculations). There is a need to make campsite barren core standards and guidelines and party size allowances compatible for pack and saddle stock outfitter-guides in wilderness in order to provide the necessary pack and saddle stock outfitter-guide commercial services.
4. An alternative was considered but eliminated that would make no change to Forest Plan standards and guidelines for barren core. This alternative also increased the number of service days to 7,275. It was identified as the proposed action in the 2005 scoping letter. This alternative was eliminated because ~~there is no justification for increasing~~

~~the number of service days to this level, since service day allocation is based on actual use (also refer to eliminated alternative #1). It also would not have been consistent with existing Forest Plan standards and guidelines pertaining to barren core. The existing party size allowing up to 18 head of stock cannot fit into 400 to 1,000 square feet of barren core without creating more barren core, and/or endangering the stock animals and handlers. **See also Alternative Eliminated #1 for why more service days were rejected.**~~

5. An alternative was considered but eliminated that would amend the Forest Plan to reduce outfitter-guide party size to 5 people and 2 head of stock. This alternative was not fully developed because the outfitter-guides would not be able to operate businesses with such a small party size and thus **would not provide extend necessary for this commercial service, as minimum required commercial services would not be provided to the public defined by the 2016 Needs Assessment.** The outfitters who use horses and mules typically have their clients ride horses, so the party includes at least as many head of stock as people, plus additional stock for packing. Elimination of pack and saddle stock outfitter-guides **entirely from wilderness** is analyzed under Alternative 1, the no action alternative.

...

20. An alternative was considered but eliminated that would allow current use to continue without amending the Forest Plan or completing a NEPA analysis. Alternatives that would not amend the Forest Plan are discussed in Eliminated Alternatives 3, 4 and 10 above. The alternative of issuing the permits without NEPA was eliminated because it would violate NEPA. Ten-year permits cannot be issued until the environmental analysis is completed. All of the Pack and Saddle Stock Outfitter-Guides are operating under one-year Special Use Permits that expire on March 31, 2017, and none of them has ever held a ten-year permit.

...

23. An alternative was considered but eliminated that would provide a list of approved camps for parties with 8 or more horses or mules. Outfitters using llamas or burros would not be restricted to these campsites. This alternative was eliminated because it is not necessary. **FEIS Appendix A lists the majority of campsites the outfitters would be allowed to use. Each campsite has been monitored, and the existing amount of barren core is disclosed in Appendix A. This appendix also specifies the amount of barren core the outfitters could use in any given camp, based on the different alternatives. The number of horses or mules in a campsite does not directly correlate to the amount of barren core, or other potential resource damage. Rather, the management of the stock in a camp is the largest contributing factor to potential resource damage. The mitigation measures that begin on FEIS page 2-19 all specify campsite use, stock management, trail use, and client activities to minimize environmental impacts. Mitigation measure #2 specifically lists areas where stock use would be limited or not allowed.** ~~The outfitters would not be allowed to increase the amount of barren core in any campsite, and therefore would only use campsites large enough to accommodate the size of the party on any given trip.~~

24. An alternative was considered but eliminated that would have established the service

~~days included to the highest level of actual use over the past 10 to 15 years, increased by 25%. The number of service days in Alternative 4 is the highest amount of actual use between 1999 and 2009, increased by 25%. Longer time spans (such as 15 years) were considered but eliminated because the intent of the handbook direction is to assign service days at levels that reflect current use. Extending the actual use consideration period beyond 10 years in the past would inflate use beyond what would likely occur in upcoming 10 years.~~

...

**28. The original Alternative 4 in the FEIS was eliminated from detailed study since it exceeded the extent necessary identified in the 2016 Needs Assessment.**

## Alternatives Considered in Detail

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*Alternatives 2, 3 and 4, beginning on FEIS page 2-9 have changes relating to the 2016 Needs Assessment.*

...

### ALTERNATIVE 2

*Alternative 2 was retained from the FEIS even though it now exceeds the extent necessary for commercial services identified in the 2016 Needs Assessment for comparison purposes and to provide continuity between the FEIS and SEIS. The objectives were updated to clarify how the service days were distributed among the areas within the permit area.*

#### Objectives

Alternative 2 would:

...

- ~~• Provide enough service days in the Pasayten and Lake Chelan-Sawtooth wildernesses to fall within the range of service days needed to meet the minimum extent necessary to provide commercial services for wilderness appropriate activities.~~
- Authorize the highest amount of actual use service days of the existing pack and saddle stock outfitter-guides over the past five years ***increased by 25% to allow for business growth (with adjustments to include prior years where extraordinary circumstances, like fires, affected outfitter-guide business, here after referred to as "high 5 plus 25%").*** ~~and create a pool of days that will give an opportunity for pack and saddle stock outfitter guides to develop a modest amount of growth (25%).~~ This follows Forest Service Handbook 2709.11, Chapter 40 direction for determining service days (US Forest Service, 2008a).
- ***Limit the number of service days within wilderness to the extent necessary determination from the 2012 Needs Assessment. This determination was based on actual use, and***

projected changes in need, not on business stability or other economic factors. Refer to 2012 Needs Assessment for details.

- Increase available service days outside wilderness, as necessary to provide the high 5 plus 25% service day level for each individual permit (total of wilderness and non-wilderness days).

### ALTERNATIVE 3

The objectives of Alternative 3 were updated to clarify how the service days were distributed among the areas within the permit area.

#### Objectives

Alternative 3 would:

- Authorize the average number of used service days over the past five years, plus 25% for business growth for a modest amount of growth (with adjustments to include prior years where extraordinary circumstances, like fires, affected outfitter-guide business, hereafter referred to the high 5 years plus 25%).

### ALTERNATIVE 4

Alternative 4 was modified to reduce the number of service days in the Pasayten and Lake Chelan-Sawtooth wilderness to match the extent necessary calculation from the 2016 Needs Assessment. No other changes were made to the structure of Alternative 4, including the forest plan amendments, mitigation measures, or monitoring. Refer to the FEIS on pages 2-9, 2-15 to 2-29 for the full description of Alternative 4.

#### Objectives

Alternative 4 would:

- ~~Increase~~ **Decrease** service days in the Pasayten **Wilderness**, and **increase days in the** Lake Chelan-Sawtooth Wilderness **(compared to current levels)** ~~es to meet the upper range of the minimum~~ extent necessary determination **in the 2016 Needs Assessment. Limit wilderness use service days to those identified as necessary in the 2016 Needs Assessment. This determination was based on actual use, and projected changes in need, not on business stability or other economic factors. Refer to 2016 Needs Assessment for details.**
- Establish **the** number of authorized service days that matches the highest amount used by the outfitters **during 1999 to 2009, plus 25%, except within wilderness, where the number**

of service days would match the extent necessary determination from the 2016 Needs Assessment.

- Assign service days to individual permits to equal the high 5 plus 25% to meet the Forest Service Handbook 2709.11 direction, placing the remaining days in a pool to cover potential additional business growth opportunities. ~~over the past ten years plus 25%. Assign service days to permits following handbook direction (highest actual use levels in the past five years), and create a pool of days with the remaining service days that will give an opportunity for pack and saddle stock outfitter guides businesses to meet the increased demand for services seen in the early 2000s~~
- Increase available service days outside wilderness, as necessary to provide the high 10 plus 25% service day total for all available pack and saddle stock outfitter guides (total of wilderness and non-wilderness days).
- 

### Description

This alternative would issue 10-year term special use permits for pack and saddle stock outfitter guides on the Methow, Chelan, and Tonasket Ranger Districts. Assigned sites (camps and base camps) would allow closer monitoring and modification of operations to reduce the size of the barren core and address other resource concerns. Assigned camp sites would be used for most full-service camps. Appendix A includes a list of authorized campsites. A total of ~~6,700~~ **6,082** annual service days (total inside plus outside wilderness) would be divided among the outfitters, or replacements who meet term permit requirements, and a pool of priority use service days. The outfitters would have a total of 390 animal unit months for authorized grazing.

The service days would be distributed among the different portions of the analysis area, with each business receiving approximately the same proportion of service days in each area it had in the past. ~~compared to all pack and saddle stock outfitters.~~ **Figure 2-3** shows the distribution of service days in the different areas. When the 10-year permits are issued, the total number of service days allocated to each outfitter would be determined by adding the highest actual use in the past 5 years, plus 25%. The total number of priority use service days assigned to all permit holders within wilderness would not exceed 1,330 days in the Pasayten or 660 in the Lake Chelan-Sawtooth to be consistent with the 2016 Needs Assessment. Any unallocated service days identified in as part of the 2016 Needs Assessment that were beyond the highest 5 years plus 25% would be held in a pool for outfitters to access on a year-to-year basis if and when demand exceeds individually allocated service days. The number of allocated priority use service days would be adjusted at the 5-year mark in the 10-year permits using the same technique, without exceeding ~~6,700~~ **6,082**.

**Figure 2-3. Alternative 4: Number of Service Days by Area and Total (*Assigned and Pool*)**

Area	Total Service Days
Pasayten Wilderness ( <i>Assigned Service Days</i> )	<del>2,170</del> <b>1,330<sup>2</sup></b>
<i>Pasayten Wilderness (Priority Use Pool)</i>	<b>310</b>
Lake Chelan-Sawtooth Wilderness ( <i>Assigned Service Days</i> )	<del>825</del> <b>530<sup>1</sup></b>
<i>Lake Chelan-Sawtooth Wilderness (Priority Use Pool)</i>	<b>207</b>
North Cascades	200
Sawtooth Backcountry	805
Bear/Ramsey	100
North Cascades (Day Rides)	1,150
Alta Lake (Day Rides)	1,450
Middle Methow	0
<b>Total</b>	<del>6,700</del> <b>6,082</b>

...

The rest of the service days are for overnight camping. Five camp locations would be assigned to the horse and mule packers to allow closer monitoring. In the Pasayten Wilderness assigned sites (see **Map 1-4** in the Map Section of this document) include camps at Bald Mountain, Sheep Mountain, and Beaver Creek, Crow Lake, and Whistler. Assigned sites would be used for full-service trips. Outfitters would be allowed to set up camps at these locations, and leave them for the entire season. All camp equipment except hitch rails, corrals, and tent poles would be removed from the camp at the end of the season, and would not be cached over the winter. Camp locations for all other trips would be limited to existing pre-approved locations (refer to Appendix A for the majority of consistently used campsites). Camping equipment and supplies could not be left in these locations for more than 24 hours when the camp is not occupied.

...

## **Mitigation Measures for Alternatives 2, 3, and 4**

*This updates Mitigation Measure 2 e) found on FEIS page 2-21.*

...

### **2. Campsite Use Limitations**

...

- e) Approval for camping at North Lake and Louis Lake, **and Williams Lake** would be made on a case-by-case basis considering time of year, number of clients, camp location, and other factors. Only drop camps would be approved, with none on weekends or holidays between Memorial Day and Labor Day.

## **Comparison of Alternatives**

<sup>2</sup> **Total service days in wilderness are equal to the extent necessary for assigned priority use service days and priority use pool days, determined in the 2016 Needs Assessment.**

*The Comparison of Alternatives table, beginning on FEIS page 2-30, was updated where needed to incorporate the changes to Alternative 4. The entire table is reprinted here for ease in comparison.*

**Figure 2-4** provides a side-by-side description of each alternative and a summary of how each alternative responds to the Purpose and Need and each Significant Issue. See Chapter 1 for background on the issues, and Chapter 3 for a complete description of the effects and for the scientific basis for results in Figure 2-4.

**Figure 2-4: Comparison of Alternatives**

	<b>Unit of Measure</b>	<b>Current</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
Total Number of Service Days	Service Days	4,460	0	4,620	2,660	<del>6,700</del> <b><u>6,082</u></b>
Total Number of Visitor Days (outfitted and private)	Visitor Days	168,300	163,840	168,460	166,500	<del>170,540</del> <b><u>169,922</u></b>
Percent of Visitor Days Outfitted by Pack and Saddle Stock Outfitter-Guides	Percent	3%	0%	3%	2%	4%
Percent Change in Total Number of Visitor Days Compared to Current	Percent		-3%	+0.1%	-1%	+1%
Total Number of Pack and Saddle Stock Visitor Days	Visitor Days	28,880	24,420	29,040	27,080	<del>31,136</del> <b><u>30,502</u></b>
Percent of Pack and Saddle Stock Visitor Days Outfitted	Percent	15%	0%	16%	10%	<del>22%</del> <b><u>20%</u></b>
Percent Change in Total Pack and Saddle Stock Visitor Days Compared Current	Percent		-15%	+0.6%	-6%	<del>+8%</del> <b><u>+6%</u></b>
Percent Change in Service Days Compared to Current	Service Days		-100%	+4%	-40%	<del>+50%</del> <b><u>+36%</u></b>
Forest Plan Amendment to Party Size			No Amendment	No Amendment (12 people/18 head of stock)	12 Heartbeats	No Amendment (12 people/18 head of stock)

	<b>Unit of Measure</b>	<b>Current</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
Forest Plan Amendment to Camp Location			No Amendment	Outfitters allowed to use established campsites within 200 feet of meadows, lakes, streams, and special interest areas	Outfitters allowed to use established campsites within 200 feet of meadows. Prohibited from using campsites within 200 feet of wetlands, streams, lakes, and special interest areas.	Outfitters allowed to use established campsites within 200 feet of meadows, lakes, streams, and special interest areas
Forest Plan Amendment to Barren Core			No Amendment	Outfitters would be allowed to use up to 5,250 square feet of barren core. In camps with more, outfitters must reuse the same 5,250 square feet each time. Outfitters would be prohibited from creating additional barren core in any camp. Excess barren core would be restored.	Outfitters would be allowed to use up to 2,800 square feet of barren core. In camps with more, outfitters must reuse the same 2,800 square feet each time. Outfitters would be prohibited from creating additional barren core in any camp. Excess barren core would be restored..	Outfitters would be allowed to use existing barren core in established campsites, but would be prohibited from creating additional barren core.

Purpose and Need	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>1. Respond to Permit Applications for outfitter-guide permits.</b>	Qualitative discussion	Would deny applications, and no pack and saddle stock outfitter-guide permits would be issued.	10-year permits would be issued with service day calculations consistent with FSH 2709.11 – highest actual use in past 5 years plus 25%. <u><b>Any excess days would be held in a priority use pool.</b></u>	10-year permits would be issued, but with 40% fewer service days compared to the current allowed use.	10-year permits would be issued with <del>enough service days to match the highest actual use in the past 10 years plus 25%</del> <u><b>service day calculations consistent with FSH 2709.11 – highest actual use in past 5 years plus 25%. Any excess days would be held in a priority use pool. Service days in wilderness would be capped at the extent necessary calculation.</b></u>
<b>2. Protect wilderness character in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas while providing necessary pack and saddle stock outfitter-guide commercial services.</b>	Qualitative discussion	The wilderness character would be protected, but no pack and saddle stock commercial services would be provided for realizing recreational or other wilderness proposes.	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. The number of service days would <del>be within the range of the minimum extent necessary for realizing the recreational purposes of the areas</del> <u><b>would be provided exceed the extent necessary for realizing the recreational purposes in the Pasayten, and only partially meet the extent necessary in the Lake Chelan-Sawtooth.</b></u>	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. Pack and saddle stock commercial services would be provided, but for less than the minimum amount necessary for realizing the recreational purposes of the areas.	Wilderness character would be protected since impacts to opportunities for solitude would be minor and localized. <del>The upper range of the minimum amount of pack and saddle stock commercial services necessary for realizing the recreational purposes of the areas would be provided</del> <u><b>extent necessary for commercial services to realize the recreational purposes of the wilderness areas would be provided.</b></u>

Purpose and Need	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>3. Make standards and guidelines for campsite barren core in wilderness compatible with party size for pack and saddle stock outfitter-guides.</b></p>	<p>Qualitative discussion</p>	<p>Forest Plans would not be amended, but there would be no pack and saddle stock outfitter-guide activities.</p>	<p>Forest Plan amendment would allow up outfitter-guides to use up to 5,250 square feet of barren core in existing camps that exceed that size. In established campsites, barren core would not be allowed to increase. This would be compatible with a party size of 12 and 18, although use patterns at campsites with over 5,250 square feet would be modified.</p>	<p>Forest Plan amendment would allow up outfitter-guides to use up to 2,800 square feet of barren core in existing camps that exceed that size. In established campsites, barren core would not be allowed to increase. This would be compatible with a party size of 12 heartbeats, although use patterns at campsites with over 2,800 square feet would be modified.</p>	<p>Forest Plan amendment would allow <del>up</del> outfitter-guides to use existing barren core in established campsites, but not increase the amount of barren core. This would be fully compatible with a party size of 12 people and 18 stock.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>1. Current and proposed pack and saddle outfitted use does not comply with some Forest Plan wilderness standards and guidelines or with the Wilderness Act because the party size and amount of use perpetuates large camps and degrades the condition of the wilderness.</b>	See next page	See next page	See next page	See next page	See next page
a) Compliance with the Wilderness Act in terms of the qualities that make up wilderness character: untrammed, undeveloped, natural, and opportunities for solitude or primitive and unconfined recreation.	Qualitative discussion	Pack and saddle stock outfitter-guides would not operate in wilderness. There would be a 32% reduction in the number of pack and saddle stock users in the Pasayten and a 6% reduction in the Lake Chelan-Sawtooth. The untrammed and undeveloped qualities of wilderness character would be unaffected. There would be minor, localized beneficial impacts to the natural quality since fewer pack and saddle stock would be grazing, and potentially damaging stream banks at watering sites. Opportunities for solitude would also be beneficially impacted on a local, minor level with the reduced number of pack and saddle stock users.	There would be approximately 4% more pack and saddle stock users in the Pasayten, and no increase in the Lake Chelan-Sawtooth compared to current numbers. The untrammed and undeveloped qualities would be unaffected. The natural quality of the Pasayten and Lake Chelan-Sawtooth wilderness areas would continue to receive minor, localized impacts. Opportunities for solitude would have minor, localized, negative impacts due to encounters and campsite size and location. <b><u>Permitted outfitter-guide service days would exceed the extent necessary determination from the 2016 Needs Assessment.</u></b>	There would be a 14% decrease in the number of pack and saddle stock users in the Pasayten, and a 3% decrease in the Lake Chelan-Sawtooth. The untrammed and undeveloped qualities would be unaffected. The natural quality would continue to have minor, localized impacts from stock grazing, and damage to stream banks at watering spots. Opportunities for solitude would improve slightly because of the decrease in pack and saddle stock users, but the <del>increase</del> <b>decrease</b> would be small enough to likely go unnoticed by most users.	There would be <del>approximately 6% more pack and saddle stock users in the Pasayten,</del> <b><u>3% decrease in the number of pack and saddle stock users in the Pasayten</u></b> and a <b><u>0.02%</u></b> increase in the Lake Chelan-Sawtooth compared to current numbers. The untrammed and undeveloped qualities would be unaffected. The natural quality of the Pasayten and Lake Chelan-Sawtooth wilderness areas would continue to receive minor, localized impacts. Opportunities for solitude would have minor, localized, negative impacts due to encounters and campsite size and location.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>b)Compliance with Wilderness Management Tool (non-degradation policy)</b>	Qualitative discussion	There would be no pack and saddle stock outfitter-guides. The elimination would reduce use at some existing sites, and lead to some natural restoration of barren core areas not used by the non-outfitted pack and saddle stock parties.	<u><b>Although the extent necessary would be exceeded, the</b></u> Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would limit the amount of barren core outfitters can use, allowing natural restoration to occur in camps with existing barren cores exceeding 5,250 square feet, and allow use of existing campsites within 200 feet of meadows, lakes, streams and key interest areas. No new campsites would be created. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.	Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would limit the amount of barren core outfitters can use, allowing natural restoration to occur in camps with existing barren cores exceeding 2,800 square feet. The reduced party size would help reduce size of barren core in campsites. Prohibiting camping in camps within 200 feet of wetlands, lakes, streams, and key interest areas would prevent continuing impacts to these campsites from outfitter-guides. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.	Pasayten and Lake Chelan-Sawtooth would continue on an improving trend, with no degradation. Forest Plan amendments would allow outfitters to use existing barren core in established campsites, but prohibit creation of additional barren core. Use of existing camps within 200 feet of meadows, lakes, streams and key interest areas would be allowed. No new campsites would be created. Mitigation measures would insure that outfitter-guides do not further degrade the condition of the wilderness.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>c) Compliance with standards and guidelines, and the effect the proposed Forest Plan amendments would have on wilderness character</p>	<p>Qualitative discussion</p>	<p>No permits would be issued for pack and saddle stock outfitter-guides, so compliance with standards and guidelines would not be applicable.</p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The forest plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, or <del>increasing the size of existing barren cores,</del> <b><u>or using more than 5,250 square feet of barren core in established campsites,</u></b> so the result will be a slight decrease in the amount of barren core at large, established camps. The second forest plan amendment would allow outfitters to use established campsites within 200 feet of meadows, lakes, streams, and key interest areas.</p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The Forest Plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, <del>or increasing the size of existing barren cores,</del> <b><u>or using more than 2,800 square feet of barren core in established campsites,</u></b> so the result will a larger decrease in the amount of barren core at large, established camps, compared to Alternative 2. They would be prohibited from using campsites within 200 feet of wetlands, lakes, streams, or key interest areas, which would reduce the number of campsites available. <del>This would degrade wilderness character in isolated areas.</del></p>	<p>Outfitter-guide activities would comply with amended standards and guidelines. The forest plan amendments would have minor, localized impacts on the opportunities for solitude by authorizing larger areas of barren core in outfitter camps compared to existing standards. The outfitters would be prohibited from creating new camps, or increasing the size of existing barren cores. The existing amount of barren core would remain. The second forest plan amendment would allow outfitters to use established campsites within 200 feet of meadows, lakes, streams, and key interest areas. This would avoid the necessity to create new camps, which would degrade wilderness character.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>d)Total Number of Service Days in Pasayten Wilderness and total number of visitor days (outfitted and private)</b>	Service Days Visitor Days	0 Service Days 16,900 Visitor Days	2,000 Service Days 18,900 Visitor Days	1,000 Service Days 17,900 Visitor Days	<del>2,170</del> <b>1,640</b> Service Days <del>19,070</del> <b>18,540</b> Visitor Days
<b>e) Total Number of Pack and Saddle Stock Visitor Days in Pasayten Wilderness (outfitted and private) and percent outfitted</b>	Visitor Days  Percent Outfitted	3,810 Pack & Saddle Visitor Days  0% outfitted	5,810 Pack & Saddle Visitor Days  34% outfitted	4,810 Pack & Saddle Visitor Days  21% outfitted	<del>5,966</del> <b>5,450</b> Pack & Saddle Visitor Days <del>36%</del> <b>30%</b> outfitted
<b>d)Total Number of Service Days in Lake Chelan-Sawtooth Wilderness and total number of visitor days (outfitted and private)</b>	Service Days Visitor Days	0 Service Days 35,885 Visitor Days	720 Service Days 36,605 Visitor Days	320 Service Days 36,205 Visitor Days	<del>825</del> <b>737</b> Service Days <del>36,710</del> <b>36,622</b> Visitor Days
<b>d)Total Number of <u>Pack and Saddle Stock Visitor Days in Lake Chelan-Sawtooth Wilderness and total number of visitor days (outfitted and private)</u></b>	Visitor Days  Percent Outfitted	12,095 Pack and Saddle Visitor Days  0 outfitted	12,815 Pack and Saddle Visitor Days  6% outfitted	12,415 Pack and Saddle Visitor Days  3% outfitted	<del>12,920</del> <b>12,832</b> Pack and Saddle Visitor Days <del>6%</del> <b>6%</b> outfitted
<b>2. Current outfitted use could degrade wetlands and habitat for native plant species.</b>					
<b>a) wetland within 500 feet of pack and saddle stock camps, and percentage of total wetlands in analysis area</b>	Estimated number of acres and percent of total	86 1%	86 1%	25.2 0.3%	86 1%

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>b) effects of activities on wetlands</b>	Qualitative discussion	Pack and saddle stock outfitter-guides would have no impacts on wetlands. 10% reduction in pack and saddle stock would reduce localized impacts of grazing and trampling of vegetation in and around campsites. The damage to vegetation would continue to be isolated in context of all the wetlands in the analysis area.	Localized impacts to the 87 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.	Localized impacts to the 25.2 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.	Localized impacts to the 87 acres of wetlands would continue, but mitigation measures would minimize impacts from outfitter-guides. Outfitter-guide activities would meet the Aquatic Conservation Strategy Objectives, and the Riparian Management Objectives, so isolated impacts to wetlands would be within standards.
<b>c) Determination statements for threatened endangered and sensitive plant species</b>	Determination rating	“No effect” on any listed plant species. “No impact” on any sensitive plant species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.	“No effect” on any listed plant species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” on sensitive species.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>d) Effects of stock grazing on plant composition</b>	Qualitative discussion	No grazing from outfitter stock, so no impacts on plant composition. The number of pack and saddle stock visitor days would be reduced by 15%. Pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would be virtually the same as the existing, 29,040 visitor days. Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would be reduced by 6%. Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.	The number of pack and saddle stock visitor days would <del>increase 8%</del> <b>increase 6%</b> . Outfitter-guide pack and saddle stock grazing in and around campsites would not result in further modification of plant succession due to the limited amount of area where the animals graze, and the small number of animals compared to past use.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>3. Current outfitted use could degrade some habitat for threatened, endangered or sensitive wildlife species through increased encounters with people or through habitat degradation.</b>					
<b>a) Determination statements from Biological Assessment for threatened, endangered or sensitive wildlife species</b>	Determination rating	“No Effect” on any listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl. “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl. “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.	“May affect, not likely to adversely affect” gray wolf, grizzly bear, lynx, northern spotted owl. “No effect” on all other listed species. “May impact individuals, but not likely to cause a trend toward Federal listing or a loss of population viability” great gray owl. “No impact” on all other listed species.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>4. Current pack and saddle stock outfitted use could degrade water quality and aquatic resources.</b>					
<b>a) Determination Statements from Biological Assessment for threatened, endangered, and sensitive fish species.</b>	Determination rating	“No effect” on any listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.	“May affect, not likely to adversely affect” bull trout, steelhead, and spring Chinook. “No effect” on all other listed species. “No impact” on sensitive species.
<b>b) Compliance with Northwest Forest Plan Aquatic Conservation Strategy (ACS) and PACFISH Riparian Management Objectives (RMO)</b>	Qualitative discussion	No permits would be issued for pack and saddle stock outfitter-guides, so compliance with ACS and RMOs would not be applicable.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized.	Alternative would comply with the ACS and RMOs. Pack and saddle stock outfitter-guide activities would not retard or prevent attainment of ACSOs or RMOs. Impacts to water quality, streambank stability, vegetation, and aquatic habitat would be minor and localized..
<b>c) Compliance with state water quality standards and the Clean Water Act</b>	Qualitative discussion	No permits would be issued for pack and saddle stock outfitter-guides, so compliance with Clean Water Act would not be applicable	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.	Alternative would comply with the Clean Water Act. Pack and saddle stock outfitter-guide activities would not alter water temperature or quality. No 303d listed waterways near outfitter-guide activities.
<b>d) Effects of loose grazing on riparian areas, streams and lakes</b>	Qualitative discussion	Pack and saddle stock outfitter-guides would have no effect on riparian areas, streams, or lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.	Loose grazing would disperse impacts, and minimize effects on riparian areas, streams, and lakes.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>e)Stream sedimentation from stock grazing.</b></p>	<p>Qualitative discussion</p>	<p>No outfitter stock grazing, so no effect on stream sedimentation. <del>pack and saddle stock outfitter-guide stock grazing.</del></p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>	<p>Stream sedimentation from stock grazing and use would be low. It would not be detectable compared to ongoing channel and hill slope erosion, except at the point of disturbance in the stream channel. There would be no detectable difference in stream sedimentation between alternatives across the analysis area. Stream turbidity is not expected to change under any of the alternatives, because the suspended sediment would not change.</p>

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>g) Localized impacts where trails cross streams or where camps are located near water</b>	Qualitative discussion	No impacts from pack and saddle stock outfitter-guides at trail stream crossings or camps near water. Overall 15% reduction in pack and saddle stock use would reduce impacts, however localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality would occur from non-outfitted use. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	There would be a 4% increase in pack and saddle stock outfitter-guide service days compared to current number, but only a 0.6% increase in all pack and saddle stock use. Small increase would not change conditions from current conditions. There would localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	The 40% reduction in the number of pack and saddle stock service days would reduce impacts from outfitters. There would be an overall reduction in pack and saddle stock use of 6%. Impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality would be reduced. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.	The <del>50%</del> 6% increase in pack and saddle stock visitor days would increase localized impacts to stream banks and other water features, including damage to riparian vegetation and reduction in water quality compared to the existing condition or Alternative 2. The isolated, localized impacts would not adversely affect riparian habitat conditions or water quality beyond the immediate areas.
<b>h. Fecal coliform levels</b>	Qualitative discussion	Outfitters would not operate, so stock would not contribute to background fecal coliform levels. Non-outfitted recreationists and stock, in addition to wildlife would result in fecal coliform in all waterways.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.	Short-term increases in fecal coliform levels at trail crossings and watering spots when stock are present. Fecal coliform would be quickly dissipated by rapidly moving water in streams. Clean Water Act standards for surface water would not be violated.

Significant Issue	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
5. Barren core limitations in Alternative 2 would not be large enough for a party of 12 people and 18 head of stock, and the number of service days in that alternative would not allow the businesses to respond to increases in demand for pack and saddle stock outfitter-guide services.					
a) amount of area needed for a party of 12 people and 18 head of stock	Qualitative discussion	No pack and saddle stock outfitter-guides would operate on National Forest System Land.	Approximately 95% of campsites used by outfitter-guides have less than 5,250 square feet of barren core. The 8 campsites exceeding 5,250 are some of the most frequently used sites, including 3 assigned sites. Altering use patterns in the large camps could be difficult and reduce the quality of the camping experience for the clients.	Approximately 85% of the campsites used by the outfitter-guides have less than 2,800 square feet of barren core. All the campsites most regularly used, including all the assigned sites, have more than 2,800 square feet of barren core. The reduced party size in Alternative 3 would help prevent creation of additional barren core.	Outfitters would be able to use existing barren core in established campsites. This would allow enough room for 12 people and 18 head of stock in every camp without changing the use patterns, or impacting the quality of the camping experience for clients.
b) impacts to the businesses from the number of service days	Qualitative discussion	No pack and saddle stock outfitter-guides would operate on National Forest System Land.	Each outfitter would have enough days to match the highest actual use in the past 5 years plus 25%. If demand increases to <u>highest levels between 1999 and 2009</u> levels seen 10 years ago, the outfitters would not be able to meet the demand.	Each outfitter would have the number of service days equal to the average amount of annual use in the past 5 years. This would be a 40% reduction compared to current, and would substantially reduce business profits.	Each outfitter would have enough service days to match the highest <del>annual</del> <u>actual</u> use in the past <del>10</del> <u>5</u> years plus 25%. If demand increases to <u>highest levels between 1999 and 2009</u> levels seen 10 years ago, the outfitters would <u>partially</u> be able to meet those demands, <del>increasing</del> <u>profits</u> .

Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Pack and saddle stock outfitter-guides could introduce noxious weeds into currently weed-free areas, such as wilderness, in stock manure.</b></p>	<p>Qualitative discussion</p>	<p>There would be no outfitter-guide pack and saddle stock that could potentially introduce weeds. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>	<p>Outfitters would help identify and locate newly established weed populations, aiding in early treatment. The requirement for certified weed-free hay at Wilderness trailheads began in 2007, and everywhere on National Forest System Land in 2009 which substantially reduced the possibility of weeds being spread by non-outfitted pack and saddle stock users.</p>
<p><b>Pack and saddle stock outfitter-guides could degrade air quality with smoke from campfires.</b></p>	<p>Qualitative discussion</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. There would be no pack and saddle stock outfitter-guide campfires, therefore no impact on air quality.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>	<p>The Pasayten Wilderness is the only Class I Airshed in analysis area. It is unlikely that smoke from campfires would degrade air quality. Campfires are built with dry fuel, and burn rapidly, ventilating upwards. In addition, there would not be a large enough concentration of smoke given the dispersed location of campsites.</p>

Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Firewood gathering by pack and saddle stock outfitter-guides could degrade the environment by removing down woody debris and limiting or eliminating this habitat component.</b></p>	<p>Qualitative discussion</p>	<p>No firewood would be gathered by pack and saddle stock outfitter-guides. Non-outfitted recreationists would continue gathering firewood on less than one tenth of one percent of the analysis area. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>	<p>Less than one tenth of one percent of the analysis area would be affected by firewood gathering. There would be some loss of habitat, but abundant habitat exists away from these isolated spots.</p>
<p><b>Reducing the number of service days allowed could lead to some existing pack and saddle stock outfitters going out of business because of reduced revenues.</b></p>	<p>Qualitative discussion</p>	<p>No pack and saddle stock outfitter-guide permits would be issued, so the existing companies would no longer be able to offer trips into the backcountry or wilderness. Most would likely go out of business.</p>	<p>Enough service days would be authorized to allow the existing businesses, or suitable replacements, to continue roughly the same amount of revenue as they have over the past 5 years, with an additional 25% available for a <del>modest amount of</del> growth.</p>	<p>The reduction in allowable service days and party size could force some businesses to close because of increased operating costs, and decreased opportunities to generate revenue.</p>	<p>The number of authorized service days would allow the existing businesses, or suitable replacements, to increase business to approximately 25% over highest levels <del>from</del> experienced <b><u>between 1999 and 2009.</u></b> <del>0 years ago.</del> This alternative could lead to increased revenues if demand increases over current levels.</p>

<p><b>Pack and saddle stock outfitter-guides could degrade the experience of other recreation users outside wilderness.</b></p>	<p>Qualitative discussion</p>	<p>There would be no pack and saddle stock outfitter-guides, so no impact on the experience of other recreation users outside wilderness</p>	<p>Approximately 2% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>	<p>Approximately 1% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>	<p>Approximately 3% of the recreation use in the analysis area outside wilderness would be associated with outfitted pack and saddle stock use. Some conflict exists between outfitted and non-outfitted users, but the relatively small amount of outfitted use compared to non-outfitted use minimizes the frequency of conflict and contact.</p>
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Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p><b>Pack and saddle stock outfitter-guide activities could lead to soil damage and displacement in meadows and other areas by stock trampling, grazing, and crossing wet areas.</b></p>	<p>Qualitative discussion</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. There would be no impact to soils from pack and saddle stock outfitter-guide activities. There would be approximately 15% fewer pack and saddle stock in the analysis area with this alternative, but the existing areas of damage would continue to be used by non-outfitted pack and saddle stock, so the amount of area with damaged soil would likely not change. The vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would be a small reduction in total barren core with the 5,250 square foot limitation on barren core, but when viewed at a landscape scale this reduction would be inconsequential. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would be a small reduction in total barren core with the 2,800 square foot limitation on barren core, but when viewed at a landscape scale this reduction would be inconsequential. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>	<p>Most existing detrimental soil damage occurred prior to implementation of the Forest Plans. Pack and saddle stock outfitter-guides would continue to use campsites, trails, and grazing areas. There would no increase in barren core as a result of outfitter-guide activities. Soil in and around campsites, at stock watering areas, and trail crossings would continue to be compacted and displaced by outfitter-guides, but the vast majority of the analysis area is completely unaffected by recreation activities, so the isolated areas of soil damage are not resulting in unacceptable amounts of detrimental soil damage.</p>

Other Issues	Unit of Measure	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>Pack and saddle stock outfitter-guide grazing could exceed Forest Plan standards and guidelines pertaining to forage utilization.</b>	Qualitative discussion	There would be no outfitter-guide stock forage use with this alternative. Non-outfitted stock would continue to graze around campsites. Stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would continue to be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.	Outfitter-guide stock forage utilization would be well within allowable use standards and consistent with all standards and guidelines. There would be localized areas of concentrated use associated with camps. With the closing of the wilderness livestock permits, even with outfitter-guide grazing, the forage use and resource impacts are still very far below the use and impacts under the old grazing allotment stocking rates.
<b>Pack and saddle stock outfitter-guides are important to the local economy.</b>	Number of Jobs Labor Income Total Sales	0 \$0 \$0	27.6 jobs \$922,451 \$1,340,359	15.9 jobs \$531,108 \$771,722	<del>40</del> <b>36.3</b> jobs <del>\$1,237,753</del> <b>\$1,214,360</b> <del>\$1,943,811</del> <b>\$1,764,516</b>

## **PREFERRED ALTERNATIVE**

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The Preferred Alternative is *the modified* Alternative 4 *detailed in this Draft Supplemental EIS*.

## Affected Environment and Environmental Consequences

...

### Past, Present, and Reasonably Foreseeable Future Actions

*The FEIS was completed in 2013, and over 3 years have passed necessitating a change in the timeframe for all cumulative effects analyses. Therefore all references in the cumulative effects analyses that cite the time boundary for such effects is changed from 2023 to 2027. These occur on FEIS pages 3-19, 3-81, 3-116, 3-125, 3-139, 3-222, 3-276, 3-283, 3-285, 3-289, 3-296, 3-299, 3-302, 3-305, 3-307, 3-308, 3-309, 3-310, 3-311, 3-312, 3-313, 3-314, 3-315, 3-316, and 3-366. The updates to the resource sections specified below also apply to and update the specialist reports in the analysis file.*

...

#### Present Actions

...

#### Special Use Permits

...

*All outfitter-guides listed in Figure 3.0-1 in the FEIS on page 3-5 are still operating with the exception of Deli Llama Wilderness Adventure.*

**Figure 3.0-1. Existing Outfitters-Guides**

Outfitter	Type of Activity	Area of Operation	Season of Operation	Type of Permit
<del>Deli Llama Wilderness Adventure</del>	<del>Pack and Saddle Stock (horses and mules)</del>	<del>Pasayten Wilderness, North Cascades Scenic Highway</del>	<del>Summer and fall</del>	<del>Priority (1 year)</del>

...

## Reasonably Foreseeable Future Actions

...

### Recreation Activities

...

The following figure lists current non-outfitted recreationists in each section of the analysis area, and the foreseeable number in ~~2023~~ 2027.

Figure 3.0-3. Current Number of Non-Outfitted Visitor Days and Estimated Number in ~~2023~~ 2027

Area	Non-Outfitted Visitor Days	Estimated Non-Outfitted Visitor Days in <del>2023</del> <u>2027</u>
Pasayten Wilderness	16,900	18,770
Lake Chelan-Sawtooth Wilderness	35,885	39,362
North Cascades Scenic Highway Corridor	71,727	116,707
Sawtooth Backcountry	13,606	14,994
Bear/Ramsey/Volstead	952	908
Middle Methow	15,000	16,439
Alta Lake	9,770	10,699
<b>TOTAL</b>	<b>163,840</b>	<b>217,933</b>

...

## 3.1 OUTFITTER-GUIDES

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...

*The Outfitter-Guide section of Chapter 3, beginning on FEIS page 3-10 is updated to reflect the change in the currently operating outfitters, and the decrease in wilderness service days in Alternative 4.*

### Affected Environment

...

*This updates the paragraph the actual use discussion on FEIS pages 3-11 and 3-12.*

The number of pack and saddle stock outfitter-guides and the number of service days has been relatively steady for the past twenty to thirty years, although there has been a decrease in actual use service days in the past five years. Several factors are possibly contributing to this, including a decreased popularity of the activity, wildfires, and the downturn in the economy. Ownership of some of the companies has changed, and three are currently not operating. The following table shows the **current status of the long-term pack and saddle stock outfitter-guides.** ~~average number of reported service days each has had over the past 20 years excluding years of authorized non-use.~~

Figure 3.1-1. ~~Current Status of Pack and Saddle Stock Outfitter-Guide and 20-Year Average Reported Service Days (excluding years of non-use)~~

Outfitter-Guide	Current Status <del>Average Reported Service Days</del>
Backcountry Burros*	<del>322</del> <b>Not Operating</b>
Cascade Wilderness Outfitters	<del>1,055</del> <b>Operating</b>
Deli-Llama Wilderness Adventure	<del>96</del> <b>Not Operating</b>
Early Winter Outfitting	<del>1,412</del> <b>Operating</b>
North Cascade Outfitters	<del>334</del> <b>Operating</b>
North Cascade Safari	<del>894</del> <b>Operating</b>
Pasayten Llama Packing*	<del>183</del> <b>Not Operating</b>
Rocking Horse Ranch*	<del>712</del> <b>Not Operating</b>
Sawtooth Outfitters	<del>801</del> <b>Operating</b>
<b>TOTAL</b>	<b>5,803</b>

\*No longer operating

...

Deli Llama Wilderness Adventures ~~has been operating~~ **operated** under a special use permit for llama outfitting and guiding since 1993. Their ~~current last~~ permit ~~is~~ **was** for 151 service days in the Pasayten Wilderness and North Cascades sub-units. **They are no longer operating as an outfitter and no longer have a special use permit.**

...

## Environmental Consequences

*This updates the portion of the direct and indirect effects of Alternative 4, found on FEIS page 3-19.*

### Direct and Indirect Effects

...

#### Alternative 4

...

Alternative 4 would increase available service days to ~~6,700~~ **6,082**. This would give the outfitters the opportunity to meet the demand for their services if that demand rebounds to the level seen in the early part of the last decade (refer to the ~~2012~~ **2016** Needs Assessment in Appendix B). According to the outfitters, the ability to increase the number of clients would likely allow them to cover increasing operating costs and remain viable businesses in the future.

...

*This updates the portion of the outfitter-guide cumulative effects section beginning on FEIS page 3-19.*

### Cumulative Effects

Past, present, and reasonably foreseeable future actions in or near the analysis area are listed in the first part of this chapter. The spatial boundary for cumulative effects is the analysis area plus the outfitter-guides adjacent ranches where outfitters begin trips from their land. The temporal timeframe is from the early 1900s (when outfitting first began on the Forest) through ~~2022~~**2027** when the permits that would be issued under this analysis would expire and the effects of those permits would cease. The actions mentioned below affect, or have the potential to affect, pack and saddle stock outfitter-guides.

...

#### Alternative 4

The cumulative effect of the past, present, and reasonably foreseeable future actions and Alternative 4 would be that the existing demand and the future demand based on the past ~~ten~~ **five** years of actual use for commercial outfitter-guide services for a variety of activities would be met. The effect would be that more people would have access to recreation on National Forest System land.

...

## 3.2 WILDERNESS

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...

*The updates to the Wilderness section, beginning on FEIS page 3-21 include incorporating the information from the 2016 Needs Assessment, and updating the effects of changing the number of service days in Alternative 4. It also updates the cumulative effects analysis.*

*The following updates the subsection beginning on FEIS page 3-23.*

#### NEED ASSESSMENT AND MINIMUM EXTENT NECESSARY DETERMINATION

...

The Forest Service completed the analysis for both the need and extent necessary, and documented the findings in a paper titled “Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness”, June 2010 (USDA Forest Service, 2010). This document was revised to respond to public comments on the Draft Environmental Impact Statement. The calculations in the 2010 document were confusing, and the finding of need was based on providing enough service days to keep the existing outfitters in business. This did not meet the intent of establishing the minimum extent necessary to meet the provisions in the Wilderness Act. The revised document is titled “Determination of Need and Extent Necessary for Commercial Services (Outfitters and Guides) in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness”, August 2012 (USDA Forest Service, 2012). ~~This paper is referred to as the “2012 Needs Assessment” in this document.~~ **This document calculated the extent necessary as a range of service days based on including an anticipated increase in demand due to the demographic shifts in the aging population. This approach was discarded, and the document was revised again following the withdrawal of the 2013 Pack and Saddle Stock Outfitter-Guide Permit Issuance Record of Decision. The most current version is referred to as the “2016 Needs Assessment” in this document.** The following information is summarized from the **2016** Needs Assessment. Refer to Appendix B for complete information, analysis, and calculations.

...

### Historic Number of Service Days

The range of years used for this determination was from 2001 to 2010. There has been a decline in outfitter guide service days in the past five years, but the reason for that decline is unknown. The decline may be a result of wildfires, the downturn in the economy, decreased demand, or other factors. The eleven year span was selected in case the factors affecting the use change, and the need increases to the levels seen earlier in the 11-year span.

...

### Anticipated Changes in Need and Demand

...

~~The shifting demographics in the population will influence the minimum extent of commercial services needed. The need for stock outfitter guides is likely to increase as the population ages, and more people are physically unable to access the wilderness on foot or carrying a backpack. There will be approximately 25% more people in the over 50 age class by 2020 (Washington State Office of Fiscal Management, 2010). The number of people in this age class wanting to travel into the wilderness could also increase by approximately 25%. Since approximately 73% of stock outfitter guide clients are over 49 years old, the minimum extent of stock outfitter guide service days could be an additional 25% above and beyond the 3% increase in stock users estimated by Washington State (Interagency Committee on Outdoor Recreation, 2003).~~

**Forest Service handbook direction also allows creation of a pool of service days that can be held in reserve, and assigned on an as-needed basis to allow outfitters extra days if bookings exceed assigned priority use days. These days return to the priority use pool at the end of each season, making them available to outfitters who need them the following season.**

**Pools are necessary in managing commercial activities in wilderness because they help ensure that an adequate number of service days are available during years when the need is high, without inflating the number of priority use days assigned to individual outfitter-guides in an attempt to cover the need. By assigning a conservative number of priority use service days to outfitter-guides, the Forest Service can keep the number of guaranteed service days to a minimum, but still be able to assign days on an as-needed basis to cover the peaks in need, in both priority and temporary special use permits.**

**The Forest Service would not exceed the calculated extent necessary. The extent necessary includes both allocated Priority Use days and pool days to allow the Forest Service to meet future, unanticipated need for outfitter and guide service. An example of this would be when wildfires or other natural disasters forces the need to shift from one wilderness to another. The total of the pool and calculated extent necessary would not be exceeded, even when this occurs. The pools were calculating by combining the use from the highest use year for each individual outfitter (priority use days are calculated by using the highest one year of use by all outfitters).**

Considering all the factors, the minimum extent of pack and saddle stock commercial services in the Pasayten ~~will range from approximately 1,735 to 2,170 service days~~ **is 1,330 priority use service days, with a pool of 310, for a total of 1,640 service days.** In the Lake Chelan-Sawtooth, the range will be

~~approximately 660 to 825 (Needs Assessment, 2012)~~ **is 530 priority use service days, with a pool of 207, for a total of 737 service days.**

...

## DATA SOURCES

*This updates this section found on FEIS page 3-30.*

### Service Days

Use data has been compiled using the most accurate data available. The number of service days in the existing pack and saddle stock outfitter-guide permits plus the number of days in the priority use pool is used as the current service days. The number of service days actually used varies from year to year. Reliable records for the Pasayten and Lake Chelan-Sawtooth are available for the past 10 to 20 years. Some data gaps and margins of error exist due to data interpretations. Reports of use provided by the outfitters occasionally recorded vague or unknown destination locations. **Actual use data from the 2014 and 2015 operating seasons was not used in this analysis. Extremely large wildfires near the permit area during those years kept use low, and does not represent typical years.** The data is the best information available, and has a level of accuracy that is more than adequate for this analysis. More detailed use data, or data that goes back farther in time, is not essential and is not critical to the analysis of wilderness character attributes.

...

### Total Recreation Use Levels

...

The averaged permit data showed ~~16,830~~ **16,338** visitor days, which was relatively close to the 18,654 visitor days from the 2005 NVUM. This validated the 2005 results, and suggests the 2010 data is not reliable enough to use.

...

## AFFECTED ENVIRONMENT

*This updates the Historic Activities section found on FEIS page 3-33.*

### Historic Activities

...

#### Wildfires and Wildfire Suppression

...

Some of the lower elevations surrounding the western slopes of the Lake Chelan-Sawtooth have burned in the last ~~10~~ **15** years. This burn pattern reduces the probability of fires burning upslope from Lake Chelan to spread fire into the wilderness, since the wilderness boundary is within approximately 50 feet of the lake's high water mark. Over 200,000 acres have burned in the Pasayten in the last ~~10~~ **15** years. Areas burned by high severity fire in Andrews and Farewell Creek drainages continue to elevate the risk of debris slides in these two watersheds. The wildfires caused short-term displacement of recreationists, increasing use in portions of the wilderness away from the

burned areas. Use patterns returned to pre-fire conditions once the fires burned out and trails were repaired to allow access.

...

*The following includes information about a Minimum Resource Decision Guide completed in 2016 for the structures in some of the assigned outfitter guide camps, found on FEIS page 3-50.*

Pasayten

...

**The Bald Mountain and Sheep Mountain camps have constructed features for stock containment. A minimum requirement decision guide (MRDG) was completed in 2016 to determine the need for these structures, and determined that allowing the continued use of the structures would better protect wilderness character by minimizing the amount of barren core in camps (refer to MRDG in the analysis file).**

## ENVIRONMENTAL CONSEQUENCES

*This updates the comparison of alternatives, found beginning on FEIS page 3-53.*

### Direct and Indirect Effects

...

**Figure 3.2-11. Comparison of Alternative Components by Alternative**

Wilderness	Alternative Component	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Pasayten	Number of Service Days***	0	2,000	1,000	<del>2,170</del> <b>1,640</b>
Lake Chelan-Sawtooth	Number of Service Days***	0	720	320	<del>825</del> <b>737</b>

\*\*\*This would be the total number of service days available. Some would be assigned to each outfitter, and the rest held in a pool. Refer to the alternative descriptions in Chapter 2 for more information.

...

### **Recreation Use**

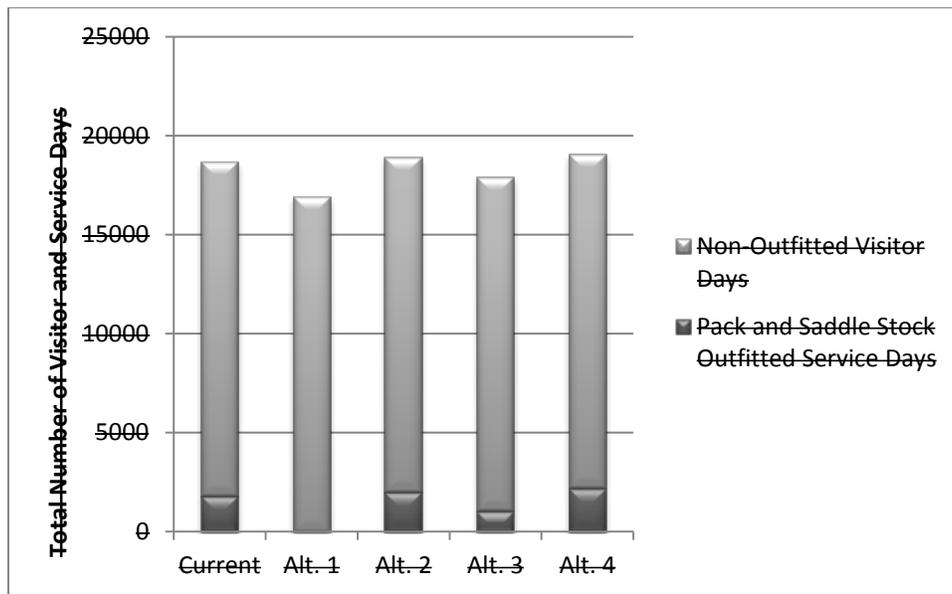
Each alternative would have result in a slight change to the number of recreation users, which includes pack and saddle stock service days. Alternative 1 would reduce the number of people visiting the Pasayten by 1,800, since pack and saddle stock outfitter guides would be eliminated. Alternatives 2 and 4 would slightly increase, and Alternatives 3 and 4 would slightly decrease the overall number of people in the Pasayten. The following table includes the number of visitor days, outfitted and non-outfitted currently and by alternative, in the Pasayten. Non-outfitted days are included to provide context and intensity for the direct and indirect effects of the alternatives.

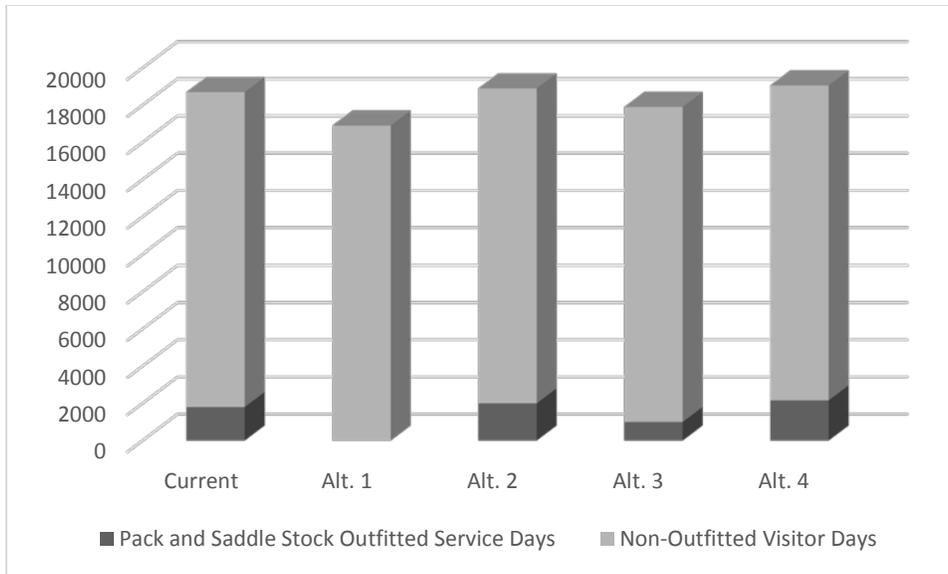
**Figure 3.2-12. Total Visitor Days and Outfitted Days in the Pasayten, Comparing Current to Alternatives**

Current or Alternative	Pack and Saddle Stock Users	Hikers	Total
...			
<b>Alternative 4</b>			
Total Visitor Days	<del>5,996</del> <b>5,379</b>	13,090	<del>19,070</del> <b>18,469</b>
Pack and Saddle Stock OG Service Days	<del>2,170</del> <b>1,640</b>	0	<del>2,170</del> <b>1,640</b>
Percent of total	<del>36%</del> <b>29%</b>	0%	<del>12%</del> <b>8%</b>
Percent Change From Current Total	<del>+6%</del> <b>-4%</b>	0%	<del>+2%</del> <b>-1%</b>
Percent Change from Current Service Days	<del>+20%</del> <b>-13%</b>	0%	

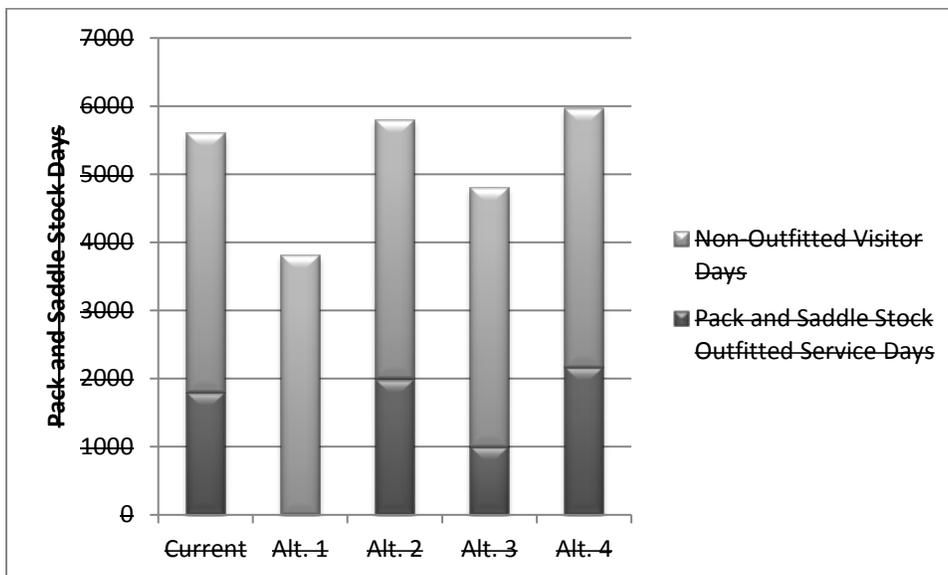
The following figures display this information in graph form. The non-outfitted use is included to provide context and intensity of the effects of each alternative.

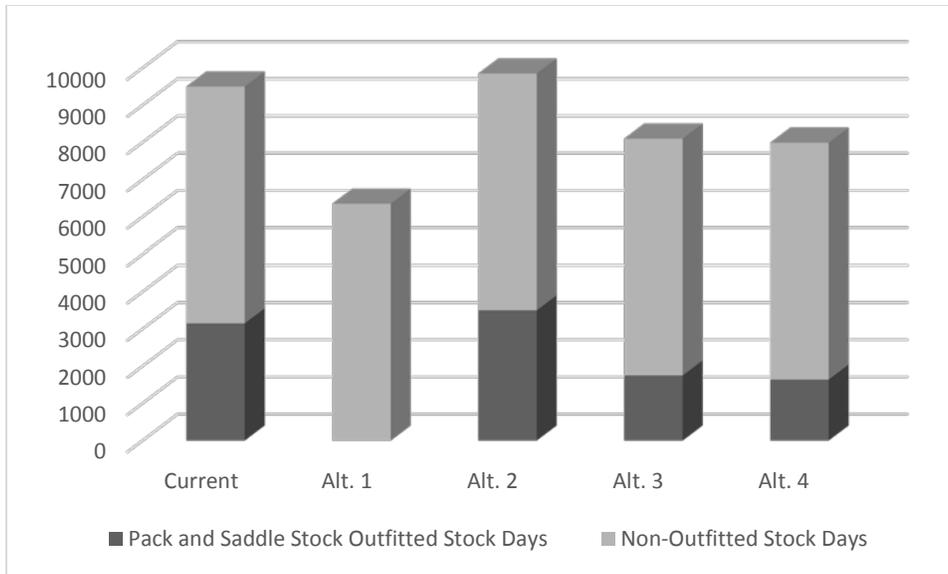
**Figure 3.2-13. Total Visitor Days in Pasayten, by Alternative**





**Figure 3.2-14. Total Number of Pack and Saddle Stock Days in Pasayten, by Alternative**





The following figure displays the approximate number of stock days in the Pasayten, by alternative. Refer to the Wilderness Report in the analysis file for the calculations.

**Figure 3.2-15. Approximate Number of Stock Days in Outfitted and Non-outfitted Parties in Pasayten Annually, and Percent Change from Current**

	Non-Outfitted Stock Days	Outfitted Stock Days	Total Stock Days	Percent Change From Current
...				
Alternative 4	6,350	<del>3,780</del> <b>2,870</b>	<del>10,130</del> <b>9,220</b>	<del>+7%</del> <b>-3%</b>

The following table includes the use information for the Lake Chelan-Sawtooth Wilderness.

**Figure 3.2-16. Total Visitor Days and Outfitted Days in the Lake Chelan-Sawtooth, Comparing Current to Alternatives**

Current or Alternative	Pack and Saddle Stock Users	Hikers	Total
<b>Alternative 4</b>			
Total Visitor Days	<del>12,920</del> <b>12,832</b>	23,790	<del>36,710</del> <b>36,662</b>
Pack and Saddle Stock OG Service Days	<del>825</del> <b>737</b>	0	<del>825</del> <b>737</b>
Percent of total	6%	0%	2%
Percent Change from Current Total	+0.2%	0%	<del>+0.13%</del> <b>+0.2%</b>
Percent Change from current Service Days	<del>+15%</del> <b>+3%</b>		

**Figure 3.2-17. Total Recreation Use in Lake Chelan-Sawtooth, by Alternative**

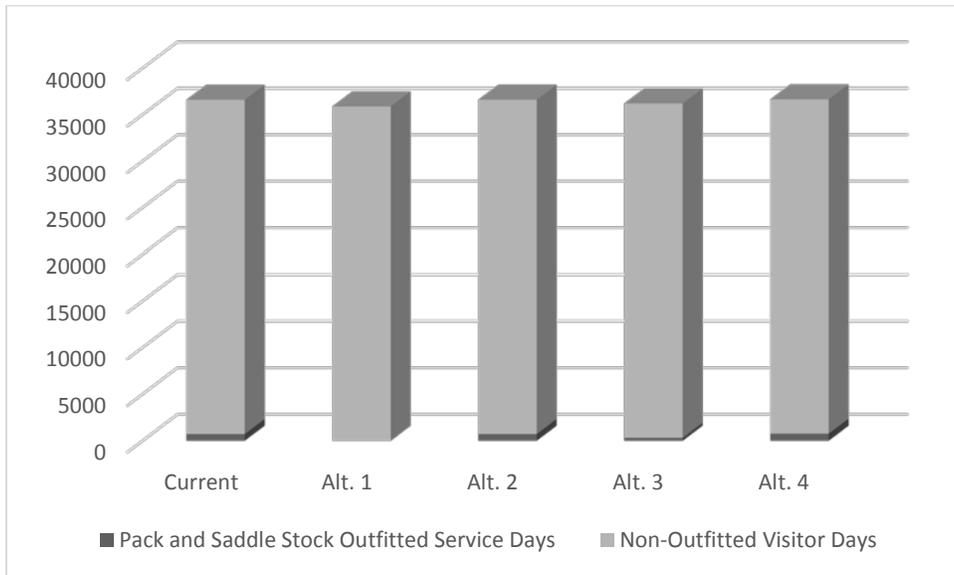
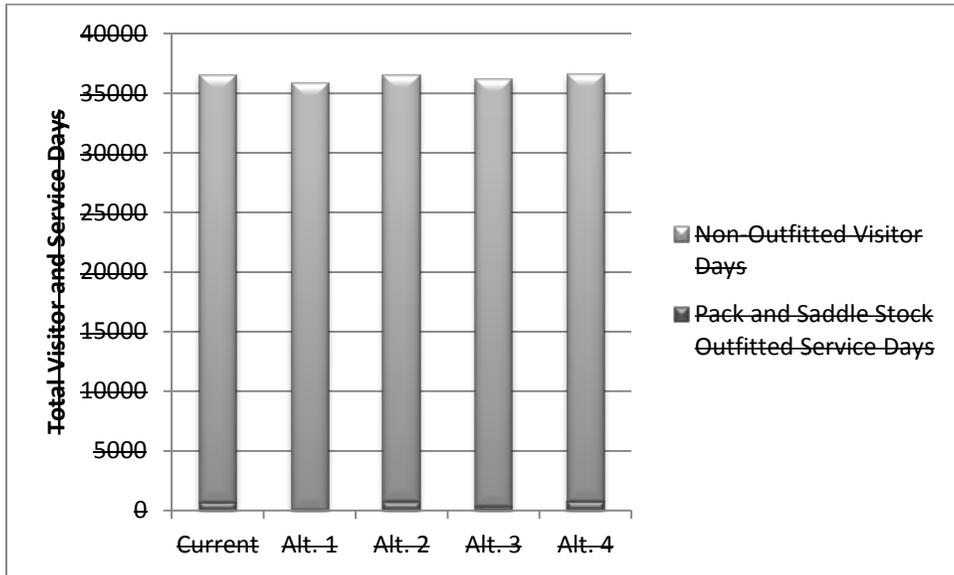
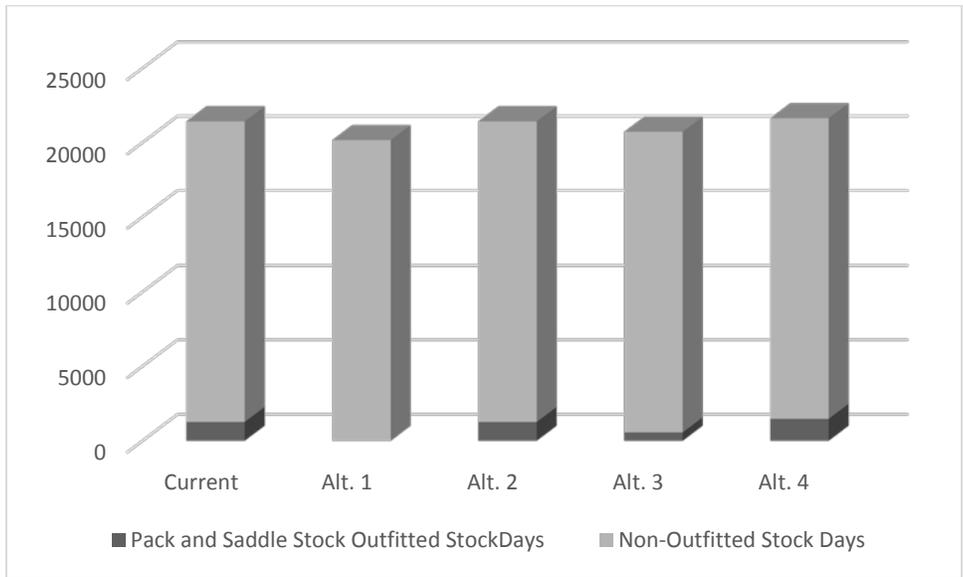
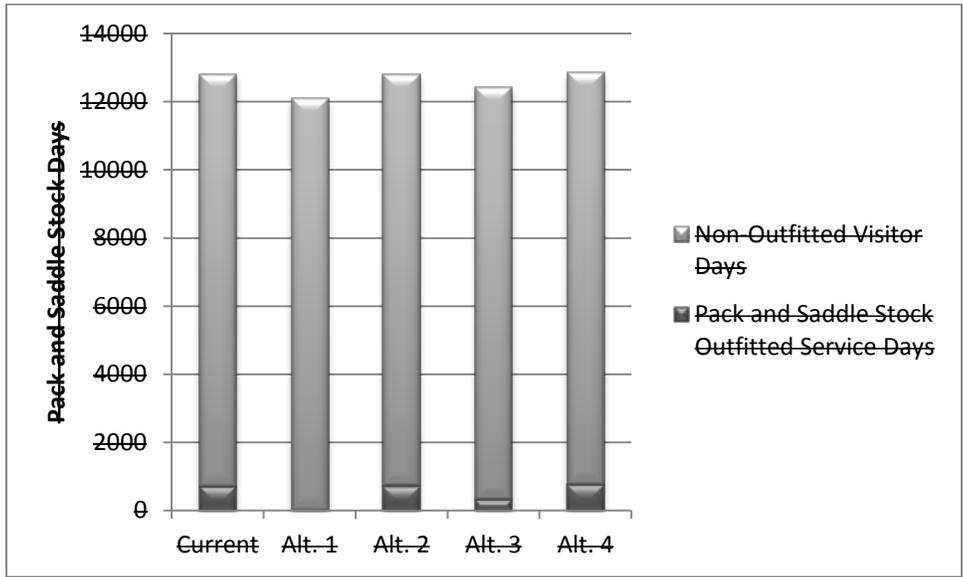


Figure 3.2-18. Total Number of Pack and Saddle Stock Days in Lake Chelan-Sawtooth, by Alternative



The following figure shows the approximate number of stock days in the Lake Chelan-Sawtooth, by alternative. Refer to the Wilderness Report in the analysis file for the calculations.

Figure 3.2-19. Approximate Number of Stock Days in Outfitted and Non-outfitted Parties in Lake Chelan-Sawtooth, Annually, and Percent Change from Current

	Non-Outfitted Stock Days	Outfitted Stock Days	Total Stock Days	Percent Change From Current
...				
Alternative 4	20,162	<del>1,470</del> <u>1,290</u>	<del>21,632</del> <u>21,452</u>	<u>+0.05%</u>

...

*The following updates the effects of Alternative 2 pertaining to meeting the need for commercial services, found on FEIS pages 3-73 and 3-77.*

#### **Alternative 2**

...

##### **Meeting the Need for Commercial Services**

This alternative would ~~provide enough commercial services to meet the low end of the range of minimum extent necessary. If the need increases due to the aging population, the alternative would fall short of meeting the need (upper end of the minimum extent necessary range~~ Pack and saddle stock wilderness recreation would be accessible to the portion of the population needing the services due to physical limitations, or lack of skill and equipment. Those needing the services of an outfitter would be able to travel into the wilderness and enjoy the opportunities for primitive and unconfined recreation. **exceed the extent necessary for commercial services in the Pasayten, and fully meet the need in the Lake Chelan-Sawtooth. Pack and saddle stock wilderness recreation would be accessible to the portion of the population needing the services due to physical limitations, or lack of skill and equipment. Those needing the services of an outfitter would be able to travel into the wilderness and enjoy the opportunities for primitive and unconfined recreation.**

...

#### **Alternative 3**

...

##### **Meeting the Need for Commercial Services**

The alternative would ~~not meet the low end of the range of~~ **partially meet** the minimum extent necessary, so opportunities for primitive and unconfined recreation would be reduced from current levels for people requiring the services of an outfitter-guide. Pack and saddle stock wilderness recreation would be accessible to about half of the people needing the services due to physical limitations, or lack of skill and equipment. The unserved half would not have the opportunity to experience the primitive and unconfined recreation offered.

...

*The following updates the indirect and direct effects of Alternative 4 tied to the number of service days, beginning on FEIS page 3-77.*

#### **Alternative 4**

Alternative 4 would ~~result in minor localized impacts to wilderness character compared to the existing condition because the 20% increase in service days.~~ **slightly reduce the number of service days in the Pasayten Wilderness from the current number, and slightly increase the days in the Lake Chelan-Sawtooth. The small changes in service days would result in essentially the same effects to wilderness character as the existing use, so the current effects to wilderness character described under the Affected Environment section would continue.** The outfitter-guide activities would impact opportunities for solitude in and around campsites, and along trails because the sights and sounds of their activities and clients would detract from the remoteness of those localized areas. The forest plan amendments allowing the outfitters to use existing campsites within 200 feet of meadows, streams, lakes, and key interest areas, and to use the existing barren core at any campsite without increasing the barren core

would prevent degradation of wilderness character by avoiding creation of new campsites and not increasing the current amount of barren core.

...

### Natural Quality

The outfitter-guide activities would continue the current minor, localized impacts to the natural quality in wildernesses. The impacts **of Alternative 4** would be ~~the greatest with this alternative compared to Alternatives 1, 2 and 3. There would a 20% increase service days in the Pasayten, and a 2% increase in the Lake Chelan Sawtooth.~~ **reduced in the Pasayten compared to the current condition and Alternative 2 due to the 13% or 18% reduction respectively. Use would be slightly higher in the Lake Chelan Sawtooth compared to the current level, and slightly less compared to Alternative 2.** Even with ~~is increase~~ **these changes**, the impacts to the natural quality would be minor because the dispersed, loose-grazing stock would not alter plant communities, and would only slightly increase impacts to sensitive or rare plant species. There would continue to be isolated spots of damage to stream banks, but not at a level that would degrade aquatic habitat or water quality.

More details are included in the Botany, Water, Aquatic, Range, and Invasive Species reports.

### Opportunities for Solitude or Primitive and Unconfined Recreation

#### **Use Levels and Encounters**

There would be ~~small increases in the number of people using pack and saddle stock with this alternative compared to the current condition (6% in both the Pasayten and the Lake Chelan Sawtooth).~~ **a small decrease in the number of people using pack and saddle stock in the Pasayten with this alternative compared to the existing condition, with a 1% decrease. In the Lake Chelan-Sawtooth, there would be an approximate 2% increase in the number of pack and saddle stock users.** For other users, the opportunities for solitude would not be noticeable from the existing condition. People would continue to encounter people with stock, especially in those areas frequented by pack and saddle stock outfitter-guides. Campsite occupancy would ~~not increase slightly, but not enough to make finding established campsites difficult for non-outfitted recreationists.~~ **remain virtually unchanged, so availability of campsites for non-outfitted recreationists would not change from the current condition.**

...

#### **Meeting the Need for Commercial Services**

This alternative would fully provide the ~~upper range of the minimum amount~~ **extent necessary** of commercial services needed for wilderness recreation and increase the opportunities for primitive and unconfined recreation. Pack and saddle stock wilderness recreation would be accessible to the portion of the population needing the services due to physical limitations, or lack of skill and equipment. Those needing the services of an outfitter would be able to travel into the wilderness and enjoy the opportunities for primitive and unconfined recreation.

The following updates the cumulative effects analysis on FEIS pages 3-81 to 3-91.

**Cumulative Impacts of all Alternatives**

...

**Reasonably Foreseeable Future Actions**

...

Recreation Use

...

**Even though the RCO projections were only through 2020, these projections RCO projected rates of increase over a 10 year period are the best available information** were used to estimate the number of people who will be recreating in the Pasayten and Lake Chelan-Sawtooth in ~~2023~~ **2027 and were therefore used in the tables below.**

**Figure 3.2-22. Current Number of Visitor days by User Group in the Pasayten, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in <del>2023</del> <b><u>2027</u></b>
Backpackers	13,090	13%	14,792
Stock Users	5,610	3%	5,778
<b>TOTAL</b>	<b>18,700</b>		<b>20,570</b>

\*Includes current outfitter-guide service days

**Figure 3.2-23. Current Number of Visitor days by User Group in the Lake Chelan-Sawtooth, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in <del>2023</del> <b><u>2027</u></b>
Backpackers	23,790	13%	26,883
Stock Users	12,810	3%	13,194
<b>TOTAL</b>	<b>36,600</b>		<b>40,077</b>

\*Includes current outfitter-guide service days

It is reasonably foreseeable that the number of hiking/backpacking outfitter-guide service days will be the number recommended in the **extent necessary determination from** the ~~2012~~ **2016** Needs Assessment (USDA Forest Service, ~~2012~~ **2016**). Refer to page B-42 for details. **Although these outfitted hiking/backpacking days are not part of this decision in this EIS, they are reasonably foreseeable future actions.** Adding the potential outfitter-guide service days (pack and saddle stock and backpacking) to these totals **visitor use** shows **cumulative total of** the approximate number of visitor days, what percentage would be outfitted, and the percent changes compared to current levels. **Additionally, the incremental cumulative effect of just pack and saddle outfitters to the totals (which include hiking/backpacking outfitters) is shown.**

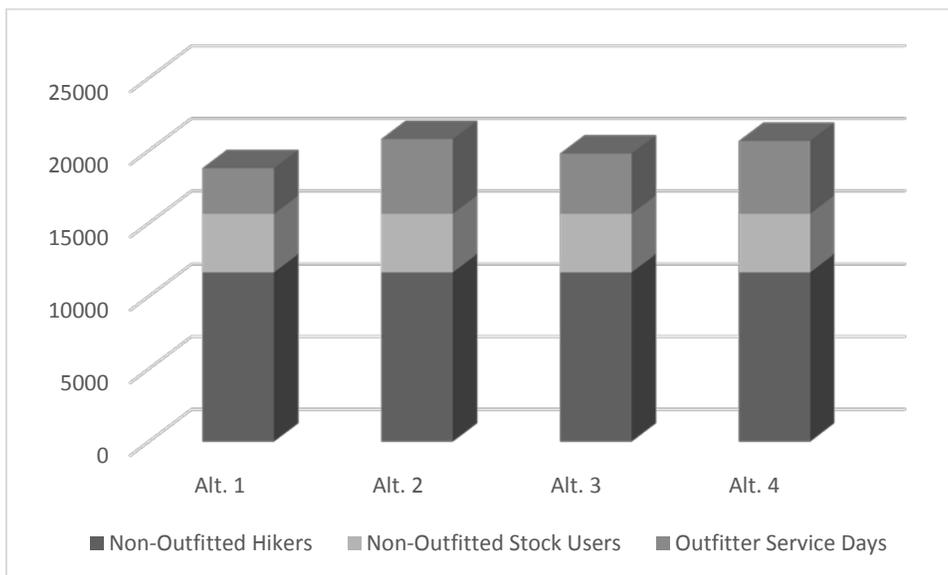
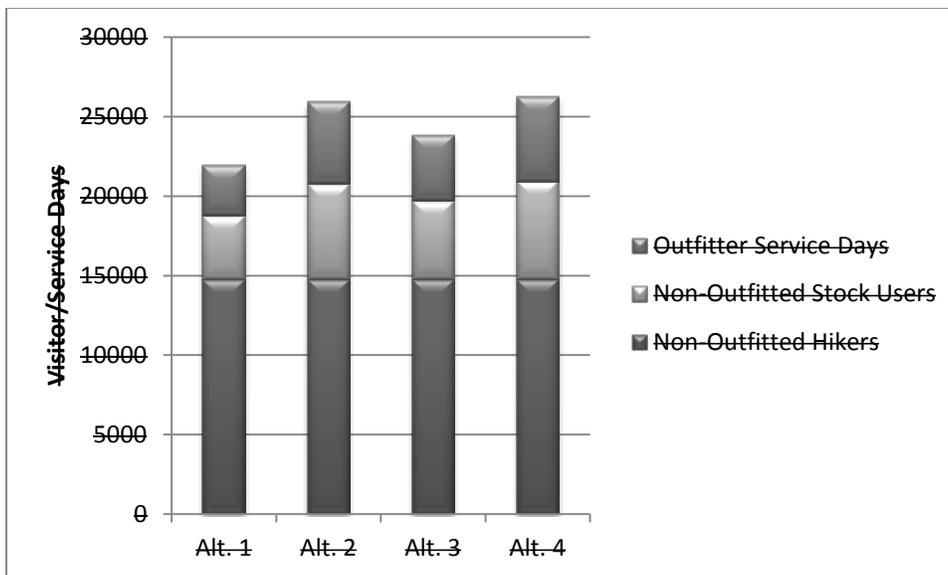
Figure 3.2-24. Cumulative Number of Visitor Days by User Group in the Pasayten in ~~2023~~ 2027, by Alternative, with Current for Comparison

Current or Alternative	Pack and Saddle Stock Users	Hikers	Total
<b>Current</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	5,610	13,090	18,700
Visitor Days Outfitted	1,800	3,150	4,950
Percent of total	32%	24%	26%
<b>Alternative 1</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	<del>3,988</del> <b>3,978</b> <i>(5,778 – 1,800)</i>	<del>14,792</del> <b>14,782</b>	<del>18,770</del>
Visitor Days Outfitted	0 <i>(incremental effect)</i>	3,150	3,150
Percent of total	0%	21%	17%
Percent Change from Current Total	-29%	+13%	+0.4%
<b><i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2027</i></b>	<b><u>2017</u></b>		<b>0%</b>
	<b><u>2027</u></b>		<b>0%</b>
<b>Alternative 2</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	<del>5,988</del> <b>5,978</b> <i>(3,978 + 2,000)</i>	<del>14,792</del> <b>14,782</b>	<del>20,770</del> <b>20,780</b>
Visitor Days Outfitted	2,000 <i>(incremental effect)</i>	3,150	5,150
Percent of total	33%	21%	25%
Percent Change from Current Total	+7%	+13%	+11%
<b><i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2027</i></b>	<b><u>2017</u></b>		<b>11%</b>
	<b><u>2027</u></b>		<b>10%</b>
<b>Alternative 3</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	<del>4,924</del> <b>4,978</b> <i>(3,978 + 1,000)</i>	<del>14,792</del> <b>14,782</b>	<del>19,716</del> <b>19,770</b>
Visitor Days Outfitted	1,000 <i>(incremental effect)</i>	3,150	4,150
Percent of total	20%	21%	21%
Percent Change from Current Total	-12%	+13%	<del>+5%</del> <b>6%</b>
<b><i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2027</i></b>	<b><u>2017</u></b>		<b>5%</b>
	<b><u>2027</u></b>		<b>5%</b>
<b>Alternative 4</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	<del>6,158</del> <b>5,618</b> <i>(3,978 + 1,640)</i>	14,792	<del>20,940</del> <b>20,410</b>
Visitor Days Outfitted	<del>2,170</del> <b>1,640</b> <i>(incremental effect)</i>	3,150	<del>5,320</del> <b>4,790</b>
Percent of total	<del>35%</del> <b>29%</b>	21%	<del>25%</del> <b>23%</b>
Percent Change from Current Total	<del>+10%</del> <b>0.1%</b>	+13%	<del>+25%</del> <b>+9%</b>
	<b><u>2017</u></b>		<b>9%</b>

<b><u>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2017 and 2027</u></b>	<b><u>2027</u></b>	<b><u>8%</u></b>
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This same information is used in the following graphical display. The outfitter-guide days for pack and saddle stock, and hiking/backpacking are combined into “Outfitter Service Days”. The “Stock Users” and “Hikers” are not outfitted.

**Figure 3.2-25. Cumulative Recreation Use in Pasayten by 2027, Outfitted and Non-Outfitted**



The information for the Lake Chelan-Sawtooth Wilderness is displayed below.

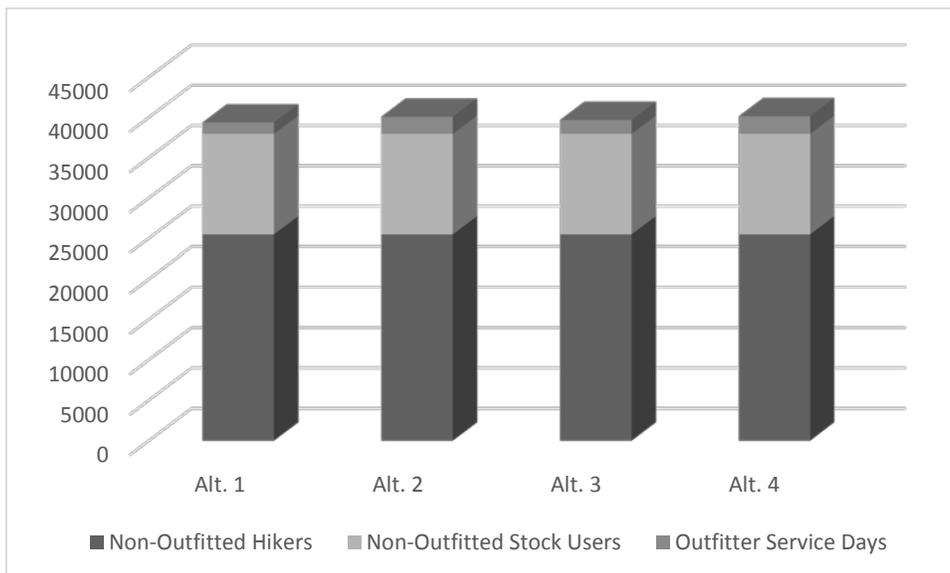
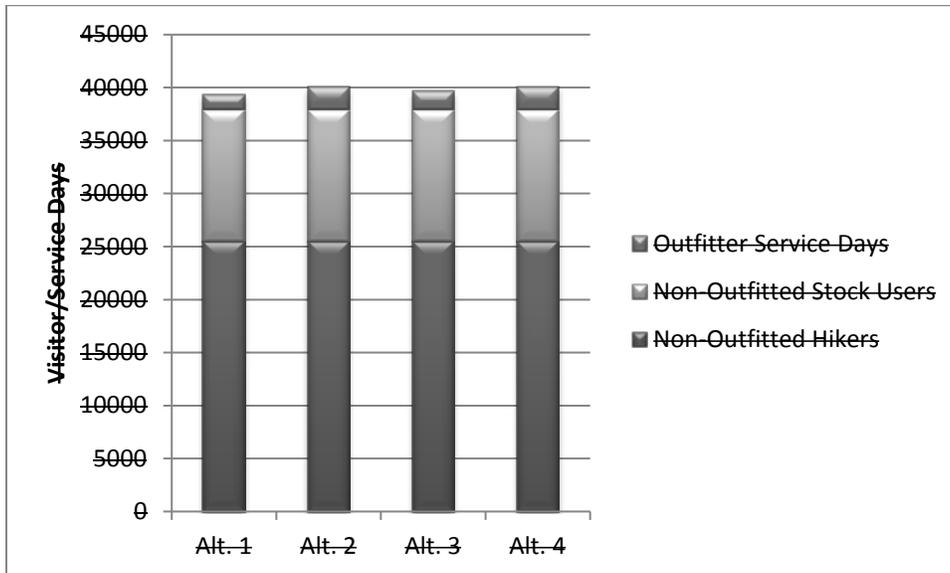
Figure 3.2-26. Cumulative Number of Visitor Days by User Group in the Lake Chelan-Sawtooth in ~~2023~~ 2027, by Alternative, with Current for Comparison

Current or Alternative	Pack and Saddle Stock Users	Hikers	Total
<b>Current</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	12,810	23,790	36,600
Visitor Days Outfitted	715	0	715
Percent of total	6%	0%	2%
<b>Alternative 1</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	12,479 <i>(13,194 - 715)</i>	26,883	39,362
Visitor Days Outfitted	0 <i>(incremental effect)</i>	1,400	1,400
Percent of total	0%	5%	4%
Percent Change from Current Total	-3%	+13%	+8%
<i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2017 and 2027</i>	<u>2017</u>		<u>0%</u>
	<u>2027</u>		<u>0%</u>
<b>Alternative 2</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	13,199 <i>(12,479 + 720)</i>	26,883	40,082
Visitor Days Outfitted	720 <i>(incremental effect)</i>	1,400	2,120
Percent of total	5%	5%	5%
Percent Change from Current Total	+3%	+13%	+10%
<i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2017 and 2027</i>	<u>2017</u>		<u>2%</u>
	<u>2027</u>		<u>2%</u>
<b>Alternative 3</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	12,799 <i>(12,479 + 320)</i>	26,883	39,682
Visitor Days Outfitted	320 <i>(incremental effect)</i>	1,400	1,720
Percent of total	3%	5%	4%
Percent Change from Current Total	-0.1%	+13%	+8%
<i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2017 and 2027</i>	<u>2017</u>		<u>1%</u>
	<u>2027</u>		<u>1%</u>
<b>Alternative 4</b>			
Total Visitor Days <i>(Outfitted and Non-Outfitted)</i>	<del>13,304</del> 13,216 <i>(12,479 + 737)</i>	26,883	<del>40,187</del> 40,099
Visitor Days Outfitted	<del>825</del> 737 <i>(incremental effect)</i>	1,400	<del>2,225</del> 2,137
Percent of total	6%	5%	5%
Percent Change from Current Total	<u>+3%</u>	+13%	+10%
	<u>2017</u>		<u>2%</u>

<u><i>Incremental Effect of Pack and Saddle Outfitter Guides on Total Visitor Use in 2017 and 2027</i></u>	<u><i>2027</i></u>	<u><i>2%</i></u>
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This same information is used in the following graphical display. The outfitter-guide days for pack and saddle stock, and hiking/backpacking are combined into “Outfitter Service Days”. The “Stock Users” and “Hikers” are not outfitted.

**Figure 3.2-27. Cumulative Recreation Use in the Lake Chelan-Sawtooth by ~~2023~~ 2027, Outfitted and Non-Outfitted**



### Cumulative Effects on Wilderness Character

**Alternatives 1, 2, 3, and 4**

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The effects to wilderness character of any of the alternatives when considered cumulatively with all past, present, and reasonably foreseeable future actions, are virtually identical. Overall, the cumulative effects of any of the alternatives to wilderness character would be minor. The untrammelled, undeveloped, and natural qualities have been improving since the elimination of commercial livestock grazing, although are still being affected by wildfire suppression, and fish stocking. The opportunities for solitude or primitive and unconfined recreation would be slightly improved by trail maintenance and campsite restoration projects. **Education activities would help reduce potential impacts to wilderness character by teaching visitors how to practice leave-no-trace techniques.** On the other hand, the projected increase in overall recreation use in the coming years would have a minor adverse impact to this quality.

The cumulative effect of all past, present, and reasonably foreseeable future actions will be an improving trend in wilderness character.

### **Untrammelled and Undeveloped Qualities**

There are no cumulative effects to the untrammelled and undeveloped qualities of the Pasayten or Lake Chelan-Sawtooth wilderness areas because there would be no direct or indirect effects from any of the alternatives. Some past, present, and reasonably foreseeable future actions are affecting these qualities. Fire suppression and fish stocking would continue to have a negative impact on the untrammelled quality, but the elimination of commercial livestock grazing is having a major wilderness-wide, beneficial impact on the untrammelled quality as wilderness ecosystems are allowed to function without wide-scale impacts to plant communities and soil properties. **Outfitter-guide use would not change this outcome.**

### **Natural Quality**

The cumulative effect of the past, present, and reasonably foreseeable future actions, and any of the alternatives would be a continued improving trend in the natural quality of both the Pasayten and Lake Chelan-Sawtooth wilderness areas. The natural quality of both wilderness areas is continuing on the wide-spread, upward trend that began with the elimination of commercial livestock grazing and **Forest Plan** party-size controls that have limited the size of recreational stock herds. Grazing by outfitted and non-outfitted pack and saddle recreational livestock would not alter plant communities, or impact vegetation more that could recover within one year (**see Botany section**). Therefore, the cumulative effect would be a continuing upward trend in vegetative condition. The ongoing trail maintenance will minimize erosion on trails, protecting streambanks and water quality. The outfitter-guide activities in Alternatives 2, 3, or 4 would have localized impacts to the natural quality but the impacts would be minor because the dispersed, loose-grazing stock would not alter plant communities, and would only slightly increase impacts to sensitive or rare plant species. There would continue to be isolated spots of damage to stream banks, but not at a level that would degrade aquatic habitat or water quality (**see Hydrology and Aquatic sections**).

### **Opportunities for Solitude or Primitive and Unconfined Recreation**

The **incremental effect of pack and saddle stock outfitter guide use may slightly decrease opportunities for solitude or primitive and unconfined recreation in Alternatives 2, 3 and 4 when considered with the** reasonably foreseeable future increases in non-outfitted recreation use, commercial backpacking/hiking outfitters, ~~and Alternatives 2, 3, or 4 could potentially decrease the opportunities for solitude~~ as popular destinations become more crowded. The cumulative effect of the elimination of pack and saddle stock outfitter-guides under Alternative 1 coupled with the potential

increases in non-outfitted recreationists ***and other activities*** would be virtually no change in the current number of people in the Pasayten, and an 8% increase in the Lake Chelan-Sawtooth, ***even with no use by pack and saddle outfitter guides. The incremental addition of use from permitted stock outfitter-guides in the Pasayten Wilderness ranges from 0% in Alternative 1, to 11% in 2017 to 10% in 2027 in Alternative 2, to 5% in 2017 and 2027 in Alternative 3, and ranges from 9% in 2017 to 8% in 2027 in Alternative 4. The incremental addition of use from permitted stock outfitter-guides in the Lake Chelan-Sawtooth Wilderness ranges from 0% in Alternative 1, to 2% in 2017 and 2027 in Alternative 2, to 1% in 2017 and 2027 in Alternative 3, to 2% in 2017 and 2027 in Alternative 4. That considered,*** the ***overall*** cumulative effect ***on visitor use from all sources*** with Alternative 2 would be an 11% increase in the Pasayten, and a 10% increase in the Lake Chelan-Sawtooth; with Alternative 3, a 6% increase in the Pasayten and an 8% increase in the Lake Chelan-Sawtooth; with Alternative 4, there would be a ~~25% increase~~ ***9% increase*** in the Pasayten and a 10% increase in the Lake Chelan-Sawtooth. ***Fire and fire suppression activities are not predictable, but when they happen, they can result in impacts to solitude or primitive and unconfined recreation, or result in completely closing areas thereby eliminating these opportunities for the general public, outfitter-guides, and their clients.*** Considering these small increases and the fact that the majority of people did not find the wilderness areas crowded (Burns, et al., 2010), the cumulative effect of all actions and any of the alternatives would be a virtually unnoticeable decrease in opportunities for solitude resulting from increased encounters with other people.

...

In all other campsites, ~~the cumulative effect of the outfitted and non-outfitted use could be increasing barren core, more damaged trees, and new travel routes, depending on the use pattern of the non-outfitted users;~~ ***outfitted-use would not add incrementally to these effects since none of these impacts are permitted. This Non-outfitted use*** could result in minor to moderate, localized impacts to the opportunities for solitude if camp conditions degrade, detracting from the remoteness of the areas. Effects of the pack stock use to be permitted under this analysis, when added to past conditions and effects of present and reasonably foreseeable future actions are negligible at the wilderness scale.

Current commercial hiking/backpacking activities in the Pasayten and Lake Chelan-Sawtooth have the potential to cumulatively affect opportunities for solitude where the use overlaps with pack and saddle stock outfitter guides activities. The only areas where overlap occasionally occurs is at Hidden Lakes in the Pasayten and Oval Lakes in the Lake Chelan-Sawtooth, so the cumulative effect on opportunities for solitude are very similar to those described under the current condition. Encounter levels would not exceed Forest Plan standards and guidelines, and there may be times when pack and saddle stock and other outfitter-guides occupy camps in the same vicinity, ***potentially decreasing solitude.***

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### **Meeting the Need For Commercial Services**

The cumulative effect of the present and reasonably foreseeable future commercial backpacking/hiking services and the pack and saddle stock outfitter-guide levels in ~~Alternatives 2 and 4 would fall within the range of the minimum extent necessary to provide for wilderness recreation, as identified in the Needs Assessment (USDA, 2012).~~ ***Alternative 2 would exceed the extent necessary for outfitter-guide services in the Pasayten Wilderness and partially meet the extent necessary in the Lake Chelan-Sawtooth, as identified in the Needs Assessment (USDA, 2016).*** The need would be partially met, cumulatively with Alternative 3, and to a lesser degree with Alternative 1, since only hiking/backpacking outfitter-guide services would be available. ***Alternative 4 would meet the extent necessary in both wilderness areas.***

## CONSISTENCY FINDINGS

The following updates the Wilderness Consistency Findings found on FEIS page 3-91.

### Wilderness Act

**Alternative 2 is inconsistent with the Wilderness Act in the Pasayten Wilderness because it provides more days than the extent necessary defined by the 2016 Needs Assessment; Alternative 2 would meet the Wilderness Act in the Chelan-Sawtooth Wilderness, although it would offer less commercial services than determined necessary.** ~~All four alternatives~~ **Alternatives 3 and 4** would comply with the Wilderness Act **because the amount of commercial services provided falls at or below the extent necessary in the 2016 Needs Assessment (USDA 2016 and Appendix B).** Alternative 3 would offer some commercial services, but less than the minimum extent necessary. **Alternative 4 provides commercial services that meet the extent necessary to provide for wilderness recreation, as identified in the Needs Assessment (USDA, 2016 and Appendix B).** All **action** alternatives would help manage pack and saddle stock outfitter-guide activities to protect the wilderness character by allowing only local, minor to moderate impacts to the opportunities for solitude or primitive and unconfined recreation and natural qualities. Impacts would be concentrated, and the vast majority of both the Pasayten and Lake Chelan-Sawtooth would be free from any impacts from outfitter-guide use to these qualities. ~~In Alternatives 2 and 4, the amount of commercial services provided would fall with the range of the minimum extent necessary to project wilderness recreation, as identified in the Needs Assessment (USDA, 2012, and Appendix B).~~

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## 3.3 RECREATION

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*The Analysis Methods and Data Sources section on page 3-109 has been updated.*

### ANALYSIS METHODS AND DATA SOURCES

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#### Future Estimates of Recreation Use Levels

The number of visitor days expected in the future was calculated using projected changes included in the Washington State Comprehensive Outdoor Recreation Planning (SCORP) publication “*Estimates of Future Participation in Outdoor Recreation in Washington State*” (Interagency Committee for Outdoor Recreation 2003). These projected changes were for the ~~10-year~~ **20-year** period between 2004 and ~~2014~~ **2024**. **This information represents the best available information to project increases in future years, so** ~~if~~ these same figures were applied to the current visitor days to generate the anticipated number in ~~2023~~ **2027**.

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## NORTH CASCADES

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*The North Cascades Recreation section starting on page 3-118 has been updated for cumulative effects*

### Environmental Consequences

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#### Cumulative Effects

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#### Present Actions

##### *Outfitter-Guides*

There are currently ten additional outfitter-guide special use permit holders operating in the sub-unit in the summer season. ~~Over the past 5 years, **Between 2008 and 2013** there has been~~ **was** an average of 450 service days from these outfitter-guides, for a **an annual** cumulative total of 1,223 service days when added to the outfitter-guide permits being analyzed in this document. This represents approximately 2% of the overall visitor days in this sub-unit. Refer to Figure 3.0-1 on pages 3-4 through 3-6 for specific information.

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##### *Non-outfitted Recreation Use*

About 71,727 visitor days occur in this area each year, independent of the pack and saddle stock outfitter-guides, not including visitors who do not stop on their way along the highway. Non-outfitted recreational activities included driving for pleasure, hiking, and mountain biking.

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##### *Grazing*

The Goat Allotment is ~~and Boulder Allotments are~~ still active, but there are few trails or established campsites within the allotments, so there are no cumulative effects to recreation opportunities.

### Invasive Plant Treatments

**Invasive plants treatments are ongoing throughout the area as approved under several Decision Notices. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

#### Reasonably Foreseeable Future Actions

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##### *Non-outfitted Recreation Use*

The number of people recreating in the scenic corridor is expected to increase approximately 100% over the next 10 years, based on the rapid increase between 1992 and 2004. The use in the rest of the sub-area is expected to increase at the rate projected in the report by the Interagency Committee on Outdoor Recreation (Interagency Committee for Outdoor Recreation, 2003). The following table displays the approximate number of people expected to be recreating in the sub-unit in ~~2023~~ **2027**, when the outfitter-guide permits being analyzed in this analysis would expire.

**Figure 3.3-3. Number of Non-Pack and Saddle Stock Outfitted Visitor Days in the North Cascades Currently and Anticipated in ~~2023~~ 2027**

User Group	Approximate Current Number of Visitor Days	% Increase by <del>2023</del> <b>2027*</b>	Estimated Number of – Visitor Days in <del>2023</del> <b>2027</b>
Hikers in Scenic Corridor*	41,925	+100%	83,850
Hikers in Remainder of North Cascades*	12,540	+13%	14,170
People w/Pack Animals	4,642	+3%	4,781
Driving for Pleasure	10,675	+10%	11,743
Mountain Bike Riders	1,945	+10%	2,140
<b>Total</b>	<b>72,500</b>		<b>116,684</b>

*\*Based on projections by the Interagency Committee for Outdoor Recreation, 2003*

**Invasive Plant Treatments**

**The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

**Alternatives 1, 2, ~~and 3~~, 3 and 4**

**Considering recreation use from all sources, including pack and saddle stock outfitter guides, recreation use would increase by 61-63% in 2027 in the North Cascades, even in Alternative 1 without pack and saddle outfitter-guides. None of the alternatives would have a noticeable or measurable effect on recreation in the North Cascades, since the anticipated change in the **The incremental effect of of this authorized use would be 0-2% of the increase (depending on the alternative) in the** overall number of people recreating there would be so small (1%) in **the area in 2017 and 1% or less increase in 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation). Maintenance of existing roads, trails and campgrounds would facilitate recreation use from all sources, although none of the area campgrounds would be authorized for use by pack and saddle outfitter-guides or their clients. Pack and saddle outfitters do not camp at mining areas; although their clients may pass by these sites, mining would have little effect on their recreational experience since the amount of time the clients would actually be in the vicinity of any mining activity would be limited.. Pack and saddle outfitters do not generally use trails or campsites on grazing allotments, so would have no overlapping effects in these areas. Treatment of invasive****

**plants would likely improve the recreational experience by restoring native plants.** Therefore, there would be no **incremental** cumulative effect **of Alternatives 1, 2, 3 or 4** on recreation with implementation of Alternative 1, 2, 3, or 4, when considering the past, present, and reasonably foreseeable future actions **and future use from expanding populations would not be noticeable or measurable in the North Cascades area.** **Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

Figure 3.3-4. Cumulative Effect on Visitor Days in the North Cascades Sub-Area with Each Alternative, Compared to Current, Projected to ~~2023~~ 2027 for all Recreation Uses

Current or Alternative	Pack and Saddle Stock Users	Hikers	Driving for Pleasure	Mountain Bike Riders	Total
<b>Current</b>					
Total Visitor Days	5,415	54,465	10,675	1,945	72,500
Visitor Days Outfitted	773	450	0	0	1,223
Percent of total	<del>11</del> <b>14%</b>	0.1%	0%	0%	<del>9</del> <b>2%</b>
<b>Alternative 1</b>					
Total Visitor Days	4,781	98,020	11,743	2,140	116,684
Visitor Days Outfitted	0 <i>(incremental effect)</i>	450	0	0	450
Percent of total	0%	0.5%	0%	0%	0.4%
Percent Change from Current	<del>11</del> <b>-12%</b>	+80%	10%	10%	+61%
<b>Total</b>					
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b>2017</b>				<b>0%</b>
	<b>2027</b>				<b>0%</b>
<b>Alternative 2</b>					
Total Visitor Days	5,431 <i>(4,781+650=5,431)</i>	98,020	11,743	2,140	117,334
Visitor Days Outfitted	650 <i>(incremental effect)</i>	450	0	0	1,100
Percent of total	12%	0.5%	0%	0%	1%
Percent Change from Current	+0.1%	+80%	10%	10%	+62%
<b>Total</b>					
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b>2017</b>				<b>1%</b>
	<b>2027</b>				<b>1%</b>
<b>Alternative 3</b>					
Total Visitor Days	5,321 <i>(4,781+540=5,321)</i>	98,020	11,743	2,140	117,224
Visitor Days Outfitted	540 <i>(incremental effect)</i>	450	0	0	990
Percent of total	10%	0.5%	0%	0%	0.1%
Percent Change from Current	<del>11</del> <b>-2%</b>	+80%	10%	10%	+62%
<b>Total</b>					
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b>2017</b>				<b>1%</b>
	<b>2027</b>				<b>&lt;1%</b>
<b>Alternative 4</b>					
Total Visitor Days	6,671 <i>(4,781+1,350=6,671)</i>	98,020	11,743	2,140	118,034
Visitor Days Outfitted	1,350 <i>(incremental effect)</i>	450	0	0	1,600
Percent of total	20%	0.5%	0%	0%	1%
Percent Change from Current	<del>24</del> <b>23%</b>	+80%	10%	10%	+63%
<b>Total</b>					
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b>2017</b>				<b>2%</b>
	<b>2027</b>				<b>1%</b>

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## SAWTOOTH BACKCOUNTRY

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*The Sawtooth Backcountry Recreation section starting on page 3-126 has been updated for cumulative effects.*

### Environmental Consequences

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### Cumulative Effects

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### Present Actions

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### Invasive Plant Treatments

**Invasive plants treatments are ongoing throughout the area as approved under several Decision Notices. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

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### Reasonably Foreseeable Future Actions

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### Non-outfitted Recreation Use

The number of people recreating in the Sawtooth Backcountry is expected to increase 12% by ~~2022~~ **2027**, when the outfitter-guide permits would expire. This ~~is the~~ rate **is** projected **based on projections** the report by the Interagency Committee on Outdoor Recreation (Interagency Committee for Outdoor Recreation, 2003).

**Figure 3.3-7** lists the current number of non-outfitted pack and saddle stock-outfitted recreationists and the estimated number for ~~2023~~ **2027**.

**Figure 3.3-7. Number of Non-Pack and Saddle Stock-Outfitted Visitor Days in Sawtooth Backcountry Currently and in 2023.**

User Group	Approximate Current Number of Non Outfitted Visitor Days	% Increase by <del>2022</del> 2027*	Estimated Number of Non Pack and Saddle Stock – Outfitted Visitor Days in <del>2023</del> 2027
Hikers	5,460	+13%	6170
People w/Pack Animals	2,520	+3%	2,596
Trail Bike Riders	4,620	+10%	5,082
Mountain Bike Riders	1,400	+10%	1,540
<b>Total</b>	<del>13,606</del> <b>14,000</b>	<del>+11</del> <b>10%</b>	<b>15,388</b>

\****Based on projections by the*** Interagency Committee for Outdoor Recreation 2003

***Invasive Plant Treatments***

***The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.***

The following figure displays the cumulative effect on visitor days for each alternative.

Figure 3.3-8. Cumulative Effect on Visitor Days in the Sawtooth Backcountry Sub-Area with Each Alternative, Compared to Current, Projected to ~~2023~~ 2027 for all Recreation Uses

Current or Alternative	Pack and Saddle Stock Users	Hikers	Trail Bike Riders	Mountain Bike Riders	Total
<b>Current</b>					
Total Visitor Days	2,520	5,460	4,620	1,400	14,000
Pack and Saddle Stock OG Service Days	394	0	0	0	394
Percent of total	16%	0%	0%	0%	3%
<b>Alternative 1</b>					
Total Visitor Days	2,202 <i>(2,596 – 394)</i>	6,170	5,082	1,540	14,994
Visitor Days Outfitted	0	0	0	0	0
Percent of total	0%	0%	0%	0%	0%
Percent Change from Current <b>Total</b>	-13%	+13%	<u>±10%</u>	<u>±10%</u>	+7%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<u>2017</u>				<u>0%</u>
	<u>2027</u>				<u>0%</u>
<b>Alternative 2</b>					
Total Visitor Days	2,602 <i>(2,202+400=2,602)</i>	6,170	5,082	1,540	15,394
Visitor Days Outfitted	400 <i>(incremental effect)</i>	0	0	0	400
Percent of total	15%	0%	0%	0%	3%
Percent Change from Current <b>Total</b>	+3%	+13%	<u>±10%</u>	<u>±10%</u>	+10%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<u>2017</u>				<u>3%</u>
	<u>2027</u>				<u>3%</u>
<b>Alternative 3</b>					
Total Visitor Days	2,362 <i>(2,202+160=2,362)</i>	6,170	5,082	1,540	15,154
Visitor Days Outfitted	160 <i>(incremental effect)</i>	0	0	0	160
Percent of total	7%	0%	0%	0%	1%
Percent Change from Current <b>Total</b>	-6%	+13%	<u>±10%</u>	<u>±10%</u>	+8%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<u>2017</u>				<u>1%</u>
	<u>2027</u>				<u>1%</u>
<b>Alternative 4</b>					
Total Visitor Days	3,007 <i>(2,202+805=3,007)</i>	6,170	5,082	1,540	15,799
Visitor Days Outfitted	805 <i>(incremental effect)</i>	0	0	0	805
Percent of total	27%	0%	0%	0%	<del>6</del> 5%
Percent Change from Current <b>Total</b>	<del>+22</del> 19%	+13%	<u>±10%</u>	<u>±10%</u>	+13%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<u>2017</u>				<u>6%</u>
	<u>2027</u>				<u>5%</u>

## Alternative 1

The cumulative effect of past, present, and reasonably foreseeable future actions on recreation activities would be a **Considering recreation use from all sources (without any pack and saddle stock outfitter guides) recreation use would increase by 7% increase** in the overall number of people recreating **in 2027**, but a 13% decrease in the number of pack and saddle stock use **is projected**. **This alternative has no incremental cumulative effect since no pack and saddle outfitter guide use would be permitted**. The overall increase **in overall recreation use** would likely not be noticed by the people recreating there, but people may notice fewer stock parties. People would still encounter large **non-outfitted** pack and saddle stock groups on the trails and at destination spots. The camps would remain at the existing size, or possibly increase over time as a result of projected general increases in recreation **and no restrictions on new camps and camp or party size**. **Overall, recreationist may find unoccupied camps easier to locate, but this may be offset by general population increases. Maintenance of the existing trail system would continue to providing adequate trails for hikers, backpackers, bikers and non-outfitted stock users, but no outfitted use would add to the need for maintenance. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

## Alternative 2

**Considering recreation use from all sources, including pack and saddle stock outfitter guides, overall recreation use would increase by** The cumulative effect Alternative 2 and the past, present, and reasonably foreseeable future actions on recreation activities would be a 10% increase in the overall number of people recreating in the area **in 2027**, including a 3% increase in pack and saddle outfitter-guide use. **The incremental effect of authorized outfitter-guide use would be 3% of the increase in the overall number of people recreating in the area in 2017 and 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation). Maintenance of existing trails would facilitate recreation use from all source, including outfitter-guides and their clients**. The increase would be larger than with Alternative 1, and people may encounter more groups in the area compared to the existing condition. This would make the area feel more crowded compared to the existing condition. **Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

The effect of this amount of use on the Sawtooth Backcountry would be that people would have a moderate chance of experiencing isolation on the trails and at popular destinations. Use would be concentrated on trails, and generally in established campsites. The existing camps would continue to be used by outfitters and outfitted recreationists, **and may result in general recreationist having to move on to other camps**. The conditions in these camps may change because there are no restrictions on camps, ~~and~~ camp sizes, **or party sizes** in the Sawtooth Backcountry, **so** outfitted use may result in an increase in **camp** size, and new camps may be developed in the future.

### Alternative 3

**Considering recreation use from all sources, including pack and saddle stock outfitter guides, overall recreation use would increase by** ~~The cumulative effect of Alternative 3 and the past, present, and reasonably foreseeable future actions on recreation activities would be an 8% increase in the overall number of people recreating in the area~~ **in 2027**, but **there would be** a 6% decrease in the number of pack and saddle stock users in the area **throughout the life of the permits**. People may not notice the small changes in overall recreation use, so the current recreation experience and opportunities would not change. **The incremental effect of authorized outfitter-guide use would be 1% of the increase in the overall number of people recreating in the area in 2017 and 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation). Maintenance of existing trails would facilitate recreation use from all source, including outfitter-guides and their clients. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

People would have a reduced chance of seeing pack and saddle stock groups, but since the overall increase in **recreation use from all sources** would be 8%, the chance of experiencing isolation on the trails and at popular destinations would ~~change little~~ **increase slightly** from current conditions. Use would be concentrated on trails and generally in established campsites. Existing camps would continue to be used by outfitters and outfitted recreationists, **although a lower levels than in the past**. The conditions in these camps may change because there are no restrictions on camps, ~~and~~ **camp sizes, or party sizes** in the Sawtooth Backcountry, **so** outfitted use at these camps may increase their size and new camps may be developed in the future.

### Alternative 4

**Considering recreation use from all sources, including pack and saddle stock outfitter guides, overall recreation use would increase by** ~~The cumulative effect of Alternative 4 and the past, present, and reasonably foreseeable future actions on recreation activities would be the largest increase in recreation use of any alternative because of the incremental effect of additional pack and saddle outfitter guide use on top of projected increases in recreational use of this area over time. There would be approximately 13% more people overall, and~~ **with** 19% more stock users. This **amount of increased overall and stock use** would be a noticeable change for most users. **The incremental effect of authorized outfitter-guide use would be 6% of the increase in the overall number of people recreating in the area in 2017 and 5% in 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation). Maintenance of existing trails would facilitate recreation use from all source, including outfitter-guides and their clients. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

The effect of this amount of permitted use, **in conjunction with non-outfitted use,** on the Sawtooth Backcountry would be that people would have a moderate chance of experiencing isolation on the trails

and at popular destinations. Use would be concentrated on trails, and generally in established campsites. The existing camps would continue to be used by outfitted and non-outfitted recreationists, **at higher levels than currently, and may result in general recreationist having to move on to other camps.** The **Because there are no restrictions on new camps, camp sizes or party sizes,** conditions in these camps could increase in size, and new camps may be developed in the future.

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## BEAR/RAMSEY/VOLSTEAD

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### Environmental Consequences

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*The Bear/Ramsey/Volstead Recreation section starting on page 3-133 has been updated for cumulative effects.*

### Cumulative Effects

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#### Present Actions

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##### *Seasonal closures*

This area is closed to motorized access from October 1 to March 31 to protect mule deer in the fall, **winter and early spring** and, as a result it provides a **non-wilderness** non-motorized hunting area. This eliminates motorized hunting activities, and provides opportunities for pack and saddle stock outfitter-guides to provide services to clients who want to camp in the non-motorized area **outside wilderness.**

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##### *Grazing*

The Ramsey and Beaver Horse and Cattle allotments are active and currently grazed. **Two outfitter-guide drop camps are located within the Volstead unit of this allotment.** There ~~Currently are currently~~ 110 cow/calf pairs graze the Volstead unit from late June to early August with a total of 186 AUMs. There are currently 322 AUMs in **the total allotment** ~~in this area~~ under a new AMP completed in 2007.

### Invasive Plant Treatments

**Invasive plants treatments are ongoing throughout the area as approved under several Decision Notices. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

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#### Reasonably Foreseeable Future Actions

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*Grazing*

The Ramsey and Beaver allotments will continue to be grazed at the current stocking level. Since the pack and saddle stock outfitter-guides do not loose graze their stock in this area, **and general firearm season occurs after the cattle have been removed from the allotment for the year**, there would be no overlap of effects to forage utilization.

**Invasive Plant Treatments**

**The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

*Non-outfitted Recreation Use*

The number of people recreating in the Bear/Ramsey/Volstead area is expected to decrease ~~15%~~ **4%** by ~~2022~~ **2027**, dropping to approximately ~~834~~ **911** visitor days per year, as **based on** ~~projections~~ by the Interagency Committee on Outdoor Recreation (Interagency Committee for Outdoor Recreation, 2003).

The following figure lists the current number of non-pack and saddle stock-outfitted recreationists, and the number that will likely be there in ~~2022~~ **2027**.

**Figure 3.3-11. Number of Non-Pack and Saddle Stock-Outfitted Visitor Days in Bear/Ramsey/Volstead Currently and in ~~2022~~ 2027.**

User Group	Approximate Current Number of Non Pack and Saddle Stock-Outfitted Visitor Days	% Change by <del>2022</del> 2027*	Estimated Number of Non Pack and Saddle Stock –Outfitted Visitor Days in <del>2022</del> 2027
Hunters camping outside closed area, or setting up camps early	700	-6%	658
Hunters packing in camps using pack animals or hiking	152	-6%	143
People Driving for Pleasure	100	+10%	110
<b>TOTAL</b>	<del>1,000</del> <b>952</b>		<b>911</b>

**\*Based on projections by the** Interagency Committee for Outdoor Recreation 2003

The following figure shows the cumulative effect on the number of people recreating in this sub-unit, by alternative.

Figure 3.3-12. Cumulative Effect Number of Visitor days in Bear/Ramsey/Volstead area *Currently and* by Alternative *in 2027*.

Current or Alternative	Hunters Packing in Camps with Pack and Saddle Stock or Hiking	Hunters Camping Outside Closure or Setting Up Camp Prior to Closure	Driving for Pleasure	Total
<b>Current</b>				
Total Visitor Days	200	700	100	1,000
Pack and Saddle Stock OG Service Days	48	0	0	48
Percent of total	24%	0%	0%	<del>3</del> 5%
<b>Alternative 1</b>				
Total Visitor Days	<del>143</del> <b>(143-48)</b>	658	110	<del>908</del> <b>911</b>
Pack and Saddle Stock OG Service Days	0 <i>(incremental effect)</i>	0	0	0
Percent of total	0%	0%	0%	0%
Percent Change From Current Total	<del>30</del> -53%	-6%	+10%	-9%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<b><u>2017</u></b>			<b><u>0%</u></b>
	<b><u>2027</u></b>			<b><u>0%</u></b>
<b>Alternative 2</b>				
Total Visitor Days	<del>240</del> <b>243</b> <b>(143+100+243)</b>	658	110	<del>1,008</del> <b>1,011</b>
Pack and Saddle Stock OG Service Days	100 <i>(incremental effect)</i>	0	0	100
Percent of total	42%	0%	0%	10%
Percent Change From Current Total	<del>20</del> 22%	-6%	+10%	+0.1%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<b><u>2017</u></b>			<b><u>10%</u></b>
	<b><u>2027</u></b>			<b><u>10%</u></b>
<b>Alternative 3</b>				
Total Visitor Days	<del>190</del> <b>193</b> <b>(143+50=193)</b>	658	110	<del>958</del> <b>961</b>
Pack and Saddle Stock OG Service Days	50 <i>(incremental effect)</i>	0	0	50
Percent of total	26%	0%	0%	5%
Percent Change From Current Total	<del>5</del> 4%	-6%	+10%	-4%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<b><u>2017</u></b>			<b><u>5%</u></b>
	<b><u>2027</u></b>			<b><u>5%</u></b>
<b>Alternative 4</b>				
Total Visitor Days	<del>240</del> <b>243</b> <b>(143+100=243)</b>	658	110	<del>1,008</del> <b>1,011</b>
Pack and Saddle Stock OG Service Days	100 <i>(incremental effect)</i>	0	0	100
Percent of total	<del>42</del> 41%	0%	0%	10%
Percent Change From Current Total	<del>20</del> 22%	-6%	+10%	+0.1%
<b><i>Incremental % PSOG of Current and Future Visitor Day Totals</i></b>	<b><u>2017</u></b>			<b><u>10%</u></b>
	<b><u>2027</u></b>			<b><u>10%</u></b>

## Alternative 1

The cumulative effect of Alternative 1 and the past, present, and reasonably foreseeable future actions would be a **Considering recreation use from all sources (without any pack and saddle stock outfitter guides) recreation use in Alternative 1 would decrease by 9% reduction in the number of people recreating in the area. This reduction would mostly occur during hunting season. This alternative has no incremental cumulative effect since no pack and saddle outfitter guide use would be permitted, and recreationists would not encounter any outfitted stock or clients. Dispersed camps would remain at the existing size, or possibly increase over time as a result of projected general increases in recreation and no restrictions on new camps and camp or party size.** The area would likely seem less crowded to the hunters, making camping spots easier to find, potentially fewer encounters with other hunters, and may improve the hunting experience. **Ongoing and future road maintenance would continue to provide access to this area for all recreational activities, although seasonal closures would only provide for a non-motorized hunting experience for the non-outfitted public. Recreationists are unlikely to encounter livestock from grazing because the hunting season is outside of the grazing season. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

## Alternatives 2 and 4

The cumulative effect of Alternatives 2 and 4, and the past, present, and reasonably foreseeable future actions **Considering recreation use from all sources, including pack and saddle stock outfitter guides, recreation use in Alternatives 2 and 4 would be virtually unchanged in the number of people recreating in the area compared to the current condition. There would be a 20% increase in outfitter-guide service days, therefore an increase in the number of people being packed into hunting camps in the non-motorized hunting area. The incremental effect of authorized outfitter-guide use would be 10% of the increase in the overall number of people recreating in the area in 2017 and 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation).** The number of people hunting and camping in the area would still be small, and hunters and camps would be dispersed across hillsides and along roads, so the area would not feel crowded. The small increase **in overall use may would not likely** lead to creation of new camps, and the encounters between groups **may are unlikely to** increase. **Ongoing and future road maintenance would continue to provide access to this area for all recreational activities, although seasonal closures would only provide for a non-motorized hunting experience for the non-outfitted public. Recreationists are unlikely to encounter livestock from grazing because the hunting season is outside of the grazing season. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

### Alternative 3

The cumulative effect of ***Considering recreation use from all sources, including pack and saddle stock outfitter guides, recreation use in*** Alternative 3 would also be a ***decrease by 4% reduction in the number of people recreating in the area. The incremental effect of of authorized outfitter-guide use would be 5% of the increase in the overall number of people recreating in the area in 2017 and 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation).*** This would likely be unnoticed by most people. The number of outfitter-guide service days would be increased by 2 over the current condition, so there would be virtually no change in the number of people being packed into hunting camps. The area would remain uncrowded with a high quality hunting experience. ***Ongoing and future road maintenance would continue to provide access to this area for all recreational activities, although seasonal closures would only provide for a non-motorized hunting experience for the non-outfitted public. Recreationists are unlikely to encounter livestock from grazing because the hunting season is outside of the grazing season. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.***

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## MIDDLE METHOW

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*The Middle Methow Recreation section starting on page 3-139 has been updated for direct and indirect effects, and cumulative effects*

### Environmental Consequences

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### Alternative 4

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The number of service days in the Lake Chelan-Sawtooth would increase by ~~6%~~ **3%**. This small increase would likely go unnoticed by non-outfitted recreationists. There would be some increase in outfitter-guide use of the trailheads and encounters on the trails leading into the wilderness. The base camp at Slate Creek Trailhead would continue to be used by the outfitter, but closed to public use.

### Cumulative Effects

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### Present Actions

**Road, Trail and Trailhead Maintenance**

**Roads, trails and trailheads are currently maintained in the area to provide for recreational access and activities**

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**Invasive Plant Treatments**

**Invasive plants treatments are ongoing throughout the area as approved under several Decision Notices. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

**Reasonably Foreseeable Future Actions**

**Road, Trail and Trailhead Maintenance**

**It is reasonably foreseeable that roads, trails and trailheads would continue to be maintained to provide for recreational access and activities in the future.**

**Non-outfitted Recreation**

It is reasonably foreseeable that the number of non-outfitted recreationists would increase in the sub-unit. Using the projections from the Interagency Committee on Outdoor Recreation (Interagency Committee for Outdoor Recreation, 2003), the approximate number of visitor days in the area in ~~2022~~ **2027** are included in the following figure.

**Figure 3.3-15. Number of Non-Pack and Saddle Stock-Outfitted Visitor Days in Middle Methow Currently and in ~~2023~~ **2027****

User Group	Approximate Current Number of Non Outfitted Visitor Days	% Increase by <del>2022</del> <b>2027*</b>	Estimated Number of Non Pack and Saddle Stock – Outfitted Visitor Days in <del>2023</del> <b>2027</b>
Hikers	1,500	+13%	1,695
Driving for Pleasure	12,000	+10%	13,200
Pack and Saddle Stock Users	750	+3%	773
Mountain Bike Riders	750	+10%	825
<b>Total</b>	<b>15,000</b>	<b>+10</b>	<b>16,493</b>

**(Based on projections by the** Interagency Committee on Outdoor Recreation, 2003)

...

**Invasive Plant Treatments**

**The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

## Alternatives 1

The cumulative effect of Alternative 1 and the past, present, and reasonably foreseeable future actions ~~considering recreation use from all sources, without any pack and saddle stock outfitter guide use, recreation use in Alternative 1 in 2027~~ would be a **increase by 10%** increase in the number of visitor days in the Middle Methow sub-unit. There would be approximately ~~8%~~ **13%** more people using trailheads and trails leading into the Sawtooth Backcountry and Lake Chelan-Sawtooth Wilderness, and driving on the roads to the trailheads. Parking could still be limited at times at the most popular trailheads, such as Crater Creek, but generally there would be adequate room for all users. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

## Alternative 2

The cumulative effect of Alternative 2 with the past, present, and reasonably foreseeable future actions would be approximately 10% more people recreating in the Middle Methow, and approximately ~~10%~~ **13%** more use at trailheads and along trails, and in traffic on roads leading to trailheads. **The incremental effect of outfitted pack and saddle stock use would be the 0.7% increase in service days in the Lake Chelan-Sawtooth Wilderness.** Parking could still be limited at times at the most popular trailheads, such as Crater Creek, but generally there would be adequate room for all users. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

## Alternative 3

The cumulative effect of Alternative 3 and the past, present, and reasonably foreseeable future actions would be an increase of approximately 8% in use at trailheads and on trails (**due to the incremental effect of a 55% decrease in pack and saddle stock outfitter guide use in the Lake Chelan-Sawtooth Wilderness**), coupled with the 10% increase in recreation use in the Middle Methow. As with Alternatives 1 and 2, parking could be limited at times, but generally there would be adequate room for all users. The amount of traffic leading to the trailheads would also increase. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

## Alternative 4

Alternative 4 would result in the largest cumulative effect as compared to the other alternatives. The cumulative effect would be as with Alternative 2, since there would be approximately 10% more people

at the trailheads leading into leading into the Lake Chelan-Sawtooth Wilderness, and on the trails ***in addition to the incremental effect of a 3% increase in outfitted pack and saddle stock use.*** Parking at trailheads leading into the wilderness could be limited at times, however there would be adequate room on most occasions. The cumulative increase in use into the Sawtooth Backcountry, approximately 13%, would increase crowding at trailheads, especially at the Crater Creek Trailhead. The cumulative effect of this 13% increase, and the anticipated 10% increase in recreation within the Middle Methow sub-unit would increase traffic on roads leading to the trailheads. ***Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.***

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## Alta Lake

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*The Alta Lake Recreation section starting on page 3-126 has been updated for cumulative effects*

### Environmental Consequences

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#### Cumulative Effects

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#### Present Actions

##### *Grazing*

~~Twenty five cow/calf pairs are currently permitted to graze the Alta Coulee Allotment from June 1 through September 30 for a total of 102 Animal Unit Months (AUMs). Cattle tend to graze only the coulee bottom even though the boundary of the allotment is much larger. Grazing is having no effect on existing recreation activities other than isolated encounters with cattle on roads or trails.~~

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#### ***Invasive Plant Treatments***

***Invasive plants treatments are ongoing throughout the area as approved under several Decision Notices. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.***

#### Reasonably Foreseeable Future Actions

##### *Grazing*

It is reasonably foreseeable that the Alta Coulee Allotment cattle grazing will continue in the area, and that it will have little effect on recreation activities.

...

**Invasive Plant Treatments**

**The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

...

*Non-outfitted Recreation Use*

The number of people recreating in the greater Alta Lake area is expected to increase by about 10% overall by ~~2023~~ **2027**, according to **projected from** the Interagency Committee on Outdoor Recreation **Report** (Interagency Committee for Outdoor Recreation, 2003).

The following table lists the current number of non-pack and saddle stock-outfitted recreationists, and the number that will likely be there in ~~2022~~ **2027**.

**Figure 3.3-18. Current Number of Visitor Days in Alta Lake Area and Estimated Number in 2023**

User Group	Current Number of Non-Outfitted Visitor Days	% Change by <del>2022</del> <b>2027</b> *	Estimated Number of Non-Outfitted Visitor Days in <del>2022</del> <b>2027</b>
Hikers	<del>335</del> <b>355</b>	+ 13%	<del>379</del> <b>401</b>
Driving for Pleasure	8,445	+10%	9,290
Pack and Saddle Stock Users	1,575	+3%	1,622
Mountain Bikers	125	+10%	138
<b>Total</b>	<del><b>9,674</b></del> <b>10,500</b>	+10%	<b>11,429</b>

(\* **Based on projections by the** Interagency Committee for Outdoor Recreation, 2003)

The following figure displays the cumulative effect on visitor days for each alternative.

**Figure 3.3-19. Cumulative Effect on Visitor Days in Alta Lake with Each Alternative, Compared to Current, Projected to 2023 for all Recreation Uses**

Current or Alternative	Pack and Saddle Stock Users	Hikers	Driving for Pleasure	Mountain Bike Riders	Total
<b>Current</b>					
Total Visitor Days	1,575	355	8,445	125	10,500
Pack and Saddle Stock OG Service Days	730	0	0	0	730
Percent of total	46%	0%	0%	0%	<del>3</del> <b>7%</b>
<b>Alternative 1</b>					
Total Visitor Days	892 <i>(1,622-730)</i>	<del>379</del> <b>401</b>	9,290	138	<del>10,699</del> <b>10,721</b>
Pack and Saddle OG Service Days	0	0	0	0	0
Percent of total	0%	0%	0%	0%	0%
Percent Change from Current Total	-43%	<del>+7</del> <b>13%</b>	10%	10%	+2%
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b><u>2017</u></b>				<b><u>0%</u></b>
	<b><u>2027</u></b>				<b><u>0%</u></b>
<b>Alternative 2</b>					
Total Visitor Days	1,642 <i>(892+750=1,642)</i>	<del>379</del> <b>401</b>	9,290	138	<del>11,449</del> <b>11,471</b>
Pack and Saddle OG Service Days	750	0	0	0	750
Percent of total	46%	0%	0%	0%	7%
Percent Change from Current Total	+4%	<del>+7</del> <b>13%</b>	10%	10%	+9%
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b><u>2017</u></b>				<b><u>7%</u></b>
	<b><u>2027</u></b>				<b><u>7%</u></b>
<b>Alternative 3</b>					
Total Visitor Days	1,482 <i>(892+590=1,482)</i>	<del>379</del> <b>401</b>	9,290	138	<del>11,289</del> <b>11,311</b>
Pack and Saddle OG Service Days	590	0	0	0	590
Percent of total	40%	0%	0%	0%	5%
Percent Change from Current Total	-6%	<del>+7</del> <b>13%</b>	10%	10%	<del>+7</del> <b>8%</b>
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b><u>2017</u></b>				<b><u>6%</u></b>
	<b><u>2027</u></b>				<b><u>5%</u></b>
<b>Alternative 4</b>					
Total Visitor Days	2,342 <i>(892+1,450=2,342)</i>	<del>379</del> <b>401</b>	9,290	138	<del>12,149</del> <b>12,171</b>
Pack and Saddle OG Service Days	1,450	0	0	0	1,450
Percent of total	62%	0%	0%	0%	12%
Percent Change from Current Total	+49%	<del>+7</del> <b>13%</b>	10%	10%	+16%
<b><u>Incremental % PSOG of Current and Future Visitor Day Totals</u></b>	<b><u>2017</u></b>				<b><u>14%</u></b>
	<b><u>2027</u></b>				<b><u>12%</u></b>

### Alternative 1

There would be no cumulative effect on recreation in the Alta Lake area with Alternative 1 and the past, present, and reasonably foreseeable future actions since the overall number of recreationists would be nearly unchanged. No pack and saddle outfitter-guide permits would be issued which would result in a reduction of 730 use days from the recently permitted numbers (~~3~~ 7% of current use). There would be a ~~50%~~ 43% reduction in the number of pack and saddle stock users, so those riding horses would see fewer other riders. Trails and roads would still be available, so the distribution of people would change very little. The overall decrease would likely not be noticed by the people recreating there, but the number of encounters between and with saddle stock users would be noticeably smaller. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

### Alternative 2

The cumulative effect of this alternative when added to past, present, and reasonably foreseeable future actions on recreation activities in the Alta Lake area would be an increase in the overall number of people recreating (about 9%), with pack and saddle stock use ~~decreasing~~ increasing by 4%. **The incremental effect of authorized outfitter-guide use would be 7% of the increase in the overall number of people recreating in the area in 2017 and 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation).** Trails and roads would still be available, so the distribution of people would change very little. The overall increase would not likely be noticed by the people recreating there. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

### Alternative 3

The cumulative effect of this alternative when added to past, present, and reasonably foreseeable future actions on recreation activities in the Alta Lake area would be a ~~7%~~ 8% increase in the overall number of people recreating, but a 6% decrease in the number of saddle stock uses over the next decade. **The incremental effect off authorized outfitter-guide use would be 6% of the increase in the overall number of people recreating in the area in 2017 and 5% in 2027, when considering recreation**

**from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation).** Trails and roads would still be available, so the distribution of people would change very little. The overall increase would be unnoticeable by the people recreating there, but the number of encounters between and with saddle stock users would be smaller. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

#### Alternative 4

The cumulative effect of Alternative 4 and the past, present, and reasonably foreseeable future actions would be the largest increase in overall recreation use, compared to Alternatives 1, 2 or 3. There would be approximately 16% more visitor days in the entire area, and 49% more pack and saddle stock riders. **The incremental effect of authorized outfitter-guide use would be 14% of the increase in the overall number of people recreating in the area in 2017 and 12% in 2027, when considering recreation from all sources (pack and saddle and hiking outfitter-guides and non-outfitted recreation).**

The increase in the number of riders would make the trails and viewpoints more crowded, but the overall use would be distributed on the roads and trails. The anticipated overall increase in visitor days would likely be noticed since it would be concentrated on the roads and trails in the sub-unit. **Future road and trail maintenance would provide adequate access and facilities for recreationists. Ongoing and future invasive plant treatments are likely to improve recreational experience by restoring native vegetation, although recreationists have the potential to bring in and spread invasive species on their clothing, equipment and stock. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species.**

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### 3.4 SOIL RESOURCES

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*The following updates the effects of Alternative 4 on soils at stream crossings, found on FEIS page 3-164. There are no other changes to the soil analysis.*

## ENVIRONMENTAL CONSEQUENCES

### Direct and Indirect Effects

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## Alternatives 2, 3, and 4

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### Soil Effects at Stream Crossings

Soil effects at trail stream crossings would be similar to current conditions. . Most stream banks are well-vegetated, stable, and meet Forest Plan standards and guidelines. Alternatives 2, 3, and 4 would not further degrade stream banks at existing stream crossings or channel bedding characteristics since pack and saddle stock outfitter-guides would be restricted to using existing campsites and existing trails. At most stream crossings, banks already lay back and are at least six feet wide. These crossing are common and were likely the travel routes of historic sheep bands. The continued use of these stream crossings would not degrade stream reaches. The crossing areas are not expected to expand as a result of pack and saddle stock outfitter-guides since the current number of recreation visitor days associated with pack and saddle stock would only increase slightly with Alternative 2, decrease by 6% in Alternative 3, and increase by ~~8%~~ 6% in Alternative 4, compared to the existing levels. The changes are simply not big enough to change the conditions on the ground.

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*The following updates Soil Resources cumulative effects section, starting on FEIS page 3-165 of the FEIS.*

### Cumulative Effects

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### Present and Reasonably Foreseeable Future Actions

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## 3.5 HYDROLOGY

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*The following updates the effects of Alternative 4 on hydrology and water quality, found on FEIS page 3-179.*

## ENVIRONMENTAL CONSEQUENCES

### Direct and Indirect Effects

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### Alternative 4

Alternative 4 would permit ~~6,700~~ **6,082** visitor days for pack and saddle stock outfitter-guides. This would be a ~~50%~~ **36%** increase over the current number of pack and saddle stock users and ~~8%~~ **6%** increase in total pack and saddle use levels. This increase would be small enough to not change the current conditions described above at meaningful or

quantifiable levels. As with Alternatives 2 and 3 described above, fecal coliform levels would be from both permitted and non-permitted stock use and background sources. At assigned sites (outfitters only) and other high use camps (outfitters and public), there would continue to be areas where stock use might result in locally higher fecal coliform levels. This would occur on a limited basis compared to the analysis area as a whole. Along streams, dilution by streamflow would keep fecal coliform levels well below the state water quality standard based on the isolated and localized nature of campsite, trail crossings, and stock watering sites being dispersed across the analysis area.

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*The following updates Hydrology cumulative effects section, starting on FEIS page 3-179 of the FEIS.*

### **Cumulative Effects**

Past, present, and foreseeable future actions in or near the analysis area are listed at the beginning of this chapter. The spatial boundary for this cumulative effects analysis is the entire Methow and Lake Chelan watersheds. The temporal boundary is the early 1900s through approximately ~~2033~~ **2037**, 10 years after the proposed 10 year special use permits would expire and any ***effects from outfitted pack and saddle stock use to hydrologic function*** would cease ***as a result of revegetation***. Those past, present, and reasonably foreseeable future actions that continue to affect hydrology are summarized below. All other actions would not contribute to cumulative effects.

### **Alternatives 1, 2, 3, and 4**

There would be no cumulative effect on fecal coliform levels from all past, present, and reasonably foreseeable future actions and any of the alternatives considered in this analysis since none of the alternatives would raise levels except at isolated stream sections near camps, trail crossings, or stock watering spots. There are no current 303(d) listings in the Methow River watershed for fecal coliform, and this would not change as a result of the cumulative effects of past, present, and reasonable foreseeable actions and the alternatives analyzed in this document. Additionally, none of the proposed actions or alternatives would have a cumulative effect on water temperature since none would result in loss of riparian vegetation that would result in increases in water temperatures in streams ***and riparian areas are continuing to recover in many areas because commercial livestock grazing has been discontinued***. Therefore, there would be no effect on the existing 303(d) temperature listing for the Chewuch River and the Methow River at Pateros, Washington.

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## 3.6 AQUATIC RESOURCES

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*The following updates the amount of increase in pack and saddle stock use, found on FEIS page 3-212.*

## ENVIRONMENTAL CONSEQUENCES

### Direct and Indirect Effects

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#### Alternatives 2, 3, and 4

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- Service Days and Visitor Days.  
The number of pack and saddle stock service days would increase 4% with Alternative 2, decrease 40% with Alternative 3, or increase 50% with Alternative 4. When considered in context of overall use, Alternative 2 would increase pack and saddle stock use by 0.6%, Alternative 3 would decrease use by 6%, and Alternative 4 would increase it by ~~8%~~ 6%.

...

- Camp locations and access routes.  
Alternatives 2 and 4 are identical where existing camps within 200 feet of wetlands, lakes, and streams could be used by outfitter-guides. There are ~~26~~ 46 campsites within 200 feet of these areas across the project area. Alternative 3 would prohibit using camps within 200 feet of wetlands, lakes, and streams. Prohibiting outfitter-guide use of these campsites would not change the current effects to aquatic habitat for two reasons. First, the outfitter-guides and the public have been using these campsites for decades and the impacts to aquatic resources have been found to be small and inconsequential. Second, these campsites would continue to be used by the general public, which accounts to >95 percent of the total people use and 85 percent of the total stock use. Therefore, use at these sites would continue at levels close to what they are currently and the impacts to aquatic/riparian resources would be the same. The trail use to these sites would remain essentially the same, so the difference in impacts to aquatic resources would remain immeasurable between alternatives.

...

*The following updates Aquatic Resources cumulative effects section, starting on FEIS page 3-222 of the FEIS.*

### Cumulative Effects

The geographic area for cumulative effects is the ~~Methow River and Chelan watersheds~~ **nineteen 5<sup>th</sup> field watershed and sixty-six 6<sup>th</sup> field sub-watersheds listed in Appendix H** because any aquatic effects from the permitted use under the alternatives would not be felt beyond these watersheds. The temporal timeframe is the early 1900s through ~~2023, when the 10-year permits would expire and no additional effects would occur~~ **2037, 10 years after the proposed 10-year special use permits would expire and any effects from outfitted pack and saddle stock use to hydrologic function would cease as a result of revegetation.** This period also includes reasonably foreseeable future actions listed at the beginning of this chapter for consideration in this cumulative effects analysis.

### **Past, Present, and Reasonably Foreseeable Future Actions**

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#### **Grazing**

Throughout the analysis area cattle and sheep grazing has slowly declined from peak levels in the early 1900s. In the last 10 years sheep grazing has been discontinued in the Hart's Pass area and in the Lake Chelan-Sawtooth and Sawtooth Backcountry. Cattle grazing has also been discontinued in the Wolf Creek watershed and across the Pasayten Wilderness. Today there is no livestock grazing in any of the wilderness areas and the number of domestic animals grazing from recreational activities in these areas is substantially lower than it has been for the last 80 to 100 years. Livestock grazing would continue within the **North Cascades (Goat and Wolf Allotments) and, Bear/Ramsey/Volstead area (although grazing occurs in the Middle Methow, none of the impacts would overlap with impacts from outfitter-guide permits).** The elimination of livestock grazing in wilderness and the Sawtooth Backcountry combined with a continuation of pack and saddle stock grazing would result in fewer domestic animals grazing in the analysis area than under past conditions even though recreational pack and saddle stock grazing may increase by up to 5% in the future (IAC, 2003). In the Bear/Ramsey/Volstead area livestock grazing would be rested for at least another year to allow the burned during the 2006 Tripod fire area to recover after which livestock grazing will continue with monitoring and annual review. The addition of a small amount of commercial recreational outfitter stock use combined with the existing livestock grazing permit is not expected to result in any noticeable changes to aquatic or riparian habitat in the Bear/Ramsey/Volstead area.

#### **Recreation use**

Non-outfitted recreation use by hikers and stock users is expected to increase by about 30% over the next 10 years (Refer to Reasonably Foreseeable Future actions in introduction of Chapter 3). A 5% increase in non-commercial pack and saddle stock recreation use combined with commercially outfitted pack and saddle stock use at levels that are similar to past levels (Alternative 2) or slightly less than past levels (Alternative 3 and 4) **would result in conditions that are similar to the current condition because management of use in** riparian areas would be the same under each alternative. Use on trails and at lakes would increase by about 35% over current conditions.

...

It is expected that the Washington State Department of Fish and Wildlife will continue fish stocking of wilderness lakes depending on future budgets and recreational use levels. The Forest Service will continue to work with the agency to provide information about fishing activity and to provide information to anglers about fishing regulations and species identification where listed bull trout are present in the analysis area. Commercial outfitters would help with this effort by ensuring that their clients are knowledgeable about fishing regulations and species identification. **Together these efforts would help protect this threatened species.**

### **Alternative 1**

Under Alternative 1, eliminating the outfitter-guides would reduce impacts to aquatic and riparian resources at the few localized areas accessed. However, these areas will continue to be used by the general public and only a few impacted areas would likely have slight improvements. Therefore, eliminating the existing outfitter-guide use would not be measurable or detectable and would have little to no cumulative benefit on **aquatic species or their habitat.**

### **Alternatives 2, 3 or 4**

**The incremental effects of permitted outfitter-guide use under Alternatives 2, 3, and 4 coupled with anticipated increases in general recreation use from the non-outfitted public** would continue outfitter use with **result in** essentially the same effects to aquatic and riparian resources **under any action alternative.** Impacts would continue to occur to localized areas that are well dispersed and represent a small fraction of the entire analysis area. ~~Additionally, ongoing use from private stock parties, hikers and other users would continue.~~

There have been substantial reductions in sheep and cattle grazing across the entire analysis area, resulting in a positive cumulative effect to riparian and stream functions, as seen in the 2000 stream surveys. Aquatic and riparian conditions in areas previously grazed by cattle and sheep would continue to improve without pressure from ~~this type of~~ **commercial** grazing. **Incrementally outfitter-guide's education efforts would help to protect bull trout, and the prohibition on outfitters from creating new trails would help ensure that outfitters do not add incrementally to trail expansion, and would have no noticeable incremental effects on trail treads with planned trail maintenance.**

Overall **considering past, present and reasonably foreseeable actions discussed previously,** aquatic and riparian conditions would continue to maintain high quality conditions at the reach, 6<sup>th</sup> and 5<sup>th</sup> field scales in wilderness and roadless areas given the minimal management activities that take place in these areas. Aquatic and riparian conditions are considered properly functioning across the analysis area and ~~continuing the~~ **permitting** outfitter-guide activity would not meaningfully retard or prevent their functions. Given the large size of the analysis area, over one million acres, compared to the small amount of impacted area, **the incremental effect of the action alternatives when considered cumulatively with** impacts **from other sources** would too small to meaningfully measure or detect.

...

*The following updates the last paragraph discussing compliance with the third Aquatic Conservation Strategy Objective, found on FEIS page 3-229.*

### **Aquatic Conservation Strategy Objectives**

All the alternatives would be consistent with the Aquatic Conservation Strategy Objectives. The rationale for this determination is as follows:

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#### **3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.**

Based on the small proportion of lake shores and stream banks impacted by outfitter-guide activity in the past, anticipated impacts at the project, 6th field, and 5th field watershed scales would be inconsequential. Additionally, current outfitter guide use accounts for ~~3%~~ **4%** of the total use in the analysis area. Under the different action alternatives, outfitter guide use would stay the same, decrease by one percent, or increase by one percent. With the small use under each alternative, a one percent change in use would not have any difference in effects over current usage levels. Therefore, issuing the permits for a 10 year term would not prevent maintaining or restoring the physical integrity of lake and stream channel features sufficient for a healthy ecosystem.

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## **3.7 BOTANY**

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### **AFFECTED ENVIRONMENT**

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*The following updates campsite information, found on FEIS page 3-243.*

Standards and guidelines for the portions of the analysis area within the Pasayten and portions of the Lake Chelan-Sawtooth wilderness that is on the Methow Valley Ranger District state that “campsites should be located at least 200 feet slope distance from meadows, lakes, streams, and key interest areas.” Applying a 200 foot linear distance to the camps in wilderness shows that there are ~~64~~ **86** campsites within 200 feet of meadows, lakes, streams, and key interest areas and ~~22~~ **46** of those campsites are within 200 feet of wetlands. ~~Twenty~~ **Thirty-four** of these ~~22~~ **46** campsites are in the Pasayten Wilderness and ~~2~~ **12** campsites are within the portion of the Lake Chelan-Sawtooth Wilderness covered by the Okanogan Forest Plan.

...

# ENVIRONMENTAL CONSEQUENCES

## Direct and Indirect Effects

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*The following updates campsite information in Alternative 2, found on FEIS page 3-259.*

...

The forest plan amendment regarding campsite location would allow outfitters to continue to use the approximate ~~98~~ 86 established campsites within 200 feet of meadows, lakes, streams, and special interest areas. Current affects to wetlands would continue and still comply with Forest Plan standard and guidelines.

...

*The following updates the number of service days and camps shown in the effects of Alternative 4 on botanical resources, found on FEIS page 3-265.*

### **Alternative 4**

In Alternative 4 there would be ~~6,700~~ 6,082 service days available for use by permitted outfitters. The party size would continue to be 12 people and 18 head of stock. There would be five assigned sites (Sheep Mountain, Beaver Creek, Bald Mountain, Crow Lake, and Whistler Camp) for full-service trips and five sites near trailheads for use as base camps (Andrews Creek, Billygoat, Slate Creek, Fish Creek, and Crater Creek).

...

The forest plan amendment regarding campsite location would allow outfitters to continue to use the approximate ~~98~~ 86 established campsites within 200 feet of meadows, lakes, streams, and special interest areas. Current affects to wetlands would continue and still comply with Forest Plan standard and guidelines.

...

*The following updates the number of service days shown in the effects of Alternative 4 on natural plant succession, found on FEIS page 3-267.*

### Natural Plant Succession

Increasing the use days to ~~6,700~~ 6,082 and permitting existing campsite barren core size would allow more barren core to be used in campsites compared to Alternative 2 and Alternative 3. The barren core would not expand out beyond what is already being used. The increased number of service days could reduce the potential annual recovery of associated graze areas. The overall ecological recovery of the plant resources within the analysis area is expected to improve with the implementation of any of the action alternatives. This is because past commercial livestock use has had a substantially

greater effect on the existing plant community composition and recovery than the level of recreational and outfitter stock has or would have in the future. Alternatives 4 complies with Forest Plan standard and guideline 15B-22A which addresses modification of natural plant succession and recovery.

...

*The following updates Botanical Resources cumulative effects section, starting on FEIS page 3-269 of the FEIS.*

### **Cumulative Effects**

The spatial boundary for this cumulative effects analysis is the analysis area. The temporal boundary is from the early 1900s through ~~2024~~ **2028**, when the 10-year permits would expire and effects associated with the permits would cease. Past actions with continuing effects overlapping effects of the pack and saddle stock outfitter-guides are included in the Current Condition section.

### **Present and Reasonably Foreseeable Future Actions**

#### **Present Actions**

Grazing is permitted ~~in the lower elevation habitats in all but the wilderness sub-sections, upper reaches of the Methow drainage in the North Cascades subunit, and the Sawtooth Backcountry subunit~~ **on the Goat and Wolf allotments in the North Cascades, and in the Bear/Ramsey/Volstead area.** This use ~~does not interface with outfitter activities and has no effect on any actions associated with is analysis. Outfitters and permittees don't use the same areas, so the disturbance doesn't occur in the same place and at the same time.~~ **Although the pack and saddle stock outfitter guides do use a limited number of drop camps, and use some of the trails in these allotments, the actual areas and timing of disturbance caused by the cattle and those caused by the outfitter-guides do not overlap. In addition, the amount of grazing by outfitter guide stock is negligible within the allotments.**

**Native plant communities are being affected on the local scale throughout the project area by overall recreation use (non-outfitted, and hiker outfitters), but the incremental effect of pack and saddle stock outfitter-guide use is negligible.** As discussed in the affected environment section where R6 Sensitive plant populations are associated with outfitter camp sites pack stock activities are part of the use. **Some of the non-assigned camps used by outfitters are also used by private stock parties, hiking outfitters or backpackers. Use of these camps by all types causes varying amounts of damage to vegetation from trampling, depending on the location and condition of the campsite, and the amount of use each receives. Since outfitter guide use accounts for approximately 4% of overall recreation use, the incremental effect from the pack and saddle stock outfitter guides is negligible.** ~~Occasionally, clients will ride their own stock in and will care for them while in the area and hire the outfitters to haul gear. Most of the camps are drop camps and typically not used overnight for pack and saddle stock. In these situations, grazing use is from private stock, not outfitter stock.~~

**Native plant communities are also being affected by invasive species throughout the project area, sometimes completely replacing natives with non-natives. Currently the forest is treating invasive species under several decisions which is providing better habitat for native species. The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods. Invasive Plants affect the recreational experience by replacing natural native plant communities with non-native plants, sometimes creating monocultures.**

#### **Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions in the analysis area that may affect **botanical species and their habitat, including** R6 Sensitive and Survey and Manage plant species, ~~such as and wetland and meadow habitats, are a continuation of the~~ **same as those listed under** present actions. **In addition,** Use of the analysis area, especially the North Cascades Highway Corridor, by private recreationists is predicted to increase **which will likely increase recreational impacts to native species, and continue to bring in and spread non-native species on vehicles, equipment and stock. Wildfires will continue in the future, and** ~~Managing wildfire for resource benefits would continue to be an option in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas—and may become an option in non-wilderness portions of the analysis area.~~ Meadow enlargement, creation, or enhancement from wildfires is more likely to occur in the future than it was in the past, **improving habitat for native species.**

**The Invasive Plant Management EIS currently in preparation would allow the continuation of invasive plants treatments throughout the area using more effective methods.**

The cumulative effects of any of the alternatives with the present and reasonably foreseeable future actions discussed at the beginning of Chapter 3 would have no **measurable** impacts on R6 Sensitive and Survey and Manage plant species habitat or species viability. ~~The~~ **Outfitter-guides are not likely to measurably add incremental** cumulative effects, **and** would not contribute to a downward trend or further listing of R6 Sensitive, ~~and~~ Survey and Manage, **or other native** plant species. The cumulative effects of any of the alternatives with the present and reasonably foreseeable future actions would not contribute to long-term modification of natural plant succession or recovery.

#### **Alternatives 1, 2, 3, and 4**

The large fires in the 2000s combined with the past high density of commercial livestock grazing in these areas modified the natural plant succession across much of the analysis area, especially in the Pasayten and Lake Chelan-Sawtooth Wilderness Areas. Given the short growing seasons, post-grazing **and post fire** recovery to plant communities takes decades. As a result the majority of grazing effects seen across the analysis area are tied to past commercial livestock grazing practices and not the result of pack and saddle stock outfitter-guide or private party stock use. Recent past stock use by both pack and saddle outfitter-guides and private parties is slowing the recovery in small, localized areas by favoring less palatable species, or where wetlands are being trampled. Given

the size of the analysis area, the effects of past grazing practices, and past fire history, the **incremental** effects of pack and saddle outfitter-guide use across the landscape are inconsequential. **Future fires and fire suppression would potentially modify plant succession depending on the size, intensity, and location of the fire and fire suppression activities.**

The general public would ~~be~~ not **be** allowed to use assigned camps, **so there would be no overlapping cumulative effects with private use, and areas in excess of barren core limitations in Alternatives 2 and 3 would begin to recover. Outfitters would be allowed to use the entire barren core in Alternative 4 so no recovery of barren core is expected despite the public not being allowed to use assigned camps.** In all other camps used by outfitter-guides, continued use by the general public would likely perpetuate the existing amount of barren core.

Campsites within 200 feet of wetlands in **wilderness in** Alternatives 1 or 3 would not be permitted for use by pack and saddle outfitter-guides. However, the private stock parties would still be allowed to use these areas. Although impacts by outfitters to wetlands near these **wilderness** camps would cease, use by private stock parties would still be have an effect on wetlands near camps. Private stock would still trample wetland vegetation, selectively graze, and cause soil damage to the wetlands habitat in the analysis area **and eliminating use by outfitter-guides may not result in any improvements. These campsites would be available to pack and saddle stock outfitter guides in Alternatives 2 and 4, in addition to the non-outfitted stock users. The incremental effect from the outfitter guide use of these camps would be that pack and saddle stock outfitters would account for approximately 34% in the Pasayten and 6% in the Lake Chelan-Sawtooth in Alternative 2, and 30% in the Pasayten and 6% in the Lake Chelan-Sawtooth in Alternative 4.**

...

Some of the alterations in plant communities are still evident on the landscape, particularly in the drier habitats where sheep regularly bedded and trailed. However, these areas are slowly showing signs of recovery since commercial livestock have been removed. Since the removal of cattle grazing, there has been a rapid and visible recovery of riparian and wetland habitats in the Spanish Camp area in the Pasayten Wilderness (Kovalchik 2002). The Chelan side of the Lake Chelan-Sawtooth Wilderness and Sawtooth Backcountry has the most campsites that will likely exhibit the longest recovery period from past commercial grazing due to drier conditions. **Pack and saddle stock outfitter guide use, in addition to use by non-outfitted pack and saddle stock users are having minor, isolated effects on plant communities in and near campsites. When considered on a landscape level, the effects from recreation use are negligible.**

**Ongoing and future invasive plant treatments are likely to improve native plant habitat by removing invasive species and quickly treating newly discovered populations. Under the Regional Invasive Plant Management Record of Decision (2005), any feed brought on to National Forest System lands, including that brought by outfitters, is required to be pelletized or certified weed free which would reduce the potential for invasive species from both outfitted and private stock.**

The cumulative effect of any of the alternatives and the other past, present, and reasonably foreseeable future actions would result in an upward trend in vegetation condition, a slow return to natural, unmodified plant communities and succession. Areas would continue to recover from past overgrazing, ~~and~~ the effects of wildfires, ***and the treatment of invasive species***. Isolated spots across the analysis area would ~~see~~ be slower to recover as a result of permitting pack and saddle stock grazing, but this would be inconsequential.

## 3.8 TERRESTRIAL WILDLIFE

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...

### ***Primary Cavity Excavators***

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#### **Environmental Consequences**

##### **Direct and Indirect Effects**

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*The following updates the number of pack and saddle stock visitor days in the discussion of effects on primary cavity excavators, found on FEIS page 3-276.*

<b>Alternative 4</b>
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In addition to the public, outfitter-guides and clients would use camps and collect firewood from surrounding areas. There would be ~~31,136~~ **30,502** pack and saddle stock visitor days in the analysis area (6,700 outfitted), which would be ~~8%~~ **6%** more than the existing number. Less than one tenth of 1% of the analysis area has been affected by past snag-felling or downed wood gathering for firewood. New snags would continue to be created by insects, disease, wildfire, and drought. These snags would eventually fall over, creating a supply of downed wood.

##### **Cumulative Effects**

*The following updates Primary Cavity Excavator cumulative effects section, starting on FEIS page 3-276 of the FEIS.*

...

##### **Reasonably Foreseeable Future Actions**

Reasonably foreseeable future activities in the analysis area that may affect primary cavity excavators are a continuation of the present actions. Use of the analysis area, especially the North Cascades Highway Corridor, by private recreationists is predicted to increase in the future ***which may result in additional snag felling and reduction of primary cavity excavator habitat.***

#### Alternatives 1, 2, 3, and 4

When considered in conjunction with other activities affecting dead and defective tree habitat, each of the four alternatives would have little cumulative effect on primary cavity excavators. Snags may continue to diminish around camps due to private party use and other permitted activities, but not as a result of pack and saddle outfitter-guides because this proposal prohibits snag felling by these outfitter-guides, ***except for safety*** (mitigation measure 3.c). Abundant habitat would exist away from these sites, so primary cavity excavator populations as a whole would be largely unaffected.

...

#### ***Marten, Pileated Woodpecker, Three-toed Woodpecker, Northern Spotted Owl and Barred Owl***

...

*The following updates Marten, Pileated Woodpecker, Three-toed Woodpecker, Northern Spotted Owl and Barred Owl direct, indirect and cumulative effects section, starting on FEIS page 3-279 of the FEIS.*

#### **Environmental Consequences**

...

#### **Direct, Indirect, and Cumulative Effects**

Outfitter-guide activities do not alter forest stands except for the removal of snags (***only for safety***) and downed logs which are used for camp firewood when on overnight trips. Firewood collection predominantly occurs in and adjacent to camp sites. See the section above on primary cavity excavators for the discussion on effects to snags and downed logs.

...

#### Alternatives 1, 2, 3, and 4

None of these alternatives would alter forest stands with the exception of firewood use in and around campsites. ***The incremental effect of outfitter-guide gathering firewood around campsites along with non-outfitted recreationists gathering firewood would result in less down wood and fewer snags near campsites.*** Abundant habitat exists away from the campsites, so American marten, pileated woodpecker, three-toed woodpecker, and barred owl populations as a whole would be largely unaffected. ***General firewood cutting, including snags, does occur in the Bear/Ramsey/Volstead area by permit, but outfitter-guide use would not add incrementally to snag removal (except for safety).*** ~~They would not change the~~ viability outcomes listed in Figure 3.8-1 ***would not change either from outfitter-guide or general public use.*** This minor effect to old-growth or mature stands would not have any effect on the character of any management requirement areas for the pileated woodpecker, marten, three toed woodpecker, or northern spotted owl.

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## ***Ruffed Grouse and Beaver***

...

### **Environmental Consequences**

#### **Direct and Indirect Effects**

...

*The following updates the number of pack and saddle stock visitor days in the discussion of effects on ruffed grouse and beaver, found on FEIS page 3-283.*

<b>Alternative 4</b>
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Outfitter-guides and livestock would continue to use trails and camps and impact nearby riparian areas. There could be a total of ~~31,136~~ **30,502** pack and saddle stock visitor days in the analysis area, and ~~6,700~~ **6,082** or ~~14%~~ **20%** would be associated with outfitter-guides. This would be an ~~8%~~ **6%** increase in total pack and saddle stock days over the current and a ~~50%~~ **36%** increase in the permitted pack and saddle stock days. Existing trail crossings and watering sites would continue to be trampled and unvegetated. As stated above these impacts are limited to a few heavily used sites and are only occurring on a small portion of the landscape.

...

*The following updates Ruffed Grouse and Beaver cumulative effects section, starting on FEIS page 3-283 of the FEIS.*

#### **Cumulative Effects**

...

##### Past, Present, Reasonably Foreseeable Future Actions

***The effects of past actions are captured in the Affected Environment section above.***

Other ***present and reasonably foreseeable future*** activities in the analysis area that would affect deciduous and riparian habitat include timber sales, road ~~construction and~~ maintenance, wild fires, prescribed fires, grazing by livestock from non-outfitted users, and commercial livestock grazing. Most ***non-outfitted*** recreational livestock use occurs in the same areas used by outfitter-guides (***except at assigned camps***), i.e., those accessed by trails. There are several active livestock allotments in the analysis area. The Ramsey C & H (cattle and horse) allotment is in the Bear/Ramsey/Volstead portion of the analysis area. ~~The Alta Coulee C & H allotment is in the Alta Lake portion of the analysis area.~~ Parts of the Goat C & H allotment ***and*** parts of the Wolf C & H allotment, ~~and Boulder C & H allotment are in the Upper Methow~~ ***North Cascades*** portion of the analysis area. ~~A portion of the Buttermilk sheep and goat allotment is in the Lake Chelan-Sawtooth Wilderness and Middle Methow portion of the analysis area.~~ Forage

utilization by the cattle and sheep on these allotments is closely monitored to not remove more than 45% of current annual growth of grasses/forbs.

#### **Alternatives 1, 2, 3, and 4**

The ***incremental*** cumulative effect of any of the alternatives ~~and~~ ***with*** the other past, present, and reasonably foreseeable future actions ***listed above*** would be the loss of some riparian habitat due to pack and saddle ***and non-outfitted*** stock trampling in and around campsites. Although Alternatives 1 and 3 would allow for some recovery of camps within 200 feet of wetlands, streams and lakes, any recovery would likely be offset by non-outfitted use of those campsites. Abundant ruffed grouse and beaver habitat exists away from ~~these~~ ***campsites***, trail/***stream*** crossings and stock watering sites, so ruffed grouse and beaver populations as a whole would be largely unaffected

...

#### ***Mule Deer***

...

*The following updates the mule deer direct, indirect and cumulative effects section found on FEIS page 3-285.*

#### **Environmental Consequences**

##### **Direct, Indirect and Cumulative Effects**

...

#### **Alternatives 1, 2, 3, and 4**

The outfitter-guide activities proposed in each of the alternatives would have no effect on mule deer winter range or summer range cover levels. Few of the trails and camps used by outfitter-guides are in mule and white-tailed deer winter range. Those in winter range are not used by the outfitter-guides when deer are there during winter. The project would not affect the health of mule and white-tailed deer populations.

**Therefore no cumulative effects would occur.**

...

#### ***Mountain Goats and High Elevation Meadows***

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*The following updates the number of pack and saddle stock visitor days in the discussion of effects on mountain goat, found on FEIS page 3-289.*

#### **Environmental Consequences**

##### **Direct and Indirect Effects**

...

#### Alternative 4

Outfitter-guide livestock would continue to graze meadows near camp sites in the analysis area. There would be a total of ~~31,136~~ **30,502** pack and saddle stock visitor days in the analysis area, and ~~6,700~~ **6,082** would be associated with the outfitter-guides, representing a ~~50%~~ **36%** increase in outfitter-guide use and an ~~8%~~ **6%** increase in total pack and saddle stock use. A large portion of the increase would be in day rides in the Alta Lake and North Cascades areas which entails no overnight grazing of stock.

This alternative includes an amendment that would allow the use of established campsites that are within 200 feet of meadows, lakes, and streams in the Pasayten and Lake Chelan-Sawtooth wilderness areas. Meadows adjacent to existing camps would continue to be ~~grazed and at a higher intensity than in the recent past~~, **but the reduction in outfitter guide pack and saddle stock service days, compared to the existing condition, would slightly reduce the amount of grasses and forbs consumed by the stock.** Impacts to meadow habitat would still be limited to a few heavily used sites. Use at those sites would likely expand to adjacent areas, however even this expanded use would be occurring on a small portion of the landscape.

...

*The following updates Mountain Goats and High Elevation Meadows cumulative effects section, starting on FEIS page 3-289 of the FEIS.*

#### Cumulative Effects

...

#### Alternatives 1, 2, 3, and 4

**Pack and saddle stock outfitter-guide use would potentially degrade habitat for mountain goats and other meadow-dependent wildlife in and around campsites, however the incremental effect would be immeasurable.** ~~When considered in conjunction with other activities affecting meadow habitat, each of the alternatives would potentially degrade habitat for mountain goats and other meadow-dependent wildlife in and around campsites.~~ **Commercial livestock grazing overlaps outfitter guide use in the North Cascades and Volstead/Ramsey/Bear areas. Outfitter guide and non-outfitted recreational use of forage in these areas is so incidental as to be immeasurable, and forage utilization is closely monitored so that Forest Plan standards are met, regardless of the source. Commercial livestock grazing has not occurred in these wilderness areas for approximately 20 years, allowing many areas to recover (Kovalchik, 2003). Although non-outfitted stock in wilderness may be kept confined resulting in heavier impacts, outfitter-guide stock would generally be loose grazed, allowing impacts to lessened by dispersing them over larger areas. Wildfire suppression has resulted in trees encroaching on meadows. The focus on fire for resource benefits in wilderness in recent years has allowed fire to play a more natural role in enhancing, enlarging or creating new meadows and will likely continue with future wildfires; however outfitter-guides would not impact meadows in this way.**

Habitat for mountain goats and other meadow-dependent wildlife is abundant away from these sites, so populations as a whole would be largely unaffected.

...

## LATE SUCCESSIONAL RESERVES

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### Environmental Consequences

*The following updates the Late Successional Reserves direct, indirect and cumulative effects section, starting on FEIS page 3-292 of the FEIS.*

#### Direct, Indirect, and Cumulative Effects

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#### Alternatives 1, 2, 3, and 4

None of the alternatives would have any effect on LSRs or habitat since pack and saddle stock recreation would not result in any alteration of forest stands, ***and therefore no cumulative effects would occur***. They would not retard or prevent attainment of LSR objectives.

...

## ENDANGERED, THREATENED AND SENSITIVE SPECIES

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### *Endangered or Threatened*

#### *Gray Wolf*

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*The following updates the information concerning wolf packs, the last paragraph under Affected Environment found on FEIS page 3-293.*

#### Affected Environment

Gray wolves were Federally listed as an endangered species in ~~1978~~ ***1973***. ***In 2011, wolves in the eastern third of Washington State were removed from federal protection under the Endangered Species Act (ESA) along with the rest of the Northern Rocky Mountain Distinct Population Segment. Wolves in the western two thirds of Washington continue to be protected under ESA and are classified as an endangered species. The analysis area is within the area where wolvers are still classified as endangered.*** Wolves are wide-ranging predators that can exist in a wide variety of habitat types. They are habitat generalists in terms of terrain and vegetation (Boyd

1999, Oakleaf et al. 2006). They are not wilderness dependent, but their survival depends on the availability of cover and relatively secure areas that allow them to avoid humans and escape persecution (Carroll et al. 2003). To successfully inhabit an area they require a year-round prey base of wild ungulates (Boyd et al. 1994, Fritts and Carbyn 1995). Mule deer are likely the main prey item for wolves in the Methow Valley since they are by far the most abundant ungulate. White-tailed deer, moose, mountain goats, beavers, wild turkeys, marmots, and other small mammals are probably preyed on also.

...

Gray wolves are believed to occur throughout the analysis area, but confirmed sightings were not common until 2008. In early 2008 a series of wolf sightings and photographs resulted in the documentation of the Lookout Pack in the Methow Valley, the first wolf pack known to exist in Washington since the 1930s. ~~To date, this is the only known reproductive wolf pair in the analysis area.~~ **The Lookout Pack was still in existence in 2015 (Becker et. al. 2016).** The Lookout Pack has inhabited areas during the summer and fall that are within the Middle Methow, Sawtooth Backcountry, and Lake Chelan-Sawtooth wilderness portions of the analysis area. **The Loup Loup Pack was identified and documented in late 2015 in the southeast portion of the Methow Valley Ranger District (Becker et. al. 2016). Members of this pack were captured and fitted with radio telemetry collars in early 2016. The location and extent of their range is not yet known.**

### **Environmental Consequences**

...

*The following updates the number of pack and saddle stock visitor days in the analysis area, in the discussion of the effects of Alternative 4 on gray wolves, found on FEIS page 3-295.*

#### **Alternative 4**

Outfitter-guide livestock would continue to use the analysis area. There would be a total of ~~34,136~~ **30,502** pack and saddle stock visitor days in the analysis area, and ~~6,700~~ **6,082** would be associated with the outfitter-guides, representing a ~~50%~~ **36%** increase in outfitter-guide use and an ~~8%~~ **6%** increase in total pack and saddle stock use. This alternative would not result in any increases in motorized access or new trail construction. It would not result in unacceptable reductions to wolf prey species.

...

*The following updates Gray Wolf cumulative effects section, starting on FEIS page 3-289 of the FEIS.*

### **Cumulative Effects**

...

#### Alternatives 2, 3, and 4

When considered in conjunction with other activities affecting gray wolves, Alternatives 2, 3, and 4 may affect, but would not likely adversely affect gray wolves. Shooting, trapping, and harassing wolves are illegal in Washington. Disturbance to a den or rendezvous site ***from management activities or recreation*** is always a possibility on public lands but there are no known wolf den or rendezvous sites in the analysis area, ***and therefore any effects from pack and saddle stock outfitter guide use on wolves would be immeasurable with implementation of any alternative.*** If a wolf den or rendezvous site was discovered in the analysis area, appropriate actions would be taken in consultation with other wildlife agencies. Domestic grazing allotments are managed to avoid or minimize conflicts between livestock and wolves.

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#### Grizzly Bear

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*The following updates Grizzly Bear cumulative effects section, starting on FEIS page 3-299 of the FEIS.*

#### Environmental Consequences

...

#### Cumulative Effects

...

Core area is ***determined by analyzing the effects of all present actions that affect roads and trails (as a result of their construction in past actions), including roads, motorized trails or high use non-motorized trails.*** Only habitat that is more than 500 meters from an ***existing or planned*** road, motorized trail, or high use, non-motorized trail ***qualifies as core.*** High use for non-motorized trails is defined as greater than 20 parties per week (IGBC 1987). Examples of high use, non-motorized trails in the study area include but are not limited to the Pacific Crest Trail, Middle Fork Pasayten River, Hidden Lakes, Andrews Creek, and Chewuch River trails. **Figure 3.8-3** indicates the amount of core area and the number of outfitter-guide camps in each of the BMUs in the analysis area.

...

#### Reasonably Foreseeable Future Actions

Foreseeable future actions that may affect grizzly bears ***in the project area*** include human disturbance to a den or foraging site, accidental or intentional shooting/trapping, ***trail or road maintenance***, livestock grazing activities, ***invasive plant treatments***, accessing improperly stored food or garbage at camp sites by the public, wildfire and wildfire suppression activities, and displacement from habitat due to human use of roads or trails.

...

## Alternatives 2, 3, and 4

***The incremental effect of*** Alternatives 2, 3, and 4 and all past, present, and foreseeable future actions may affect, but would not likely adversely affect grizzly bears and their habitat. Outfitter-guide use would not change the amount of core area in any of the alternatives; ***although it is possible that pack and saddle outfitter-guides or their clients, hiking outfitters, or the general non-outfitted public could disturb a den or foraging site, it is highly unlikely that these could occur from multiple sources at the same time and place.*** Additional use that could occur under ~~a~~ Alternatives 2 and 4 would be on trails that are already mapped as high use. Although pack and saddle outfitter-guides may take clients to hunt black bears, shooting and trapping grizzly bears is illegal in Washington and mitigation measures requiring education and warning. ~~Timber sale and grazing~~ Grazing activities are regulated and planned to avoid or minimize and mitigate impacts to grizzly bears. There have been no reported incidents of grizzly bears getting into improperly stored food or garbage in the analysis area. ***Most invasive plant treatments are in the vicinity of roads and heavily used trails, and all road and most trail maintenance are by definition outside of core areas. Therefore disturbance from treatments would in almost all cases already overlap effects on core from other activities, including outfitter-guide use. Because outfitter-guides are restricted to roaded access, and heavily used trails that are already eliminated from core, no incremental impacts to core would occur.***

...

## Lynx

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*The following updates Lynx cumulative effects section, starting on FEIS page 3-302 of the FEIS.*

## Environmental Consequences

...

### Cumulative Effects

...

#### Present Actions

Present actions ***in the project area*** that may affect lynx include accidental shooting of individual lynx, ~~timber sale activities,~~ fire suppression, and the grooming of snowmobile/ski routes. Snowmobile use may impact lynx by providing a compacted snow surface that allows competing predators to access lynx habitat. There are 43 lynx analysis units (LAU) on the Methow Valley Ranger District portion of the analysis area and 40 of them have snowmobile route density of less than 1 mi./sq.mi. This is considered a low level of human influence (Gaines et al. 2003). Present and future management activities are analyzed using the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000), ***under which the Forest Service agreed that all projects would be designed such that they would have no effect or would not likely affect lynx.***

#### Reasonably Foreseeable Future Actions

Future foreseeable actions that may affect lynx include accidental shooting of individual lynx, **increases in recreation use, timber sale activities, fire suppression, and the grooming of snowmobile/ski routes with effects as described in past actions above.** Present and future management activities are analyzed using the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000), **resulting in projects that are not likely to adversely affect lynx. No actions are currently under consideration to change grooming of snowmobile routes. Future increases in recreation use may increase the possibility of accidental shooting of lynx and increasing the amount of snow surface compacted by snowmobiles, increasing competing predators' access to lynx habitat.**

...

#### Alternatives 2, 3, and 4

When considered in conjunction with other activities affecting lynx and their habitat, Alternatives 2, 3, and 4 may affect, but would not likely adversely affect lynx. **Permitted pack and saddle outfitter-guide use would not incrementally affect accidental shooting of lynx, fire suppression tactics, or grooming of snowmobile/ski routes. It is highly unlikely that a lynx would be accidentally shot during pack and saddle outfitter hunting and pack and saddle outfitter guides do not use snowmobile or ski routes. Future wildfire suppression activities that could cause disturbance to lynx are not likely to overlap with pack and saddle outfitter guide trips because areas are usually closed during wildfire. Future increases in recreation use, and the potential for increased accidental shooting and compacted snow surface could overlap the areas used by the pack and saddle stock outfitter guides, adding to the potential effects to lynx habitat.**

...

#### Marbled Murrelet

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*The following updates Marbled Murrelet direct, indirect and cumulative effects section, starting on FEIS page 3-304 of the FEIS.*

#### Environmental Consequences

##### Direct/Indirect/Cumulative Effects

#### Alternatives 1, 2, 3, and 4

Each of the alternatives would have “no effect” on the marbled murrelet **because the project area is outside the known range, and therefore no cumulative effects would occur.**

#### Designated Critical Habitat-Marbled Murrelet

There is no designated critical habitat for marbled murrelets in the analysis area. All four alternatives would have no effect on marbled murrelet critical habitat, **and no cumulative effects on critical habitat.**

## **Northern Spotted Owl**

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*The following updates Northern Spotted Owl cumulative effects section, starting on FEIS page 3-305 of the FEIS.*

### **Environmental Consequences**

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#### **Cumulative Effects**

...

Other activities in the analysis area that may affect northern spotted owls include disturbance to a nesting pair by ***non-pack and saddle outfitters, non-outfitter recreationists or management activities***, and habitat loss from ***timber management activities, wildfire, and wildfire suppression***.

#### **Alternative 1**

This alternative would have no cumulative effect on northern spotted owls because no permits would incrementally add to effects from other projects.

#### **Alternatives 2, 3, and 4**

When considered in conjunction with other past, present, and foreseeable future actions, these alternatives may affect, but would not likely adversely affect spotted owls or their habitat. Most recreational activities ***in the project area***, including pack and saddle outfitter-guide activities, do not occur in the forest stand types that spotted owls utilize for nesting, ***and therefore it is unlikely nesting pairs would be disturbed by any recreational activities***. ~~Timber and other m~~ Management activities are planned and implemented to avoid or minimize and mitigate any impacts to northern spotted owls. ***Wildfire and wildfire suppression activities could overlap areas used by the pack and saddle stock outfitter guides, and have the potential to alter spotted owl habitat. Wildfires have the potential to substantially degrade spotted owl habitat, depending on size and intensity. Wildfire suppression activities could include falling trees and constructing firelines through habitat, adversely affecting the habitat. These events are unplanned, and cannot be predicted. The incremental effect of pack and saddle stock outfitter guide activities in wildfire areas would be immeasurable.***

...

#### **Designated Critical Habitat-Northern Spotted Owl**

There are three critical habitat units in the analysis area: WA1, WA2, and WA3. The activities proposed in the four alternatives would not alter any forested stands and thus would have no effect on northern spotted owl critical habitat.

#### ***Sensitive Species***

...

## **Bald Eagle**

...

*The following updates Bald Eagle direct, indirect and cumulative effects section, starting on FEIS page 3-307 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire and the effects of the permits would cease.~~

#### **Alternatives 1, 2, 3, and 4**

The proposed activities would not occur near any known bald eagle use areas. They would have "no impact" on bald eagles, ***and therefore no cumulative effects would occur.***

## **Common Loon**

...

*The following updates Common Loon direct, indirect and cumulative effects section, starting on FEIS page 3-307 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire and the effects of the permits would cease.~~

#### **Alternatives 1, 2, 3, and 4**

All four of the alternatives would have "no impact" on the common loon. The outfitter-guide activities would not disturb any known nesting sites nor alter any suitable habitat, ***and therefore no cumulative effects would occur.***

## **Fisher**

...

The following updates the Fisher affected environment section, starting on FEIS page 3-308 of the FEIS.

### Affected Environment

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**Habitat for fishers has been reduced by past timber management which reduced canopy closure or removed structure needed for denning and resting. Wildfire has also reduced suitable habitat. Individual fishers may have been shot, trapped and poisoned, although this is now illegal in Washington state.**

The following updates the Fisher direct, indirect and cumulative effects section, starting on FEIS page 3-308 of the FEIS.

### Environmental Consequences

#### Direct and Indirect, and Cumulative Effects

##### **Alternatives 1, 2, 3, and 4**

There would be no reduction of mature or old growth habitats under any of the four alternatives. Each of the four alternatives would have “no impact” on fishers, ***and therefore no cumulative effects would occur.*** See the sections above on primary cavity excavators and LSRs for the discussion on effects to snags and downed logs.

##### **~~Cumulative Effects~~**

~~The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10 year permits would expire and effects of the permits would cease.~~

~~Past actions that may have affected fishers include shooting/trapping/poisoning of individual fisher and timber management that reduced habitat. Some forest management activities reduce habitat for fisher by reducing canopy closure or removing structure needed for denning and resting. Present and reasonably foreseeable future actions in the analysis area that may affect fisher include accidental shooting or trapping and wildfires that reduce suitable habitat.~~

##### **~~Alternative 1~~**

~~This alternative would have no cumulative effect on the fisher because no outfitter-guide permits would be issued.~~

##### **~~Alternatives 2, 3, and 4~~**

~~When considered in conjunction with other activities affecting fishers and their habitat, these alternatives would have no impact on the fisher. Shooting and trapping fisher in Washington is illegal. Body gripping traps are not allowed for any species in Washington.~~

## **Gray Flycatcher**

...

*The following updates the Gray Flycatcher direct, indirect and cumulative effects section, starting on FEIS page 3-309 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~Outfitter-guide activities would not alter gray flycatcher nesting habitat or foraging habitat. None of the outfitter-guide camps are in gray flycatcher habitat.~~

~~The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire.~~

#### **Alternatives 1, 2, 3, and 4**

**Outfitter-guide activities would not alter gray flycatcher nesting habitat or foraging habitat. None of the outfitter-guide camps are in gray flycatcher habitat.** These four alternatives would have “no impact” on the gray flycatcher. **Therefore no cumulative effects would occur.**

## **Great Gray Owl**

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*The following updates the Great Gray Owl cumulative effects section, starting on FEIS page 3-310 of the FEIS.*

### **Environmental Consequences**

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#### **Cumulative Effects**

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#### **Alternatives 2, 3, and 4**

When considered in conjunction with other past, present, and reasonably foreseeable future actions, these three alternatives may impact individual great gray owls, but are not likely to cause a trend toward Federal listing or a loss of population viability as a result of small potential for impacting habitat for prey species from recreational livestock grazing. ~~Timber and other Forest Service permitted management activities~~ ***Current and future allotment management plans*** are ~~now~~ planned and implemented to avoid or minimize and mitigate impacts to great gray owls, ***although impacts to prey species may still occur. Taken together with impacts from pack and saddle outfitter guides and their clients, impacts are negligible.***

## **Lewis' Woodpecker**

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*The following updates the Lewis' Woodpecker direct, indirect and cumulative effects section, on FEIS page 3-311 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~Effects to snag habitat are specified above in the MIS section on primary cavity excavators. The spatial boundary for the cumulative effects analysis is the Methow Watershed. The temporal boundary is from the early 1900s through 2023, when the 10 year permits would expire and the any effects would cease.~~

#### **Alternatives 1, 2, 3, and 4**

***Effects to snag habitat are specified above in the MIS section on primary cavity excavators.*** These alternatives would have “no impact” on the Lewis' woodpecker. The proposed outfitter-guide activities would not alter any key features of Lewis' woodpecker habitat. ***Therefore no cumulative effects would occur.***

## **Moose**

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*The following updates the Moose direct, indirect and cumulative effects section, on FEIS page 3-312 of the FEIS.*

### **Environmental Consequences**

#### **Direct/Indirect/Cumulative Effects**

~~Effects to riparian habitat are specified above in the MIS section on ruffed grouse and beaver. The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10 year permits would expire and the any effects would cease.~~

#### **Alternatives 1, 2, 3, and 4**

**Effects to riparian habitat are specified above in the MIS section on ruffed grouse and beaver.** These alternatives would have “no impact” on moose. The proposed outfitter-guide activities would not alter any key features of moose habitat. Effects to riparian habitats are limited to trail crossings and other small areas near camps. Woody browse that moose prefer are not typically favored by domestic stock and are not limiting in the analysis area. **Therefore no cumulative effects would occur.**

## **Mountain Goat**

...

*The following updates the Mountain Goat direct, indirect and cumulative effects section, on FEIS page 3-321 of the FEIS.*

### **Environmental Consequences**

#### **Direct/Indirect/Cumulative Effects**

#### **~~Alternatives 1, 2, 3, and 4.~~**

~~These alternatives would have no impact on mountain goats.~~

## **Pallid Bat**

...

*The following updates the Pallid Bat direct, indirect and cumulative effects section on FEIS page 3-313 of the FEIS.*

## Environmental Consequences

### Direct/Indirect/Cumulative Effects

~~The proposed outfitter-guide pack and saddle stock activities would not impact night roosting habitat or day roosting habitat for pallid bats.~~

#### Alternatives 1, 2, 3, and 4

**The proposed outfitter-guide pack and saddle stock activities would not impact night roosting habitat or day roosting habitat for pallid bats.** ~~These alternatives would have no impact on the pallid bat.~~

The proposed project would not alter any bat roosting habitat or affect their prey base. **Therefore no cumulative effects would occur.**

### **Peregrine Falcon**

...

*The following updates the Peregrine Falcon direct, indirect and cumulative effects section on FEIS page 3-313 of the FEIS.*

## Environmental Consequences

### Direct, Indirect, and Cumulative Effects

~~There are no known peregrine falcon nesting sites in the analysis area. Outfitter-guide pack and saddle stock activities are unlikely to disturb nesting falcons since their nests are on sheer cliffs. The proposed activities would not substantially alter habitat for falcon prey species.~~

~~The spatial boundary for the cumulative effects analysis is the analysis area as described in Chapter 1. The temporal boundary is from the early 1900s through 2023, when the 10 year permits would expire and any effects would cease.~~

#### Alternatives 1, 2, 3, and 4

**There are no known peregrine falcon nesting sites in the analysis area. Outfitter-guide pack and saddle stock activities are unlikely to disturb nesting falcons since their nests are on sheer cliffs. The proposed activities would not substantially alter habitat for falcon prey species.** All four alternatives would have “no impact” on the peregrine falcon. Pack and saddle stock outfitter-guide activity would not alter peregrine falcon habitat. **Therefore no cumulative effects would occur.**

## ***Sharptail Snake***

...

*The following updates the Sharptail Snake direct, indirect and cumulative effects section on FEIS page 3-314 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the Lake Chelan Watershed. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire and any effects would cease.~~

#### **Alternatives 1, 2, 3, and 4**

These alternatives would have “no impact” on the sharptail snake. The proposed alternatives would not alter any sharptail snake habitat. There are no outfitter-guide camps or other activities proposed to occur in sharptail snake habitat.

## ***Striped Whipsnake***

...

*The following updates the Striped Whipsnake direct, indirect and cumulative effects section on FEIS page 3-314 of the FEIS.*

### **Environmental Consequences**

#### **Direct/Indirect/Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the Lake Chelan Watershed. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire.~~

#### **Alternatives 1, 2, 3, and 4**

These alternatives would have “no impact” on the striped whipsnake. The proposed alternatives would not alter any striped whipsnake habitat. There are no outfitter-guide camps or other activities proposed to occur in striped whipsnake habitat. ***Therefore no cumulative effects would occur.***

## ***Townsend’s Big-eared Bat***

...

*The following updates the Townsend’s Big-eared Bat direct, indirect and cumulative effects section on FEIS page 3-315 of the FEIS.*

### **Environmental Consequences**

#### **Direct/Indirect/Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the Methow Watershed. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire.~~

<b>Alternatives 1, 2, 3, and 4</b>
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Alternative 1 would have no impact on the Townsend’s big-eared bat; there would be no change from the existing condition. Alternatives 2, 3, and 4 would have “no impact” on the Townsend’s big-eared bat since the project would not alter any bat roosting habitat or affect the prey base. ***Therefore there would be no cumulative effects.***

### ***Western Gray Squirrel***

...

*The following updates the Western Gray Squirrel direct, indirect and cumulative effects section beginning on FEIS page 3-315 of the FEIS.*

### **Environmental Consequences**

#### **Direct, Indirect, and Cumulative Effects**

~~The spatial boundary for the cumulative effects analysis is the Methow Watershed. The temporal boundary is from the early 1900s through 2023, when the 10-year permits would expire and the any effects would cease.~~

<b>Alternatives 1, 2, 3, and 4</b>
------------------------------------

These alternatives would have “no impact” on the western gray squirrel. The proposed outfitter-guide activities would not alter any key features of western gray squirrel habitat. ***Therefore no cumulative effects would occur.***

### ***White-headed Woodpecker***

...

*The following updates the White-headed Woodpecker direct, indirect and cumulative effects section on FEIS page 3-316 of the FEIS.*

## Environmental Consequences

### Direct, Indirect, and Cumulative Effects

~~Effects to snag habitat are specified above in the MIS section on primary cavity excavators. The spatial boundary for the cumulative effects analysis is the Methow Watershed. The temporal boundary is from the early 1900s through 2023, when the 10 year permits would expire and the any effects would cease.~~

#### Alternatives 1, 2, 3, and 4

Effects to snag habitat are specified above in the MIS section on primary cavity excavators; ***outfitters would not be allowed to cut snags, except for safety.*** These alternatives would have “no impact” on the white-headed woodpecker. The proposed outfitter-guide activities would not alter any key features of white-headed woodpecker habitat. ***Therefore no cumulative effects would occur.***

### **Wolverine**

...

*The following updates the Wolverine direct, indirect and cumulative effects section on FEIS page 3-317 of the FEIS.*

## Environmental Consequences

~~The potential effects of the proposed outfitter-guide activities on wolverines are the possibility of human disturbance to a mother with kits. Reproductive den habitats, as described by Magoun and Copeland (1998) are not typically sought out by pack and saddle stock outfitter-guides. In addition, the wolverine reproductive denning season is considered to be February through April (Magoun and Copeland 1998). The proposed outfitter-guide activities would not occur until after this so disturbance is unlikely.~~

### Direct, Indirect and Cumulative Effects

#### Alternatives 1, 2, 3, and 4

***The potential effects of the proposed outfitter-guide activities on wolverines are the possibility of human disturbance to a mother with kits. Reproductive den habitats, as described by Maqoun and Copeland (1998) are not typically sought out by pack and saddle stock outfitter-guides. In addition, the wolverine reproductive denning season is considered to be February through April (Magoun and Copeland 1998).*** These alternatives would have “no impact” on wolverine. Pack and saddle stock outfitter-guide activities would occur after the reproductive den season so disturbance would be unlikely. ***Therefore no cumulative effects would occur.***

...

## ***Sensitive Invertebrate Species***

...

*The following updates the Sensitive Invertebrate Species direct, indirect and cumulative effects section on FEIS page 3-318 of the FEIS.*

### **Environmental Consequences**

~~The only sensitive vertebrate species known to occur within the analysis area are those with alpine rocky areas for habitat. There is potentially suitable habitat for the meadow fritillary, Great Basin fritillary, tawny-edged skipper, and Peck's skipper. Overgrazing by livestock would be an impact to butterflies trying to inhabit these areas.~~

### **Direct, Indirect and Cumulative Effects**

#### **Alternatives 1, 2, 3, and 4**

***The only sensitive invertebrate species known to occur within the analysis area are those with alpine rocky areas for habitat. There is potentially suitable habitat for the meadow fritillary, Great Basin fritillary, tawny-edged skipper, and Peck's skipper. Overgrazing by livestock would be an impact to butterflies trying to inhabit these areas.*** These alternatives would have "no impact" on sensitive invertebrate species. Pack and saddle stock would not impact alpine rocky habitats. The proposed alternatives would not result in the overgrazing of any suitable habitats. ***Therefore no cumulative effects would occur.***

## **3.9 INVASIVE PLANTS**

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*The following updates the current condition of invasive plants found on FEIS page 3-325.*

## **Affected Environment**

...

### **Current Condition of Invasive Plants**

...

Information currently in the NRIS (Natural Resource Information System) inventory database shows 11 species occurring singly or in combination at 162 sites in the analysis area, for a total of about 4,066 acres. All invasive plant sites in the analysis area ~~were inventoried in the last five years~~ ***are inventoried regularly.***

Many of the invasive plant sites in the analysis area that occur on the Methow Valley and Chelan Ranger Districts have been approved for herbicide use under the 1997, 1999

and 2001 Integrated Weed Management EA Decision Notices, the 2008 Blue Buck Hawkweed Decision Notice and the 2003 Crupina Integrated Weed Management EIS Record of Decision. Of the total 4066 gross acres of weeds within the project are, 743 acres of herbicide treatment and 263 acres of manual treatment ~~have been~~ **are** constantly accomplished each year. ~~over the past 6 years~~. Overall, treatments have been effective in reducing populations. The larger dalmatian toadflax and diffuse knapweed populations have warranted using bio-control agents.

...

*The following updates the number of service days in Alternative 4 in the direct and indirect effects on invasive plants, found on FEIS page 3-334.*

## ENVIRONMENTAL CONSEQUENCES

### Direct and Indirect Effects

...

#### Alternatives 2, 3, and 4

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The current outfitter-guides are permitted 4,460 days of use. This number would be increased in Alternative 2 to 4,620, reduced to 2,660 in Alternative 3 (40% reduction from recently permitted level), or increased to ~~6,700~~ **6,082** in Alternative 4 (~~50%~~ **36%** increase). The potential for introduction and spread would range from similar (Alt. 2) to slightly less than (Alt. 3) to slightly more than (Alt. 4) under the recently permitted use, since these changes represent a 1% increase in the number of visitor days in Alternative, 1% decrease in Alternative 3, or a ~~3%~~ **6%** increase in Alternative 4. These changes are too small to affect the overall potential for invasive plant introduction and spread. In Alternatives 2 and 4, outfitter-guides would use existing trails and camps; no new camps or trails would be developed. Alternative 3 would also require pack and saddle outfitter-guides to use existing trails and camps, but additionally would prohibit them from using established camps with 200 feet of wetlands, lakes, and streams. The camps that would be eliminated currently do not have any new invader weeds within them so this prohibition would not likely affect them.

*The following updates the cumulative effects invasive plants section found on FEIS page 3-334.*

### Cumulative Effects

...

#### Present Actions

**The Forest currently treats invasive species as approved under the 1997, 1999 and 2001 Integrated Weed Management EAs. The 2004 Crupina Record of Decision for treatment of Crupina is currently being implemented in the Lake Chelan-Sawtooth Wilderness in the Chelan drainage. The Blue Buck Hawkweed EA and Decision Notice (USDA Forest Service 2008) allows for treatment of orange hawkweed in the Blue Buck drainage in the Bear/Ramsey/Volstead permit area. These documents allow invasive plant treatment using all available methods including herbicides, but do not include more recently improved herbicides that are more effective with less environmental effects. Although they do allow for some limited treatment beyond the treatment areas, they do not allow for treatment forestwide.**

**Trailheads are a priority under these documents. Integrated weed management is reducing the risk of spread from currently infested areas on access roads, trailheads, and trails into the outfitter-guide activity areas. Invasive species are still spreading within the project area as a result of ongoing recreational and other management activities, but integrated weed management is reducing the risk of spread from currently infested areas on access roads, trailheads, and trails into the outfitter-guide activities areas. All types of recreation are vectors for disturbance and weed spread in the analysis area, including, but not limited to driving on roads, outfitter-guide packing, hiking, camping, mountain biking, road maintenance, and trail maintenance/rehabilitation.**

**Commercial grazing is occurring outside of wilderness, and livestock are known to transport invasive species seed across the landscape.**

**The Region Six Invasive Plant Management EIS requires that any feed carried onto the forest, including wilderness, be weed free which minimizes the risk of stock transporting invasive species into backcountry and wilderness areas, although seeds can be carried on people, equipment and stock, or in the feces of stock.**

#### **Reasonably Foreseeable Future Actions**

The Forest is currently working on an EIS to permit invasive species treatment forest-wide which would allow treatments with all strategies in areas outside wilderness, and within wilderness treatment areas. This document is expected to be completed and implemented in ~~2013~~ **2017**. The document analyzes new management strategies for controlling weeds, including those in riparian areas. The treatments under this EIS are expected to help control the establishment and spread of noxious weeds in the analysis area.

**Until the new EIS is completed and implemented** All new invader sites are authorized for treatment under current NEPA documents for an aggressive treatment strategy to contain, reduce, or eradicate the populations. Herbicides will continue to be used in areas approved under the 1997, 1999 and 2001 Integrated Weed Management EA (USDA Forest Service 1997e, USDA 1999a, and USDA Forest Service 2000d) Decision Notices, the 2003 Crupina Integrated Weed Management FEIS (USDA Forest Service 2003b) Record of Decision, and the 2008 Blue Buck Hawkweed EA and Decision Notice. **in the documents cited above.** Trailheads will continue to be a priority for weed surveys

and treatment. Integrated weed management will **continue to** reduce the risk of spread from currently infested areas on access roads, trailheads, and trails into the outfitter-guide activities areas.

All the known new invader noxious weed sites in and adjacent to the analysis area are being prioritized for integrated weed management. Integrated weed management would continue in the new invader weed infestations on recreation access roads, trail heads, trails, corrals, camps and off roads in areas where weeds may spread to impact recreation facilities and activities. Integrated weed management would be accomplished by implementing a combination of all the control methods available with emphasis on early detection of new infestations, rapid treatment response, and prompt revegetation. The combination of herbicide, manual, and cultural treatment together would provide effective control of small populations. ~~District weed treatments with herbicides are authorized under the 1997 and 2000 Weed EA Decision Notices and the 2003 Crupina EIS Record of Decision.~~

All types of recreation will continue to be vectors for disturbance and weed spread in the analysis area, including, but not limited ***driving on roads***, to outfitter-guide packing, hiking, camping, mountain biking, ***road maintenance***, and trail maintenance/rehabilitation. ***Most of this potential for spread would be along existing roads and trails.***

Commercial livestock grazing ~~can~~ **will** continue ~~to~~ **and may** transport weed seeds across the landscape with dispersal into disturbed areas, although only outside wilderness since commercial grazing no longer occurs in wilderness. Given the existing low noxious weed densities in the analysis area, and that there are ~~virtually no~~ **very limited** areas where outfitter-guide activities occur in commercial livestock (cattle) grazing areas, ~~so~~ the likelihood of outfitter-guide stock to spread weeds introduced by cattle is low.

***Any feed carried onto the Forest is now required to be weed free which minimizes the risk of stock transporting invasive species into backcountry and wilderness areas, although seeds can be carried on people, equipment and stock, or in the feces of stock.***

***The Forest is currently preparing a travel management plan that will restrict all motorized vehicles to designated roads, trails and areas, and close the rest of the Forest to motorized use. This project will prevent motor vehicles from spreading invasive species in closed areas. Most of the areas that outfitter-guides would be in area closed to motorized use under the proposed travel management plan.***

#### **Alternative 1**

~~The cumulative effects of Alternative 1 and all past, present, and reasonably foreseeable future actions would continue to provide vectors for weed spread although not in conjunction with outfitter-guide activities under this decision. Current disturbances would continue to provide sites suitable for weed establishment. Control of existing weeds would continue to occur under the existing Integrated Weed management decisions which would result in reductions in weed populations. A Forest wide EIS is planned for completion in 2012; the decision would likely help to control the spread and~~

~~establishment of invasive plants in the analysis area because additional areas and more effective and less impactful herbicide treatments could be used. The combination of herbicide, manual, and cultural treatments together would provide effective control of small populations. Treatments would be conducted by the District Weed program with herbicide treatments authorized under the 1997, 1999 and 2001 Noxious Weed EA Decision Notices, the 2003 Crupina EIS Record of Decision, and the 2003 Blue Buck Hawkweed Decision.~~

No cumulative effect would occur because outfitter-guides would not be adding any incremental effects, although short-term increases in amounts of established invaders and slight increases in the amount of new invaders may occur from use by the general public and non-pack and saddle outfitter-guides. Recovery of unused barren core would have no risk of weed establishment by pack and saddle outfitter-guides, however there is a potential for the public to spread weeds into these areas.

In the long-term, with implementation of weed prevention awareness by recreationists, including on-going weed management, weed populations would be reduced.

#### **Alternatives 2, 3, and 4**

The risk of invasive plant introduction and spread would be reduced through an Integrated Weed Management approach, implementation of mitigation measures in this analysis and weed control treatments. A Forest-wide EIS is planned for completion ***and implementation*** in ~~2013~~ **2017**; the decision would likely help to control the spread and establishment of invasive plants present in the analysis area with more effective, less impactful treatments. The combination of herbicide, manual, biological and cultural treatments together would provide effective control of small populations. Treatments would continue to be conducted by the District Weed program with herbicide treatments authorized under the 1997, 1999 and 2001 Weed EA Decision Notices, the 2003 Crupina EIS Record of Decision, and the 2008 Blue Buck Hawkweed Decision Notice ***until the new Forestwide EIS is completed***. With implementation of mitigation measures included in Alternatives 2, 3, and 4, and on-going weed management, weed populations would be reduced. The combination of these actions would lessen the threat of invasive plants to native plant communities in the analysis area as a result of outfitter-guide activities, even with increased numbers because of the increase in mapping, reporting and awareness by outfitter guides.

The continued effective control of Crupina would greatly reduce the potential of spread by outfitter-guide activity to other areas within its primary habitat ***in the Lake Chelan-Sawtooth Wilderness***. With only 9% of the outfitter-guide camps within habitat that is susceptible to invasion, the likelihood of establishment of seed dispersal by outfitter-guide activities is relative to the limited suitable habitat within the project area, ***and ongoing Crupina treatments would lessen the chance that outfitters could spread Crupina***.

***Continued*** implementation of the ***2005 Regional Invasive Plant Management prevention standards required for all projects, plus the*** Prevention and Management Strategy ***for Outfitter Guides*** (located in the analysis file) with emphasis on early

detection and rapid response to any newly found populations would reduce the likelihood of the establishment of large new invader infestations.

**Once the travel management plan is implemented in 2017, restricting motorized use to designated roads, trails and areas, it is less likely that outfitter-guides could spread invasive species seed brought in on motor vehicles, although some trails will remain motorized.**

Although the mitigation measures recommend pack and saddle outfitter-guides to consider feeding stock certified weed free feed several days prior to their trips **to prevent stock from carrying invasive seed onto the Forest in their feces**, this mitigation has low effectiveness potential because they are not required to do so.

### Summary Statement

The cumulative effects of all past, present, and reasonably foreseeable future actions **discussed above** would be short-term increases in amounts of established invaders and slight increases in the amount of new invaders. In the long-term, with implementation of **Regional prevention standards**, mitigation measures, and an increase in weed prevention awareness by outfitter-guide and recreationists including on-going weed management, **and implementation of the planned Invasive Plant Management project**, weed populations would be reduced.

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## 3.10 RANGE RESOURCES

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## AFFECTED ENVIRONMENT

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There is currently no permitted commercial livestock (cattle or sheep) grazing in the Pasayten Wilderness, Lake Chelan-Sawtooth Wilderness, ~~Alta Lake~~, or the Sawtooth Backcountry areas. All prior allotments are vacant or closed. Vacant allotments are scheduled for NEPA analysis to update the allotment management plan or to close the allotment.

The Bear/Ramsey/Volstead, North Cascades, **and** Middle Methow, ~~and Alta Lake~~ areas have some level of commercial livestock grazing, however there are virtually no areas where outfitter-guide activities, especially pack and saddle stock grazing, occurs in the livestock (cattle or sheep) grazing areas. There are no deluxe or progressive camps or the associated trails or trailheads in permitted livestock grazing areas. The recreation activities that occur within the livestock allotments are typically day use with hiking or saddle horse riding. The only outfitter-guide activity within livestock allotments is taking clients to drop camps with no overnight pack and saddle stock use or passing through the allotment to camps outside the allotment. The day use activities utilize a negligible amount of forage with no measurable impacts on the rangeland resource. The primary

foraging areas within commercial livestock grazing allotment are associated with road systems and with the livestock utilizing the transitory range within historic timber harvest units adjacent to roads. The current pack and saddle stock outfitter-guide activities in general are almost exclusively within the areas with no roads. Because of this there is virtually no overlap of livestock grazing and these outfitter-guides activities. There are no areas with range resource impacts of both outfitter-guide stock and livestock (cattle or sheep) in the same area.

...

#### Alta Lake

The Alta Coulee Allotment ~~has been~~ **was** grazed by 25 cow/calf pair of cattle for many years, **but the permit was waved back to the Forest Service in 2013. There is no commercial livestock grazing occurring within this area.** ~~In recent years only the bottom of the coulee has been grazed in conjunction with private land on Antoine Creek, the Alta Pond area has been rested.~~

#### Permitted Livestock Grazing within the Project Area

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#### North Cascades

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Boulder/Wolf Allotments **were analyzed in an Environmental Assessment, with a Decision Notice that closed the Boulder Allotment in 2013.** ~~are grazed together under one grazing rotation with one permittee. The Boulder allotment consists of 7,801 acres and is located in the Little Boulder Creek, Looney Creek watersheds and portions of the Huckleberry Creek, and Cedar Creek watersheds.~~ **The Wolf allotment is still active, and the Allotment Management Plan was completed in 2013.** ~~The grazing area is 10,502 acres with three pastures, Rader, Little Wolf, and Little Falls Creek. only the Little Falls Creek pasture **is the only Wolf Allotment pasture in the project area,** in the Little Falls Creek watershed. The existing AMPs for both Boulder and Wolf allotments are currently out of date and scheduled to be revised in 2012.~~

Currently the permit allows ~~60~~ **36** cow/calf pairs to graze from June 1 to September 30 every year, which equals ~~244~~ **144** cow months or ~~322~~ **190** animal unit months (AUM). ~~The grazing strategy is to graze the Boulder allotment and the Falls Creek pasture on even years with 40 cow/calf pairs in Boulder and 20 cow/calf pairs in Little Falls Creek with complete rest on even years where the other pastures of the Wolf allotment are grazed. There are four outfitter drop camps within the Boulder allotment and There is one a drop camp in the Falls Creek pasture. Both the outfitter-guide stock and commercial livestock use portions of the same access trails to the drop camp with a negligible amount of forage use by outfitter-guide stock occurring.~~

**Middle Methow, Sawtooth Backcountry, and Lake Chelan-Sawtooth Wilderness** Buttermilk Sheep Allotment is in the Middle Methow, Sawtooth Backcountry (Methow), and Lake Chelan-Sawtooth Wilderness areas. The 52,974 acre allotment was in non-use between 2000 and 2005, except in 2003, when partial use occurred and has been vacant since 2006 when the last grazing permit expired. The sheep were routed through the allotment with a herder with restrictions on bedding and trailing to reduce resource

impacts. This allotment was grazed in conjunction with the Harts Pass allotment that was waived back in 2000. ~~Currently the permit allows 1,200 ewe/lambs from May 1 to July 10. The season can be modified to provide for a later season of use to adjust for loss of the Harts Pass allotment which was grazed in the late summer.~~ The Crater Creek outfitter-guide base camp (corral) and trail system is in the Buttermilk allotment. Only a negligible amount of forage use is occurring by the outfitter-guide stock occurring.

**Alta Lake**

~~The Alta Coulee allotment is 3,249 acres with two pastures. Currently the permit allows 25 cow/calf pairs annually from June 1 to September 30, which equals 102 AUMs. Although permitted use dates are June through September, the pastures are typically used for less time than the permitted season as the permittee keeps the permitted cattle on his private land pasture during the early part of the permitted period of use. The allotment boundary includes several sections of land but only the bottom of the coulee is grazed by the 25 cow/calf pair, in conjunction with the aforementioned private land to the south. There is a fence that divides the Alta Pond area from the south part of the coulee. The pond area is grazed early for two weeks then the cattle are excluded for the remainder of the season. The pond area has been rested voluntarily by the permittee for the past five years as approved by the Forest Service with the benefit of reducing impacts to the pond riparian area. There is a day use recreation trail system within the rested Alta Pond area. It is not likely that the pond area will be grazed in the future but it will remain in the permit if needed. The trail used for day rides passes through this allotment.~~

...

*The following updates the number of service days in Alternative 4 in the direct and indirect effects on range resources, found on FEIS page 3-353.*

## ENVIRONMENTAL CONSEQUENCES

### Direct and Indirect Effects

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<b>Alternatives 2, 3, and 4</b>
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...

Within the non-wilderness backcountry areas nearly every camp used is a drop camp where there would be no pack and saddle stock grazing impacts because stock would not remain onsite to graze. The 4,620 service days associated with pack and saddle stock outfitter-guides in Alternative 2 would increase the number of pack and saddle stock visitor days by 0.3% compared to the recently permitted levels. Alternative 3 would reduce the outfitter-guide visitor days to 2,660, leading to a 4% reduction in recently permitted level of stock use. Alternative 4 would include ~~6,700~~ **6,082** service days, and would increase stock use by ~~5%~~ **6%** compared to current permitted levels.

Alternative 2 would allow 270 AUMs for the outfitter-guide use. Alternative 3 would include 150 AUMs, and Alternative 4 would allow ~~390~~ **212** AUMs.

...

*The following updates the cumulative effects on range resources starting on FEIS page 3-354.*

## **Present Actions**

### Commercial Grazing Allotments

There are ~~64~~ active commercial grazing allotments with the project area as described in detail in the Affected Environment section. Non-outfitted recreation use, other outfitters, general public pack and saddle stock use, trail maintenance, and permit administration use are additional activities that would have a cumulative effect on the proposed actions but would have less of an impact on commercial livestock grazing than pack and saddle stock activities. The impacts of these activities would have a negligible reduction in the forage availability or cumulative physical impacts to streambanks.

## **Reasonably Foreseeable Future Actions**

### Commercial Livestock Grazing

All vacant allotments within the Pasayten Wilderness Area, Lake Chelan-Sawtooth Wilderness Area, and the Sawtooth Backcountry project areas are scheduled to be **analyzed in the future to be determine if they will be reactivated or closed. Permitted livestock grazing will continue outside of wilderness. The Wolf, Boulder, Buttermilk and Alta Coulee allotments are scheduled for Allotment Management Plan (AMP) revisions within the next 4 years. The no grazing alternative may be the preferred alternatives for Buttermilk and the Boulder allotments. The Wolf AMP revision will be completed in 2013.** Commercial livestock numbers within the project area will remain relatively low and continue to constitute a small amount of the forage overlap with pack and saddle stock with virtually no combined effect of the dual use. Range management techniques such as numbers of commercial livestock turned out, salting, water developments and timing of use, would continue to be used to meet riparian goals, and to obtain uniform distribution of use on the allotments. Riparian objectives include maintaining and/or increasing bank stability along riparian areas. These objectives would be reached through the continued use of deferred and rest rotation grazing and maintenance of water troughs and fences.

## Cumulative Effects

...

### **Alternative 1**

This would result in a 2% reduction in the number of pack and saddle stock users in the analysis area. No AUMs would be used by outfitter-guides.

There would be no **outfitted** pack and saddle stock recreation livestock grazing. Camp sites would continue to be used by the general public but likely with fewer stock than in the past. A relatively small portion of the available forage in the livestock grazing allotments would continue to be grazed by the general public pack and saddle stock; the amount of forage in allotments utilized by general public stock would be negligible and have a ~~minor~~ **no measurable** effect on forage availability for permitted livestock grazing.

### **Alternative 2, 3, and 4**

The cumulative effect of any of the alternatives and the past, present, and reasonable foreseeable future actions **listed above** would be an improving trend in range conditions across the analysis area. ~~There would be no overlap between recreational and commercial livestock grazing, and~~ **Grazing allotments would closely monitored to ensure that** forest plan utilization standards would be met. Vegetation recovery from past overgrazing would continue. Proper commercial grazing allotment management coupled with the low numbers of recreational **outfitted and non-outfitted** livestock and the mitigation measure to reduce impacts from pack and saddle stock outfitter-guide recreational livestock would continue the upward trend.

...

## **3.11 ECONOMIC AND SOCIAL ANALYSIS**

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*Age demographic shifts were no longer used to calculate the extent necessary for commercial services in wilderness, so the demographic and social sections in Analysis Method on page 3-359, Data Sources on page 3-360 and the Affected Environment sections on pages 3-362 to 3-364 were deleted.*

## **ANALYSIS METHOD**

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### **Social Analysis**

~~The social analysis was conducted using demographic information about outfitter-guide clients, and how the alternatives would affect the opportunity for people to participate in pack and saddle stock activities.~~

...

## **DATA SOURCES**

...

**Demographic Information**

The information on demographics and age class distribution is from the Washington State Office of Fiscal Management, 2010. The number of visitor days expected in the future was calculated using projected changes included in the Washington State Comprehensive Outdoor Recreation Planning (SCORP) publication "Estimates of Future Participation in Outdoor Recreation in Washington State" (Interagency Committee for Outdoor Recreation 2003). These projected changes were for 10 and 20 year periods based on participation data from the 1999-2000 RCO survey (IAC 2003). These projections took into account NSRE data and projections for the Pacific Northwest Region, demographic trends in Washington State, the local supply of lands available for recreation activities, and other factors.

## AFFECTED ENVIRONMENT

...

**Social Demographics**

The demographics of the population of people hiring pack and saddle stock outfitter guides helps identify potential social impacts to this segment of the recreating public. One statistic to consider is the age of the visitors. Assuming that as people age, they are less able to backpack long distances, an aging visitor population may have an increasing need for stock outfitter guides. Hiring outfitter guides for stock help make backcountry trips more feasible for older age groups.

The age class distribution of existing pack and saddle stock outfitter guide clients shows that the majority of them are over the age of 50, based on actual client age information provided by the pack and saddle stock outfitter guides.

The following figure shows the age ranges and percent of visits.

**Figure 3-11-3 Percent of Total Wilderness Visits and Outfitter guide Clients by Age Class**

Age Class	Percent of Total Wilderness Visits (NVUM)	Percent of Stock OG Clients
Under 16	<1%	3%
16-19	6%	8%
20-29	33%	1%
30-39	<1%	2%
40-49	13%	12%
50-59	25%	24%
60-69	11%	41%
70+	12%	8%

The Washington State Office of Fiscal Management tracks the population of the state, and how the composition of age classes is shifting over time. The following figure displays the current population distribution across the age classes, compared to the projected distribution in 2020. As is shown, the age class distribution is shifting into the older age classes. The number of people in the 60-69 age range will increase

approximately 40%<sup>3</sup>, and those 70 years and older will increase 46%<sup>4</sup> (Washington State Office Fiscal Management, 2010) by the year 2020. The Washington State Interagency Committee for Outdoor Recreation discusses projected changes in populations in the 2003 “Estimates of Future Participation in Outdoor Recreation in Washington State” (IAC, 2003). One of the key considerations in projecting changes in the number of people participating in various outdoor recreation activities is age. Physical demands of various activities, such as backpacking, will discourage people from participating as they age (IAC, 2003).

**Figure 3-11-4. Percent Change in Number of People in Age Classes in 2010 and 2020**

Age Class	Number of People in 2010	Projected Number in 2020	Percent Change
Under 15	1,311,555	1,517,032	16%
15-19	464,155	478,724	3%
20-29	966,978	1,014,958	5%
30-39	883,849	1,098,567	24%
40-49	959,344	935,360	-3%
50-59	947,648	967,301	2%
60-69	643,504	903,726	40%
70+	556,217	809,712	46%
Total	6,733,250	7,725,380	15%

(Washington State Office Fiscal Management, 2010)

As shown in Figure 3.11-3, approximately 73% of stock outfitter guide clients are 50 years old or older. This age class is more dependent on stock to travel into the wilderness or backcountry and more likely to use an outfitter guide service due to a combination of physical limitations, more leisure time, and higher income levels. The relatively large predicted increase in the number of people over the age of 50 in Washington state (refer to Figure 3.13-4) indicates that there will likely be a corresponding increase in the number of people and the percentage of visitors who will require the service of stock outfitters guides for trips into the analysis area. The largest increases will be in people 60 years old and older. Therefore, the need for stock outfitter guides will likely increase in the coming years at a faster rate than the general activity increases projected by the Washington State Interagency Committee on Outdoor Recreation, 2003. Although only a small percentage of people over 50 years old actually take trips into the wilderness or backcountry, it is safe to assume that the number of people in that age class that do so could increase at a rate that matches the rates of increase in the general population—approximately 25%<sup>5</sup>.

## ENVIRONMENTAL CONSEQUENCES

### Direct/Indirect Effects

...

<sup>3</sup>  $(903,726 \text{ people} - 643,504 \text{ people}) / 643,504 \text{ people} = 0.40$ , or 40%

<sup>4</sup>  $(809,712 \text{ people} - 556,217 \text{ people}) / 556,217 \text{ people} = 0.456$ , or 46%

<sup>5</sup>  $(967,301 + 903,726 + 809,712) - (947,648 + 643,504 + 556,217) / (947,648 + 643,504 + 556,217) = 0.248$  or 25%

The following updates Figure 3.11-5, found on FEIS page 3-364.

...

**Figure 3.11-5: Summary of Permitted Days and Economy-Wide Contribution of Current Number of Service Days and By Alternative, Compared to Okanogan County Economy**

Current/Alternative	Service Days	Pack and Saddle Stock Outfitter-Guide Economy-wide Contribution		
		Employment (# Jobs)	Labor Income (\$2011)	Total Sales (\$2011)
Current Condition	4,460	26.6	\$890,504	\$1,293,940
Alternative 1	0	0	0	0
Alternative 2	4,620	27.6	\$922,451	\$1,340,359
Alternative 3	2,660	15.9	\$531,108	\$771,722
Alternative 4	<del>6,700</del> 6,066	<del>40.0</del> 36.2	<del>\$1,337,753</del> \$1,090,476	<del>\$1,943,811</del> \$1,584,507
<b>Okanogan County Economy</b>		<b>22,581</b>	<b>\$803,916,135</b>	<b>\$1,824,787,904</b>

The following deletes the age demographic analysis for all alternatives and updates Figure 3.11-8, found on FEIS pages 3-364 to 3-366.

#### Alternative 1

...

##### **Social Impacts**

~~The elimination of pack and saddle stock outfitter guides under Alternative 1 would have the most impact on people over 50 years of age. This age class is more likely to need the services of a pack and saddle stock outfitter guide to travel into the wilderness or backcountry and enjoy the type of recreation these settings offer. People unfamiliar with the analysis area, or lacking the skill and equipment to use pack and saddle stock would also lose the opportunity for this popular recreation activity.~~

#### Alternative 2

...

##### **Social Impacts**

~~Alternative 2 would slightly increase the number of service days authorized, so the pack and saddle stock outfitter guides would be available for people who need them. Enough service days would be available to meet the current level of demand, but may fall short of demand in the future because of the projected increases in people over 50 who may need outfitter guide services.~~

#### Alternative 3

...

**Social Impacts**

~~Alternative 3 would have a 40% reduction in the number of service days, compared to the permitted numbers under the current condition. This would have the greatest impact on those over 50 years old, since approximately 73% of the pack and saddle stock outfitter guide clients fall in this age class. There would also be a reduced opportunity for people lacking experience or equipment to enjoy wilderness or backcountry recreation. It is likely that some people seeking this experience would not be able to find outfitter guide services.~~

**Alternative 4**

**Economic Impacts**

Figure 3.11-8 shows the economic contribution to Okanogan County from the ~~6,700~~ **6,082** service days authorized in Alternative 4.

**Figure 3.11-8. Economic Contribution of Alternative 4 to Okanogan County Compared to Effect of Current Service Days**

Impact Type	Employment (# Jobs)	Labor Income (\$2011)	Total Sales (\$2011)
Direct Effect	<del>33.4</del> <b>30.3</b>	<del>\$1,138,446</del> <b>\$1,033,455</b>	<del>\$1,307,014</del> <b>\$1,186,457</b>
Indirect Effect	<del>1.6</del> <b>1.4</b>	<del>\$51,020</del> <b>\$46,314</b>	<del>\$171,280</del> <b>\$155,482</b>
Induced Effect	<del>4.9</del> <b>4.5</b>	<del>\$148,268</del> <b>\$134,591</b>	<del>\$465,516</del> <b>\$422,578</b>
<b>Total Effect</b>	<del>40.0</del> <b>36.3</b>	<del>\$1,337,753</del> <b>\$1,214,360</b>	<del>\$1,943,811</del> <b>\$1,764,516</b>
<b>Current Condition</b>	<b>26.6</b>	<b>\$890,504</b>	<b>\$1,293,940</b>

Alternative 4 would have the most positive benefits to the Okanogan economy of any alternative. It would increase the number of jobs generated by pack and saddle stock outfitter-guides by approximately ~~13~~ **10** compared to the existing condition. It would also increase labor income by approximately ~~\$450,000~~ **\$324,000** and total sales by roughly ~~\$650,000~~ **\$470,000**.

**Social Impacts**

~~Alternative 4 would increase the number of service days by approximately 50% 36% over current levels. This would have a positive impact on people wanting pack and saddle stock recreation activities. As the age class distribution of the population shifts into the older segments, and the number of people traveling to the area increases, there would be enough service days available to meet potential increases in demand.~~

*The following updates the Economic cumulative effects analysis starting on page 3-366 of the FEIS*

**Cumulative Effects**

...

Reasonably Foreseeable Future Actions

...

Demographics

~~There would be an approximate 25% increase in the number of people over 50 years old by the year 2020 compared to the current population distribution among the classes, according to the Washington State Office for Fiscal Management. The aging population will increase the demand for pack and saddle stock outfitter guide services.~~

**Alternatives 1, 2, 3, and 4**

Economic Impacts

The cumulative effects of all other outfitter-guides and recreation that contributes annually to the "Other amusement and recreation services" category in Figure 13-1, and the alternatives is shown in Figure 3.11-9 below. This category would contribute between twelve and fourteen million dollars annually to the economy of Okanogan County, depending on the alternative.

**Figure 3.11-9. Cumulative Other Amusement and Recreation Services Economic Contribution by Alternative**

Alternative/ Current	Employment (# Jobs)	% Change from Current	Labor Income (\$2011)	% Change from Current	Total Sales (\$2011)	% Change from Current
Current	297		\$6,215,524		\$13,330,139	
Alternative 1	270	-9%	\$5,325,020	-14%	\$12,036,199	-10%
Alternative 2	298	+0.3%	\$6,247,471	+5%	\$13,376,558	+0.3%
Alternative 3	286	-4%	\$5,856,128	-6%	\$12,807,921	-4%
Alternative 4	<del>310</del> <b>307</b>	<del>+4%</del> <b>+3%</b>	<del>\$6,662,773</del> <b>\$6,539,380</b>	<del>+7%</del> <b>+5%</b>	<del>\$13,980,010</del> <b>\$13,800,715</b>	<del>+5%</del> <b>+4%</b>

As shown in Figure ~~3-13-1~~ **3.11-1**, the total employment in Okanogan County is 22,581 jobs, total labor \$803,916,135, and total sales \$1,824,787,904. When considered cumulatively with the entire economy of Okanogan County, there is virtually no difference between the four alternatives. **When considering all sources of income, pack and saddle outfitter guide services account for only two-tenths of 1% of total employment or less under any alternative.**

Social Impacts

~~As stated above, the shift in the age distribution would increase the demand for pack and saddle stock outfitter guide services in the future. The overall increasing trend in recreation use will also increase demand, albeit at a slower rate, for the other services currently being offered by the pack and saddle outfitter guides and other recreation special use permit holders.~~

~~Alternative 1 would not meet the need for the aging population in terms of pack and saddle stock activities, but the other outfitter guides would likely meet the demand for other types of recreation. Alternatives 2, 3, and 4 would all offer pack and saddle stock commercial services, so these alternatives added to the other outfitter guides services being offered would provide access for nearly all segments of the population to more types of recreation experiences on National Forest System land than Alternative 1.~~

## 3.12 HERITAGE RESOURCES

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...

## ENVIRONMENTAL CONSEQUENCES

...

*The following updates the Heritage cumulative effects section on FEIS page 3-372.*

### Cumulative Effects

The area considered for heritage resources cumulative effects analysis consists of the Area of Potential Effect (analysis area). The time period considered for cumulative effects analysis includes up to 10 years into the future, the time-period of the proposed outfitter-guide special use permit issuance and any effects from the issuance of these permits would cease. From the list of past, present and reasonably foreseeable future actions at the beginning of this chapter, only ground-disturbing activities were considered in this cumulative effects analysis since ***only*** these activities have the potential to affect heritage resources.

...

### **Alternatives 2, 3, and 4**

There would also be no cumulative effect with Alternatives 2, 3, or 4 since the pack and saddle stock outfitter-guides would not affect or damage cultural resources.

## 3.13 SPECIFICALLY REQUIRED DISCLOSURES

---

*There are no changes to this section.*

## List of Preparers

*This updates the list of preparers by adding Paul Willard.*

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---

...

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Contribution: Preparation of DSEIS and Need Assessment and Extent Necessary Determination

...

Chapter

**5**

## **List of Agencies, Organizations and Individuals Receiving Notification of Web Availability of the Draft Supplemental Environmental Impact Statement**

## **FEDERAL, STATE AND LOCAL AGENCIES**

Advisory Council on Historic Preservation  
Chelan Chamber of Commerce  
Chelan City Hall, Paul Schmidt  
Chelan Co. Planning  
Chelan County Commissioners  
Chelan County Community Development  
Environmental Protection Agency  
FAA Northwest Mountain Region  
Federal Highway Administration  
National Marine Fisheries Service (NMFS)  
NMFS NW Region  
National Resources Conservation Service (NRCS)  
North Cascades National Park  
Northwest Power Planning Council  
Office of Environmental Policy and Compliance (USDI)  
Okanogan County Commissioners  
Shiloh Hills Elementary, Judy Sedy  
U.S. FISH & WILDLIFE SERVICE  
US Army Engr. Northwestern Division  
US Coast Guard (USCG)  
US Department of Energy  
USDA Aphis PPD/EAD  
USDA National Agricultural Library  
USDI Regional EP Assistant, Mandy Lawrence  
WA Dept of Ecology  
WA Dept of Ecology, SEPA Unit  
WA Dept of Fish and Wildlife  
WA Dept of Natural Resources  
WA Dept. of Fish and Wildlife, Lynda Hofmann  
WA Dept. Nat. Res. Nat. Heritage Program

## **AMERICAN INDIAN TRIBES**

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Yakama Nation, Harry Smiskin, Chair  
Yakama Nation, Kristina Proszek, Environmental Review Coordinator

## **ORGANIZATIONS**

American Forest Resource Council  
Backcountry Horsemen of WA  
Blue Ribbon Coalition, A. Cook

Conservation Northwest  
FSEEE  
Manson Community Council  
Methow Valley Backcountry Horsemen of WA  
Methow Valley Citizens Council  
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NCW Trail Riders Assoc., R. Peterson  
Northwest Ecosystem Alliance, Liz Tanke  
Oroville Trailriders Association  
Pacific Biodiversity Inst., P. Morrison  
Pacific Legal Foundation  
PNW 4 Wheel Drive Assoc., Arlene Brooks  
Port of Chelan County, Mark Urdahl  
Seattle Audubon Society  
Sierra Club Cascade Chapter, M. Lawler  
Skagit Backcountry Horsemen of WA  
The Wilderness Society, C. Wilkerson  
Tri-Rivers Backcountry Horsemen  
WA Flyfishing Club  
WA Native Plant Society  
WA Outfitters and Guides  
WA Trails Association  
WA Wild, Tom Uniack  
WA Wilderness Coalition  
Wilderness Watch

## **BUSINESSES**

Alpine Assents  
American Alpine Institute, Jason Martin  
Birch Berman  
Budd-Falen Law Offices  
Cascade Corrals  
Cascade Wilderness & Wildlife Outfitters  
Chewack River Guest Ranch  
Columbia Helicopter, Inc.  
Deli Llama Wilderness Adventure, Bob Shapiro  
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Lake Chelan Boat Company  
Lake Chelan Mirror  
Lloyd Logging Inc., B. Lloyd  
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Loup Loup Ski Ed. Foundation, Sandy Liman  
Methow Grist  
Methow Valley News  
Methow Valley Sports Trail Assoc.  
Mountain Madness  
N. Cascade Heli-skiing

N. Cascade Safari, Ryan Surface  
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North Cascades Mountain Guides  
North Cascades Outfitters  
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---

## MAPS

*There are no changes to the FEIS maps.*

---

## GLOSSARY

*There are no changes to the FEIS glossary, beginning on FEIS page Glossary-1.*

---

## Literature Citations

*This adds one reference to the literature citations, beginning on FEIS page Citations-1.*

...

Becker, S., T. Roussin, W. Jones, E. Krausz, S. Walker, S. Simek, D. Martorello, and A. Aoude. 2016. Washington Gray Wolf Conservation and Management 2015 Annual Report. Pages WA-1 to WA-24 in U.S. Fish and Wildlife Service Rocky Mountain Wolf Program 2015 Annual Report. USFWS, Ecological Services, 585 Shepard Way, Helena, MT, 59601.

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*This replaces the FEIS index, beginning on FEIS page Index-1. This index is only for the DSEIS.*

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# APPENDICES

*There are no changes to the following appendices:*

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*Appendix F. Recreation Activity Review*

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*Appendix H. Fifth and Sixth Field Watersheds in Analysis Area*

*Appendix I. Wetlands Within 500 Feet of Campsites*

*Appendix J. Sensitive Species Habitat*

*Appendix K. Sensitive Species Within 500 Feet of Campsites*

*Appendix L. Survey & Manage Tracking Form: Botany Species Survey and Site Management Summary*

*Appendix M. Response to Comments*

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## APPENDIX B

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*This replaces the FEIS Appendix B in its entirety, starting on FEIS page Appendix B-1.*

### 2016 NEED ASSESSMENT

#### 1. INTRODUCTION

The 1964 Wilderness Act (P.L. 88-577) prohibits commercial enterprises in wilderness. Section 4 (d)(6) provides an exception allowing commercial services within wilderness areas “to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.” Wilderness purposes are defined as recreational, scenic, scientific, educational, conservation, and historical use.

The purpose of this needs assessment is to clearly describe an informed, defensible analysis on the type, amount, location, and timing of commercial outfitter and guiding services necessary in the Pasayten Wilderness and Lake Chelan-Sawtooth Wilderness.

The desired future condition and management objectives for the Pasayten and Lake Chelan-Sawtooth wilderness areas are included in the Okanogan and Wenatchee Forest Plans (USDA, 1989b, and USDA, 1990). The desired conditions are areas with unmodified or predominately unmodified primitive environments. The standards and guidelines ensure a non-degradation approach to wilderness management and activities by controlling activities that could impact the untrammeled, undeveloped, and natural qualities of wilderness character, and the opportunities for solitude or primitive and unconfined recreation.

Three determinations must be made to authorize commercial services (outfitter-guides) in a wilderness area:

- First, the Forest Service must decide that the activity is proper for realizing one or more of the wilderness purposes.
- Second, determine if there is a need for commercial services to provide these activities.
- If commercial services are deemed necessary (i.e. there is a need for those services), then decision makers must determine the ‘extent necessary’, or what amount and type of service is needed to achieve the purposes of the Act.

While need refers to whether visitors require a commercial service to access and experience wilderness or whether the agency has a need for OG activities, the ‘extent necessary’ must show why the amount or extent of services is necessary for realizing the public purposes of wilderness. As part of the calculation of “extent necessary”, it must be determined that this level of use preserves and does not degrade wilderness character.

The Forest Service Handbook (FSH) 2709.11, 41.53d defines needs assessment as “an assessment of public or agency need for authorizing outfitting or guiding activities on NFS lands.” Forest Service policy

on outfitting and guiding provides direction to conduct a needs assessment to determine the public or agency need for authorized outfitting and guiding activities (FSH 2709.14, 53.1e). There is further direction provided for wilderness areas:

*When conducting a needs assessment for outfitting and guiding activities in a wilderness area, assess whether these activities are necessary for realizing the recreational or other wilderness purposes of the area and the extent to which the activities may be authorized consistent with maintaining the wilderness character of the area (FSH 2709.14, 53.1f).*

FSH 2709.14 also directs units to conduct a resource capacity analysis “when monitoring demonstrates that impacts associated with use may exceed desired conditions” (53.1f).

## **2. PROCESS**

This document is organized in major sections, covering the three determinations described above.

1. Assessment of whether there is a need for commercial services to meet one or more of the purposes of the Wilderness Act. This section includes the following:
  - a. Background
    - i. Area of consideration
    - ii. Prior needs assessment work
    - iii. Public use and trends
    - iv. Current services
  - b. Criteria for determining need
  - c. Determination of need for services.
2. Once a need for commercial services is identified, assessment of the extent of those services necessary to realize one or more of the purposes of the Wilderness Act.
  - a. Wilderness capacity assessment
3. Extent necessary determination
4. Potential effects/impacts to wilderness character
5. Monitoring

## **3. ASSESSMENT OF NEED FOR COMMERCIAL SERVICES**

### **A. Background**

#### **Areas of Consideration**

##### Pasayten Wilderness

The 531,541 acre Pasayten Wilderness spans the Methow Valley and Tonasket Ranger Districts. The western-most portion of the Pasayten is located on the Mt. Baker-Snoqualmie National Forest and is administered by the Okanogan-Wenatchee National Forest, Methow Valley Ranger District.

##### Lake Chelan-Sawtooth Wilderness

The 153,129 acre Lake Chelan-Sawtooth Wilderness is divided between the Methow Valley and Chelan Ranger Districts.

## Prior Needs Assessment Work

A needs assessment was completed for the Pasayten and Lake Chelan-Sawtooth wilderness areas in 1996, and is documented in the *Assessment of Need for Outfitting/Guiding Assistance, Okanogan National Forest, Chelan Ranger District Portion of the Wenatchee National Forest North of Lake Chelan*, 1996 (USDA Forest Service 1996a). The Assessment used a criteria-based perspective to determine the need for outfitter-guides.

The 1996 Needs Assessment did not determine the “extent necessary” for outfitters in wilderness. A 2012 Needs Assessment was completed and published in the 2013 FEIS that this DSEIS is supplementing. The purpose of this 2016 Needs Assessment and Extent Necessary Determination document is to build on the analyses completed in 1996 and 2012, updating and adding documentation of the extent of services needed to achieve the designated purposes in each wilderness.

## Public Use and Trends

There are different data sources available to estimate the amount of use in the Pasayten and Lake Chelan-Sawtooth wildernesses.

- Mandatory self-issued registration permits at trailheads provide an actual count of the number of people who register and their length of stay for all use in the Pasayten. This is the most accurate data source for the Pasayten.
- There are voluntary trailhead registers at the Lake Chelan-Sawtooth trailheads where people can enter information about party size, destination, and length of stay. While this provides data, the information is not as reliable as the registration permits in the Pasayten because there is a lower compliance rate with the discretionary registers based on Wilderness Ranger compliance control reports.
- Data collected in the 2005 and 2010 National Visitor Use Monitoring (NVUM) process is also used to generate an estimate of use, although the estimated use levels for each wilderness generated from 2005 and 2010 are dramatically different. Data from the 2015 NVUM is not yet available and is likely to be affected by the record setting wildfires in near the Chelan and Methow Valleys in 2015.

As described in the following section, total visitor numbers based on data collected from the self-issued permits validates the data from the 2005 NVUM report. A second round of NVUM was completed in 2010. However, a limited number of sampling days in 2010, combined with post-survey realization that there were inconsistencies in the sampling frame, resulted in data with a confidence interval too large to be reliable or useful for further analysis of visitor use. A third round of data was collected by contractors in 2015 but is not yet available for use. Therefore, the 2005 NVUM data was used in this Needs Assessment and Extent Necessary Determination for both the Pasayten and Lake Chelan-Sawtooth in order to use a consistent data source for both areas.

### Pasayten

The number of annual visitor days (the total of outfitted and non-outfitted use) remained relatively constant over the 10 year period between 2004 -2013. People filled out mandatory self-issued registration permits prior to entering the Pasayten. Wilderness rangers conducted compliance checking as part of regular patrols to determine what percentage of visitors complied

with the permit requirement. The data from the permits is adjusted by the compliance factor to calculate the annual number of visitor days. Data from these permits was compiled and averaged for 2004 through 2013, showing an average of 16,338 visitor days annually. Large wildfires in 2003 resulted in much of the Pasayten being closed, so information from that year was not included in the average calculation. In addition, the Forest Service has incomplete data permit registration for 2005 and 2007, so these years were excluded from the calculation. Extraordinary fires, the largest in the history of the state of Washington, also affected the area surrounding these wildernesses in 2014 (Carlton Complex) and 2015 (Okanogan Complex, Twisp River, Chelan Complex and Wolverine Fires), which severely affected visitation and businesses in the area. Therefore, 2014 and 2015 were also excluded from the 10 year “look back” calculation, and these years are not used for any calculations in this document.

As shown in the following figure, the highest amount of use during this time frame was 20,359 visitor days in 2004, and the lowest was 14,793 in 2009.

**Figure B-1. Pasayten Wilderness Visitor Days from Registration Permits**

Year	# of Visitor Days from Permits	# of Visitor Days Adjusted by Non-Compliance Factor*	Stock Outfitters Visitor Days	Other Guides Visitor Days	Total Visitor Days
2004	13,698	16,437.6	1,316	2,605	20,358.6
2005**	no data	no data	842	2,984	3,826
2006	10,649	12,778.8	899	1,846	15,523.8
2007**	no data	no data	1,018	2,118	3,136
2008	12,300	14,760	1,028	1,503	17,291
2009	10,569	12,682.8	730	1,380	14,792.8
2010	10,268	12,321.6	810	1,854	14,985.6
2011	10,936	13,123.2	793	2,084	16,000.2
2012	10,870	13,044.0	773	1,490	15,267
2013	11,729	14,074.8	741	2,028	16,843.8
<b>Average</b>	<b>11,377</b>	<b>13,652.9, rounded to 13,653</b>	<b>886</b>	<b>1,849</b>	<b>16,338</b>

\*Permits are self-registered and Wilderness Ranger compliance checks indicate that approximately 20% of visitors do not register. Research completed elsewhere regarding non-compliance has shown highly variable rates, however a 20% non-compliance rate is within the ranges found in these studies. Visitor Days were adjusted to account for this non-compliance rate.

\*\*These years were excluded from averaging because of incomplete data

Using the 2005 NVUM data, there are an estimated 18,700 annual visitor days (one visitor day equals one person for one day) in the Pasayten. This number was calculated by converting the number of annual visits reported in the National Recreation Use Monitoring (NVUM)<sup>6</sup> completed on the Okanogan portion of the National Forest in 2005 to visitor days. The number of annual visits was 11,000, and the average length of stay was 40.7 hours (averaged for the Pasayten and Lake Chelan-Sawtooth together). Multiplying these numbers gives the total number of hours spent in the Pasayten (11,000 visits x 40.7 hours/visit = 447,700 hours). Dividing this product by 24 hours converted 11,000 visits to 18,654, rounded to 18,700 visitor days (447,700 hours / 24

<sup>6</sup> NVUM is a sampling exercise conducted every 5 years designed to produce a statistically accurate estimate of visitor use.

hours/day = 18,654 rounded to 18,700 visitor days). This falls within the range of use shown from the self-issued permits, and therefore helps validate the accuracy of the 2005 NVUM data.

National Visitor Use Monitoring was completed again in 2010, with a report issued in 2011 compiling the data. This reported that there were 5,000 visits to the Pasayten with an average stay of 12 hours. This calculates out to 2,500 visitor days<sup>7</sup>, which is substantially lower than the 2005 data (18,700 visitor days), and the average of the registration permits (16,830 visitor days). The differences between the 2005 and 2010 data are a result of the way the sample was constructed for each year. In 2010, a limited number of sampling days combined with inconsistency in assigning the sampling frame resulted in data with a confidence interval too large to be reliable or useful for further analysis.

Since the 2005 data falls within the range of the information from the more specific permit information, it is assumed to be more accurate than the 2010 data.

About 70% of all user days (outfitted and non-outfitted) are backpacking, and 30% are stock visitor days. This breakdown was developed by analyzing trailhead registrations, wilderness permits, and the professional judgment of the wilderness manager and wilderness rangers on the Methow Valley Ranger District.

#### Lake Chelan-Sawtooth

The most accurate data source for estimating use in the Lake Chelan-Sawtooth is the 2005 NVUM data. According to the results of that survey, there were 21,600 annual visits to this wilderness, and the average length of stay was 40.7 hours (USDA, 2006c & 2006d). This was converted to visitor days: 21,600 visits x 40.7 hours/visit = 879,120 hours/24 hours/day = 36,630 visitor days.

Registration permits are not required for the Lake Chelan-Sawtooth, however trailhead registration boxes are at each trailhead. Some people fill out the registration information, but since it is not a requirement, many do not register, therefore data compiled from the registrations is not a reliable source for determining visitation. Since the 2010 NVUM data had questionable reliability for the Pasayten Wilderness, it was also not used for the Lake Chelan-Sawtooth in this analysis.

About 65% of all visitor days (outfitted and non-outfitted) are backpacking and 35% are stock visitor days. This breakdown was developed by analyzing trailhead registrations, wilderness permits, and the professional judgment of the wilderness manager and wilderness rangers on the Methow Valley and Chelan Ranger Districts.

#### **Recreation Use Trends**

There will be increasing demand for outdoor recreation in the coming years. The technical report *Outdoor Recreation in the Pacific Northwest and Alaska: Trends in Activity Participation* (Hall et al. 2009), predicts that since the population of Washington will increase, the number of people recreating across all demographic groups will also increase, all other factors being even. The popularity of recreation activities near water is expected to grow, as is the use of popular day use

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<sup>7</sup> 5,000 visits x 12 hours/visit =60,000 hours / 24 hours/day = 2,500 days, or 2,500 visitor days

areas. Word-of-mouth recommendations and media exposure will spread interest in these popular areas, and crowding and conflict will likely increase (Hall et al. 2009).

In 2003, the Washington State Recreation and Conservation Office (RCO) completed a report that projected participation rates of nature-based activities in Washington State over a 10-year and 20-year period based on participation data from the 1999-2000 RCO survey (IAC 2003). These projections, shown in Figure B-2, took into account National Survey for Recreation and the Environment (NSRE) data and projections for the Pacific Northwest Region, demographic trends in Washington State, the local supply of lands available for recreation activities, and other factors. Even though these projections were only through 2020, these is the best available information to estimate the number of people who will be recreating in the Pasayten and Lake Chelan-Sawtooth in 2027 and were therefore used in the tables and calculations below.

**Figure B-2. RCO Recreation Participation Projections as a Percent of Change in the Number of People Participating in the Future Compared to 1999-2000 Survey Results (IAC 2003)**

Activity	Projected % growth in # of participants (2010-2020)
Hiking & Backpacking	+13%
Equestrian	+3%

These projections were used to estimate the number of people who will be recreating in the Pasayten and Lake Chelan-Sawtooth ten years from now.

**Figure B-3. Current Number of Visitor Days by User Group in the Pasayten, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in 2027	Estimated Increase in Visitor Numbers in 2027
Backpackers	13,090	13%	14,792	+1,702
Stock Users	5,610	3%	5,778	+168
<b>TOTAL</b>	<b>18,700</b>		<b>20,570</b>	<b>+1,870</b>

\*Includes current outfitter-guide service days; uses 2005 NVUM data.

**Figure B-4. Current Number of Visitor Days by User Group in the Lake Chelan-Sawtooth, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in 2027	Estimated increase in Visitor Numbers in 2027
Backpackers	23,790	13%	26,883	+3,093
Stock Users	12,810	3%	13,194	+384
<b>TOTAL</b>	<b>36,600</b>		<b>40,077</b>	<b>+3,477</b>

\*Includes current outfitter-guide service days; uses 2005 NVUM data.

### Current Services/Existing Commercial Services

Currently, several companies provide outfitting and guiding services in the Pasayten and Lake Chelan-Sawtooth wilderness areas on the Okanogan-Wenatchee National Forest. There are two major

categories of outfitter-guide commercial services in the Pasayten and Lake Chelan-Sawtooth wildernesses. One is for backpacking/mountaineering/wilderness education (hereafter referred to as “backpacking”), and the mode of transportation is foot travel. The other category is pack and saddle stock (hereafter referred to as “stock”). Most stock clients ride horses, but some hike while pack animals carry their supplies. If all authorized service days were used, commercial outfitting and guiding services would represent approximately 26% of the overall use in the Pasayten and 6% in the Lake Chelan-Sawtooth (refer to Figure B-5 on page Appendices-8 and Figure B-8 on page Appendices-11).

Outfitter-guides have been operating continuously in the areas that were designated as the Pasayten and Lake Chelan-Sawtooth wilderness areas for over 50 years and have had a variety of types of special use permits. Among the stock outfitter-guides, some operated under five-year term permits for years. Others operated under short-term, annual permits that were reissued year after year. All the five-year term permits expired over the past fifteen years, so every stock company has been issued short-term permits annually, waiting completion of a NEPA analysis of issuing ten-year permits. One of the backpacking companies is currently operating under a 10-year permit, while the others have short-term permits. The Forest Service will begin working on the NEPA analysis for multi-year permits for these backpacking outfitters at some point in the future, so this Needs Assessment covers both.

The current permits include a specified number of service days (usually called “priority use days”). The Forest Service has also established a pool of service days. Outfitters can request days from the pool if they are going to exceed their allotment of priority use days, or if they want to operate in an area where they have no assigned days. The pool days are returned to the pool each season, and assigned on a first-come first-served basis the following year. This allows for fluctuations in the number of people needing outfitter-guide services in any given year.

Actual service days are the total of service days actually used, regardless of whether they were priority or pool. Unused priority use days are not included in actual use.

Pasayten

The current number of service days available for both priority and temporary use was used to calculate the percentage of overall outfitter use. There are currently 3,150 service days available for backpackers/hikers, and 1,800 service days available for stock outfitters. Assuming use of all available service days, up to 24% of backpackers are clients of the outfitters, and up to 32% of the stock users are outfitted. If all service days are used, overall, outfitter-guide service days represent up to 26% of the visitor days in the Pasayten.

**Figure B-5. Current Number of Visitor days by User Group in the Pasayten, and Number of Outfitter-Guide Service Days in Current Permits**

User Group	Total Visitor days*	Outfitter-guide Service Days	Maximum % of Total Visitor Days
Backpackers	13,090	3,150	24%
Stock Users	5,610	1,800	32%
<b>TOTAL</b>	<b>18,700</b>	<b>4,945</b>	<b>26%</b>

\*Includes outfitter-guide service days

The number of service days varies from year to year, as does the number of non-outfitted recreationists, so these percentages are approximate; using the 2005 NVUM data, actual percentages may range from 11% in 2009<sup>8</sup> to 21% in 2004<sup>9</sup>. The following figure lists the annual actual number of service days used.

**Figure B-6. Actual Use by Activity and Year in the Pasayten by Outfitter-Guides**

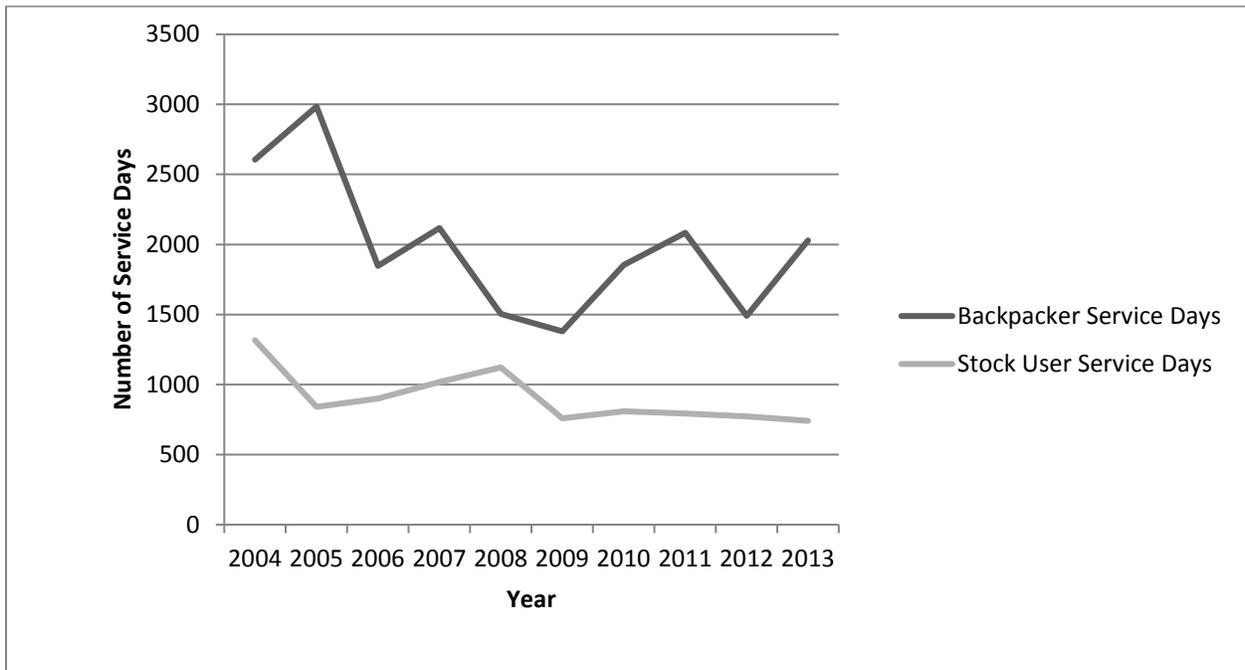
Year	Activity	Actual Outfitter-Guide Service Days
<b>2004</b>	Backpackers	2,605
	Stock Users	1,316
	<b>TOTAL</b>	<b>3,921</b>
<b>2005</b>	Backpackers	2,984
	Stock Users	842
	<b>TOTAL</b>	<b>3,826</b>
<b>2006</b>	Backpackers	1,846
	Stock Users	899
	<b>TOTAL</b>	<b>2,745</b>
<b>2007</b>	Backpackers	2,118
	Stock Users	1,018
	<b>TOTAL</b>	<b>3,136</b>
<b>2008</b>	Backpackers	1,503
	Stock Users	1,123
	<b>TOTAL</b>	<b>2,626</b>
<b>2009</b>	Backpackers	1,380
	Stock Users	760
	<b>TOTAL</b>	<b>2,140</b>
<b>2010</b>	Backpackers	1,854
	Stock Users	810
	<b>TOTAL</b>	<b>2,664</b>
<b>2011</b>	Backpackers	2,084
	Stock Users	793
	<b>TOTAL</b>	<b>2,887</b>
<b>2012</b>	Backpackers	1,490
	Stock Users	773
	<b>TOTAL</b>	<b>2,263</b>
<b>2013</b>	Backpackers	2,028
	Stock Users	741
	<b>TOTAL</b>	<b>2,769</b>

This information is displayed in chart form below. Pack and saddle and backpacking days are combined into the total actual and authorized use by year.

<sup>8</sup> From Figure B-6; 2,140 service days / 18,700 visitor days = 0.114, or 11%

<sup>9</sup>From Figure B-6; 3,921 service days / 18,700 visitor days = 0.209, or 21%

**Figure B-7. Outfitter-Guide Actual Use in the Pasayten**



Despite overall use remaining somewhat steady in the Pasayten over the past 11 years, there is an overall downward trend in the actual number of service days the existing outfitters are providing. The reason for this is unknown, but is likely a result of several factors. The first factor could be a simple decrease in the popularity of the activity. Two other factors have likely been wildfires and that some of the existing companies operating in the early 2000s ceased operations, or substantially reduced the number of service days reported. Another effect may have been the down-turn in the economy from 2007-09 and a slow economic recovery after 2009.

Approximately 130,000 acres have burned in the Pasayten since 2001. The major fires have included:

- Thirtymile Fire (2001)
- Farewell Fire (2003)
- Tatoosh Buttes and Tripod (2006)

These fires have affected the outfitters' ability to use traditional areas and decreased the number of people coming to the Methow Valley, likely decreasing the number of clients seeking service. The effects of the fires have continued into the years following the fires - trails have been closed, or have become much more difficult to travel, established campsites have been burned, and the character of the land has changed. These factors may have all contributed to a decline in clients.

The total number of service days has also decreased because fewer outfitters are operating. Two outfitters who operated in the early 2000s stopped operating in the mid-2000s. Another company was sold in the mid-2000s, and the new owner reported reduced numbers of service days for the first few years of operation. Another outfitter took non-use in 2009. Some of the clients of these outfitters may have shifted to active outfitters, requested trips in the Lake Chelan-

Sawtooth Wilderness or other areas where shorter trips are offered, or simply stopped hiring an outfitter.

The other factor possibly affecting the outfitter-guide business may have been the downturn in the economy, however there was not a corresponding decrease in the number of service days in the Lake Chelan-Sawtooth (see following section).

Lake Chelan-Sawtooth

The current number of service days available for both priority and temporary use was utilized to calculate the percentage of overall outfitter use. Assuming use of all available service days, up to 6% of the backpackers are outfitted, and up to 6% of the stock users are outfitted. If all service days are used, overall, outfitter-guide service days represent up to 6% of the visitor days in the Lake Chelan-Sawtooth.

**Figure B-8. Current Number of Visitor Days by User Group in the Lake Chelan-Sawtooth, and Number of Outfitter-Guide Service Days in Current Permits**

User Group	Total Visitor days*	Outfitter-guide Service Days	% of Total Visitor Days
Backpackers	23,790	1,400	6%
Stock Users	12,810	715	6%
<b>TOTAL</b>	<b>36,600</b>	<b>2,115</b>	<b>6%</b>

\*Includes outfitter-guide service days

As in the Pasayten, the number of visitor days and the number of service days varies from year to year, so these percentages are approximate. Using the 2005 NVUM data, the actual percentages of outfitted use compared to total use range from 0% in 2012<sup>10</sup> to 4% in 2007<sup>11</sup>. The following chart lists the number of service days by year, and by activity.

<sup>10</sup> From Figure B-9: 0 service days / 36,600 visitor days = 0%

<sup>11</sup> From Figure B-9: 1,626 service days / 36,600 visitor days = 0.044, or 4%

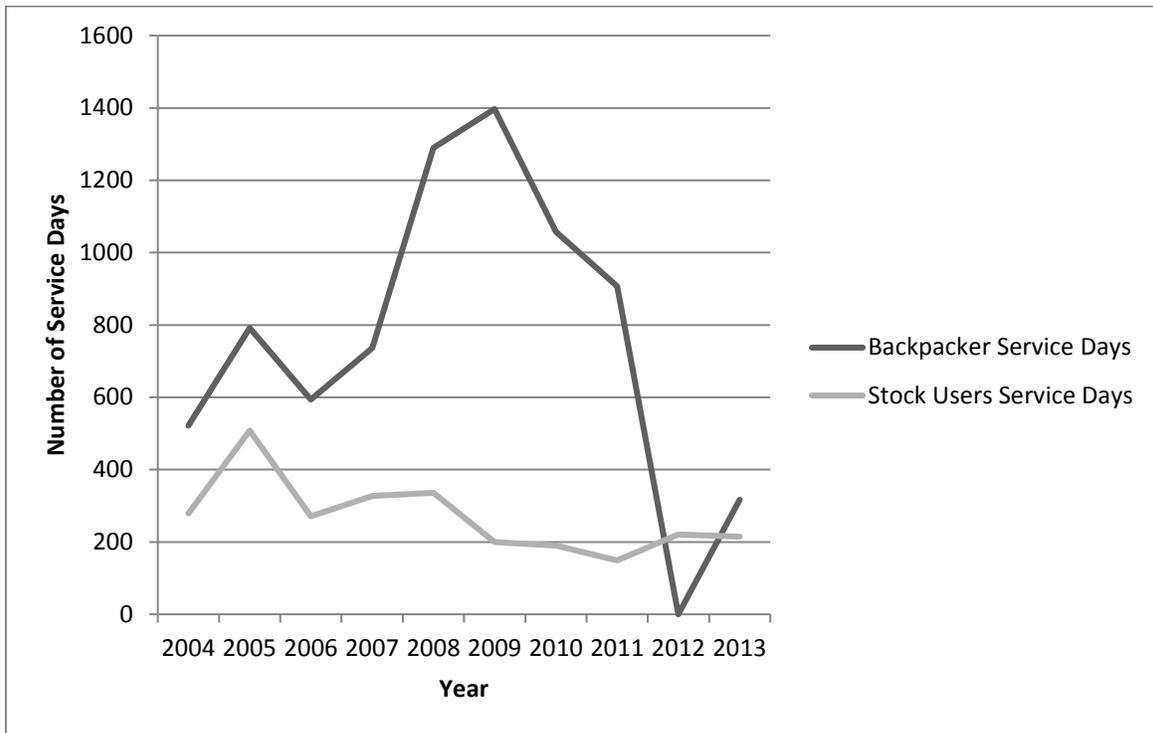
**Figure B-9. Actual Use by Activity and Year in the Lake Chelan-Sawtooth by Outfitter-Guides**

<b>Year</b>	<b>Activity</b>	<b>Actual Outfitter-Guide Service Days</b>
<b>2004</b>	Backpackers	522
	Stock Users	279
	<b>TOTAL</b>	<b>801</b>
<b>2005</b>	Backpackers	792
	Stock Users	508
	<b>TOTAL</b>	<b>1,300</b>
<b>2006</b>	Backpackers	594
	Stock Users	271
	<b>TOTAL</b>	<b>865</b>
<b>2007</b>	Backpackers	736
	Stock Users	327
	<b>TOTAL</b>	<b>1,063</b>
<b>2008</b>	Backpackers	1,290
	Stock Users	336
	<b>TOTAL</b>	<b>1,626</b>
<b>2009</b>	Backpackers	1,397
	Stock Users	200
	<b>TOTAL</b>	<b>1,597</b>
<b>2010</b>	Backpackers	1,057
	Stock Users	190
	<b>TOTAL</b>	<b>1,247</b>
<b>2011</b>	Backpackers	907
	Stock Users	149
	<b>TOTAL</b>	<b>1,056</b>
<b>2012</b>	Backpackers	0*
	Stock Users	221
	<b>TOTAL</b>	<b>221</b>
<b>2013</b>	<b>Backpackers</b>	<b>317</b>
	<b>Stock Users</b>	<b>215</b>
	<b>TOTAL</b>	<b>532</b>

\*Outward Bound did not operate in 2012, and National Outdoor Leadership School had no trips into the Lake Chelan-Sawtooth that year.

The following figure displays this information in chart form. Pack and saddle and hiking service days are combined into the total actual and authorized use by year.

Figure B-10. Outfitter-Guide Actual Use Lake Chelan-Sawtooth



The number of service days the existing outfitters have provided has remained somewhat steady, with a drop in numbers in the mid-2000s, most likely due to wildfires, and drop in business for two of the major backpacking companies.

Approximately 36,000 acres have burned in the Lake Chelan-Sawtooth since 2000. Some of the larger fires are listed below:

- Rex Creek, 2001
- Flick Creek, 2006

These fires burned in the portion of the wilderness in the Chelan watershed, and kept the stock outfitters out of some of their traditional use areas. In addition to the fires listed above, major fires outside the Lake Chelan-Sawtooth Wilderness, most notably the Thirtymile Fire in 2001, Deer Point in 2002, the Farewell and Needle Creek fires in 2003, and the Tripod and Tatoosh fires in 2006 caused an overall decrease in the number of people coming into both valleys as a result of smoke and concern about the fires. This is reflected in the demand for service days in the Lake Chelan-Sawtooth. Use levels rebounded in the year or two following the Rex Creek and Flick Creek fires, although some outfitter-guide traditional use camps were burned over.

The down-turn in the economy does not seem to have affected service days in the Lake Chelan-Sawtooth. This may be because trips into the Lake Chelan-Sawtooth tend to be shorter, and less expensive from the Methow Valley Ranger District trailhead starting points. In addition, the hiker/backpacker outfitter-guides have shifted some of their business from the Pasayten to the Lake Chelan-Sawtooth and other portions of their permit area outside wilderness where trips are shorter and resupply logistics are simpler.

## **B. Commercial Service Available to the Public Nearby**

The Pasayten and Lake Chelan-Sawtooth wildernesses sit in the northern-most stretch of the North Cascades in Washington State. While there are commercial services offering extended trips into a wilderness setting in other locations in the state, the only ones operating on the eastern slopes in this northern-most reach of the North Cascades are those currently operating in the Pasayten and Lake-Chelan Sawtooth wildernesses, and in North Cascades National Park. Most of the commercial services in the Park are for backpacking or mountaineering, with very few offering pack and saddle stock trips.

There are also non-wilderness areas on the Methow Valley and Chelan Ranger Districts, specifically the Sawtooth Backcountry and the Harts Pass/Pacific Crest Trail area, which are part of the existing outfitter-guide permit areas, and offer opportunities to travel in undeveloped areas. Approximately 56% of the available service days for backpacking and stock (currently assigned and in the priority use pool) are specified for the Pasayten or Lake Chelan-Sawtooth wildernesses. The remaining 44% are in these undeveloped areas outside wilderness. These undeveloped areas provide a somewhat similar experience to a wilderness trip in terms of an absence of roads and facilities at campsites, but trails in the Sawtooth Backcountry are open to motorcycles, and the encounter rates between parties in the Harts Pass/Pacific Crest Trail area are considerably higher than in the wilderness areas. Additionally, party sizes are not limited outside wilderness.

## **C. Criteria for Determining Need**

The traditional method for evaluating need (used in the 1996 Needs Assessment) gave a rating of high, medium, or low, sometimes converted to a numerical score, for each activity considered. The results of this method were not always useful in determining if an activity met the agency or public need, and therefore the method was not useful in determining the need for outfitting and guiding.

The evaluation process was revised to produce a narrative evaluation of several criteria, and to reach a consensus decision based on professional judgment about an activity meeting the need, meeting the need with modification, or failing to meet the need. This process is described below, followed by the criteria for evaluation of proposed or existing outfitter-guide services (Figure B-12).

The first step was to determine if the activity is allowed in wilderness, then to evaluate it in terms of meeting the components of the Wilderness Act. The following questions were addressed:

1. Are services or activities legally allowed in wilderness?
2. Is there other legislation that explicitly allows the proposed activity?
3. Do services or activities support management objectives or general wilderness direction in Forest's land and resource management plans?

The existing commercial services (pack and saddle stock and backpacking outfitter-guides) are allowed under the Wilderness Act under special provisions in Section 4. There is no other legislation that explicitly allows or directs these activities.

The Pasayten Wilderness is covered by the management direction in the Okanogan National Forest Land and Resource Management Plan, 1989, as amended (Okanogan Forest Plan). The Lake Chelan-Sawtooth is divided between the Okanogan Forest Plan (for the portion on the Methow Valley Ranger District) and

the Wenatchee National Forest Land and Resource Management Plan, 1990, as amended (Wenatchee Forest Plan). The Okanogan Forest Plan includes forest-wide standards and guidelines that specifically pertain to outfitter-guide permits.

*“Recreation services partnerships to provide recreation facilities and services shall be used where feasible.”* Forest-wide Standard and Guideline 8-2.

*“Recreation special use authorizations shall conform to the goals of the MA.”* Forest-wide Standard and Guideline 8-11.

The Wenatchee Forest Plan recognizes that outfitter-guides provide valuable recreation opportunities for a segment of the public who do not have the expertise, equipment, or physical capabilities to enjoy these experiences on their own. The Plan states that permits should be issued when there is a demonstrated public need or demand for the service, when permitted use is compatible with general public use, and when use can occur without exceeding carrying capacities, causing unacceptable impacts, or causing changes that approach limits of acceptable change (USDA Forest Service 1990: E-11).

4. Do activities meet a public purpose defined in Section 4 (b) of the Wilderness Act?
5. Do services facilitate outstanding opportunities for solitude or a primitive and unconfined type of recreation as specified by Section 1 (c) of the Wilderness Act?

There are six public purposes identified in the Wilderness Act: recreational, scenic, scientific, educational, conservation, and historical use.

The existing services primarily support or facilitate the recreational purpose of the Wilderness Act. The services considered here enable visitors who may have a personal or physical limitation to experience wilderness. For example, some visitors may not be able to hike the extended distances required to access a wilderness area. Other visitors may not have the specialized knowledge, skills, or equipment required for a wilderness visit.

An important component of outfitter-guide services is the role of education, both in teaching wilderness practices and skills, as well as conveying appropriate wilderness information and messages. For example, both backpacking and pack and saddle stock outfitters utilize leave-no-trace techniques and practices. Specifically, the Chief’s 10 Year Wilderness Challenge directs outfitter-guides to model appropriate wilderness practices and incorporate awareness of wilderness values in the service provision. The outcome for this element is:

*[o]utfitters and guides will serve as ambassadors for wilderness. Their clients will leave with appreciation and knowledge that they may use in future self-guided trips to wilderness areas. Outfitters will provide a direct benefit to the wilderness they operate in by providing needed opportunities for visitors and education about wilderness (Chief’s 10-Year Wilderness Challenge 2004-14).*

The experience of solitude and/or primitive and unconfined recreation are integral to wilderness recreation. The existing services facilitate these opportunities for guided clients. Depending on the focus of the trip and interest of clients (public and agency), the experience of scenic, scientific, conservation, and historic purposes may also be met by commercial services.

Figure B-11 provides a breakdown of criterion for assessing the categories of potential need. Each category is further defined following the table. Evaluation of a proposed or existing service is considered to meet, partially meet, or fail to meet the criteria for determining potential need.

Meets – The activity completely meets the criterion statements.

Partially Meets: The activity largely meets the criterion statements, or could be modified to completely meet.

Fails: The activity does not meet the stated criterion.

**Figure B-11. Categories of Potential Need and Criteria to Determine Potential Need**

Category	Criteria
Education of Wilderness Practices and Wilderness Management	Teaching clients about wilderness practices and wilderness management are an integral objective of the activity. Examples include (but are not limited to) leave-no-trace techniques, courses teaching wilderness ethics, and regular instruction on wilderness regulations.
	The outfitter-guide lists teaching as an integral objective in advertising and other literature.
	The outfitter-guide models appropriate wilderness behavior and is an ambassador for wilderness.
Skill	The activity requires the participant to master unique, technical skills.
	The activity requires considerable time and/or talent to master the skills.
	In-person instruction during the experience or the learning process (i.e. through an outfitter/guide service) is important for a novice to successfully participate in the activity.
Equipment	Specialized equipment needed for the activity is expensive to the point of being beyond the reach of many people that might otherwise try the activity. Initial equipment costs exceed \$1,000.
Knowledge	Outfitter offers unique knowledge about methods to access and use an activity area that will minimize resource damage.
	Outfitter offers unique knowledge about methods to access and use an activity area that will minimize user conflicts.
Safety	Without a guide's assistance, novice participants could seriously endanger their health or lives or the lives of others.
Demand	There is a demonstrated demand for commercial services.

The existing commercial services, backpacking/wilderness education/mountaineering, and pack and saddle stock trips, were both evaluated using the categories and criteria in Figure B-11. The results are included below in Figure B-12, and detailed in narrative form following the figure.

**Figure B-12. Determination of Need for Commercial Services**

Category	Backpacking/Wilderness Education/Mountaineering/Rock Climbing	Pack & Saddle Stock Trips
Education of Wilderness Practices and Wilderness Management	Meets Criteria: Education about wilderness practices and management is an integral part of the services offered	Meets Criteria: Outfitters model proper stock handling techniques, and practice leave-no-trace camping techniques.
Skill	Meets Criteria: activity requires time to master skills	Meets Criteria: Activity requires mastering skills that take a considerable amount of time to learn
Equipment	Partially Meets Criteria: Specialized equipment could have a combined cost of over \$1,000, although less expensive and rental equipment available	Meets Criteria: Cost of stock and necessary equipment far exceeds \$1,000
Knowledge	Meets Criteria: Outfitter has knowledge of landscape to allow groups to avoid more popular locations, thus reducing user conflicts and impacts to solitude	Meets Criteria: Proper stock handling techniques substantially reduce impacts to resources
Safety	Partially Meets Criteria: Novice participants could endanger their lives, however activities can be relatively easily learned	Meets Criteria: Stock can be dangerous and cause serious injury or death to riders and handlers. Novice participants could endanger their lives or the lives of others.

**Education:** Outfitter-guides are important partners in providing opportunities for visitors to learn wilderness skills and to be exposed to wilderness management goals and values. The 2012 Regional Wilderness Interpretation and Education Plan explicitly recognizes the role of outfitter-guides in this process. Materials under development and a “train-the-trainer” partnership between the USFS and outfitter-guides will help to ensure that permittees have the skills and materials necessary to fulfill this need.

**Skill:** Both backpacking and pack stock use require a mastery of unique technical skills. Mastering skills in stock transport, care, and handling takes years of experience, and people with little to no experience cannot take extended pack and saddle stock wilderness trips without an outfitter-guide. Backpacking skills are learned more quickly, but still require a certain amount of time to acquire the skills necessary for extended, rugged backpacking trips.

**Equipment:** The pack and saddle stock services meet the need in this category, while the backpacking services partially meet the need. Pack and saddle stock equipment, including all the costs associated with the animals in addition to the gear required, is very expensive, from the initial investment to the ongoing costs. Quality backpacking equipment can be expensive, although reasonably priced and rental equipment is available.

**Knowledge:** Backpacking outfitter-guides have knowledge of lesser-used portions of the wilderness, and their activities may reduce user conflicts and protect solitude by minimizing time spent in areas popular

with the non-outfitted public. Improper stock handling techniques can cause substantial resource damage, so the pack and saddle stock outfitter-guides help minimize impacts from clients, and model behavior to the non-outfitted public.

Safety: While backpacking basics can be learned relatively quickly, novice backpackers need to develop map-reading, navigation, first-aid, food management in wildlife areas, and other skills that are appropriately learned in a field-based, guided setting. Handling stock, however, takes a considerable amount of time and field experience to do safely, and novice users are at a much higher risk of serious injury. Novice stock users need in-person guidance and instruction, as well as specialized equipment, such as that provided by outfitter-guides. While the inherent risk and hazard of the wilderness setting should always be considered, there is a need to provide outfitter-guide services for some members of the public to experience wilderness when safety considerations are a concern.

Demand: While it is not appropriate to directly correlate demand to need; there is a subset of the population who are unable or unwilling to embark on a wilderness experience without the services of an outfitter guide. For example, an individual who cannot walk long distances, physically carry a pack, or navigate uneven terrain may determine that they cannot experience wilderness without the services of an outfitter-guide. Other potential clients of outfitter-guide services may not fit into a pre-determined category of specialized need, but still feel that they are not adequately competent to engage in a wilderness experience without some assistance from an outfitter-guide service.

The Forest Service has therefore determined that there is a need for outfitter-guide services, both backpacking and pack and saddle, in the Pasayten and Lake Chelan-Sawtooth Wildernesses. Determining the extent necessary of this need will be addressed in the following analysis of wilderness capacity and potential effects to wilderness character.

#### **4. DETERMINATION OF EXTENT NECESSARY**

##### **A. Wilderness Capacity Assessment**

This step examines the condition and trends of the wilderness resource in terms of the biophysical and social resources to determine the amount of use that can occur without causing unacceptable impacts on wilderness character. This defines the wilderness capacity.

A key component of the wilderness resource is wilderness character. The concept of wilderness character comes from Section 2(a) of the Wilderness Act: “... for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness and so as to provide for the protection of those areas, the preservation of their wilderness character.”

Wilderness character is, in part, an intangible concept, yet results in substantial disagreement over whether the agency is managing wilderness in a manner that meets the legal requirements of the Act. For this reason, this analysis will use concepts from the Act to help frame the discussion. The four qualities of wilderness character will be referred to throughout this analysis. These four qualities are derived from the definition of Wilderness, Section 2(c) of the Act, which contains distinct attributes that link to the concept of wilderness character:

*A Wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where man himself is a visitor who does not*

*remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.*

The four qualities or concepts of wilderness character that will be addressed throughout this analysis are:

1. **Untrammeled** – wilderness ecosystems are essentially unhindered and free from human control or manipulation. Recreation activities do not impact this quality, since they do not intentionally control or manipulate the ecosystems.
2. **Undeveloped** – wilderness is essentially without permanent improvements or modern human occupation. Recreation activities do not impact this quality, unless they involve construction of buildings or require motorized or mechanized equipment.
3. **Natural** – wilderness ecological systems are substantially free from the effects of modern civilization. Recreation activities can influence this quality through pack and saddle stock grazing, and impacts to water quality, stream bank erosion, and disturbance to soils.
4. **Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – wilderness provides outstanding opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge. This is the quality most affected by recreation activities. The number of visitors, and encounters between them, number and condition of campsites, number of user-created recreation facilities, and number of miles of trails all impact the opportunities for solitude, or a primitive and unconfined type of recreation (Landers et al. 2008).

## **1. Historic Use, Conditions and Trends of the Social and Biophysical Resource**

The elements of wilderness character: untrammeled, natural, undeveloped, and opportunities for solitude or primitive and unconfined recreation, have been on a stable or upward trend in the Pasayten and Lake Chelan-Sawtooth wilderness areas since the areas were designated as part of the Wilderness Preservation System. In order to understand this, it is important to consider the historic use of the areas. Human activities altered the biophysical condition of the resources prior to designation. Commercial livestock grazing and wildfire suppression had altered plant communities over much of the landscape, and fish stocking of high elevation lakes changed the aquatic ecosystems and recreation use patterns. Recreation activities (including outfitting and guiding), livestock herders, and mining activities created a network of trails, campsites, and scattered buildings in both wilderness areas. Some of the effects of these past activities are still evident today.

Commercial livestock grazing declined and eventually ceased. The end of commercial livestock grazing, coupled with recreation party size controls and other standards and guidelines from the Forest Plans which were first implemented in 1990, and is perpetuating the upward trend in the untrammeled, natural, and undeveloped qualities of the wilderness character. Recovery has been shown by Kovalchik (2003) and through ongoing campsite monitoring (see project record). Tungsten was mined in the Pasayten Wilderness in one location, but there has been no mining activity since the mid-1900s. Some

buildings remain at the mine site and are a destination for some recreationists. This has degraded the undeveloped quality in the immediate vicinity, but is having a very minor impact to the overall undeveloped quality of the wilderness character in the Pasayten.

People have been using stock to travel into the backcountry for nearly a century. Stock outfitter-guides have been operating in the areas for decades, before the Pasayten and Lake Chelan-Sawtooth Wildernesses were designated, and long before the Forest Plans were signed and implemented. There were no limitations on party sizes prior to the current Forest Plans, so groups larger than the current 12 people and 18 head of stock limitations traveled through and camped in the wilderness. Camps were constructed and maintained to provide for clients' comfort, with facilities such as permanent latrines, picnic tables, cook tents with wooden floors and ovens, camp furniture, and tent pads. Trees were cut down for firewood, or to improve the view or lay-out of camps. Stock were tied to trees, damaging some, and exposing their roots. All these activities were completely legal and acceptable at the time. Many camps originally used by livestock permittees were converted to stock outfitter camps. This created and perpetuated camps with large areas of vegetation loss and compacted bare mineral soil, trees with exposed roots, trees killed by recreation activities, and removal of all snags in and around camps.

Hiking and backpacking started to gain popularity in the 1960s and 1970s, and overtook horseback riding as the most common mode of transportation into the backcountry. Outfitter-guides offering trips in backpacking and wilderness skills have been operating in the Pasayten and Lake Chelan-Sawtooth wilderness areas since 1977. These groups occasionally use large, established campsites, but also operate in the trail-less portions of the wilderness areas, teaching their clients about hiking, backpacking, mountaineering, survival skills, environmental and wilderness education.

Many of the large campsites developed prior to wilderness designation are still used today by recreationists and outfitters. Due to the level of historic and continuing use, some of the hardened sites are still devoid of vegetation cover, and exceed current plan standards for vegetation loss and compacted bare mineral soils, and number of trees with exposed roots. The condition of most of these camps has been on an upward trend since wilderness designation (Kovalchik 2003). Facilities (such as picnic tables, wooden tent floors, and spring developments) not needed for resource protection have been removed. Party size limitations and changing use patterns have allowed many barren areas to revegetate, reducing barren core in all of the largest camps<sup>12</sup>. Nevertheless, the camps have the sights and sounds of people in the wilderness, and are therefore detracting from the remoteness of wilderness. They are having minor to moderate, localized impacts to opportunities for solitude, depending on their location and whether or not the camps are occupied. However, their impact is negligible at the wilderness scale.

The social resources in the Pasayten and Lake Chelan-Sawtooth are also on a stable or upward trend. Outstanding opportunities for solitude, primitive, and unconfined recreation exist in most locations throughout the Pasayten and Lake Chelan-Sawtooth wilderness areas. Refer to the Social Capacity section below for more details.

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<sup>12</sup> Refer to campsite monitoring data for specific information.

## 2. Capacity Analysis

An important step in determining the extent necessary for commercial services in wilderness is to complete a visitor capacity analysis. A capacity analysis is an exercise that determines the maximum capacity of an area, where the amount of interaction between people, and the effect of the people on the resources meets the Wilderness Act, the forest plan and other management direction. In other words, capacity is defined as the amount of overall use an area can sustain without detrimental social or physical resource impacts (without impairing wilderness character). Biophysical capacity is based on resource conditions, and ensuring non-degradation of wilderness character. Social capacity is based on Forest Plan standards and guidelines, the opinions of the people recreating in the wilderness, and their satisfaction of their experiences. The overall capacity determination is made considering both the biophysical and social capacity findings.

The Pasayten Wilderness is covered by the Okanogan National Forest Land and Resource Management Plan, 1989, as amended (Okanogan Forest Plan) (USDA 1989). The portion of the Lake Chelan-Sawtooth Wilderness that lies within the Methow Watershed is also covered by the Okanogan Forest Plan, while the portion that is within the Chelan Watershed is covered by the Wenatchee National Forest Land and Resource Management Plan, 1990, as amended (Wenatchee Forest Plan) (USDA 1990). The plans established zones with standards and guidelines setting limits for changes in biophysical elements, including, for example, barren core and vegetation loss, number of trees with exposed roots, campsites visible when occupied, and firewood availability. Refer to the Forest Plans for a complete list.

In addition, the Forest Service has many regulations to limit unwanted ecological effects from recreation in wilderness; including prohibitions on damaging vegetation, trail construction, littering, caching supplies (except by permit), grazing, hitching, or hobbling stock within 200 feet of lakes, to name just a few. The terms and conditions of the special use permits for outfitting-guiding further control actions by outfitter-guides, and establish consequences for non-compliance.

### a. Biophysical Capacity

Biophysical attributes influence whether or not a setting is capable of providing a particular (wilderness dependent) recreation opportunity without degrading the area's ecological processes, structure, composition, function, resilience, integrity, and potential, as well as the setting's ability to restore itself and provide for other resource uses and values. From this perspective, capacity is based on managing condition to acceptable standards. These standards can be elements of a forest or wilderness plan that can be understood as "biophysical" qualities (i.e. untrammeled, undeveloped and natural).

The resource conditions in the Pasayten and Lake Chelan-Sawtooth were thoroughly evaluated during the analysis of a proposal to issue 10-year outfitter-guide permits to the existing stock outfitters. Refer to the *Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement*, 2013 (USFS, 2013), and the corresponding resource reports for detailed information. Resource specialists found concentrated areas of impact around campsites, but overall wilderness character is not being degraded by the recreation activities because the effects are limited and localized.

### Untrammeled Quality

The current recreation use, including the current pack and saddle stock outfitter guide activities, is having no effect on the untrammeled quality of the Pasayten or Lake Chelan-Sawtooth wildernesses. This quality pertains to the wilderness ecosystem, and whether it is essentially unhindered and free from human control or manipulation (Landres et al. 2008). Recreation use, including outfitted and non-outfitted use, is causing localized impacts, but these are more associated with the Natural and Opportunities for Solitude qualities of wilderness character, and are discussed below. As discussed in the previous section titled "Historic Activities", livestock grazing, wildfire suppression, and fish stocking have had wilderness-wide, moderate to major, long-term impacts to wilderness character. The overall condition of both wilderness areas has been on an upward trend since designation due to the elimination of commercial livestock grazing and implementation of Forest Plan standards and guidelines.

### Undeveloped Quality

Recreation activities are also not impacting the undeveloped quality in either wilderness. The undeveloped quality is that wilderness is essentially without permanent improvement or modern human occupation. Non-recreational structures, inholdings, use of motorized or mechanized equipment, or impacts to cultural resources degrade the undeveloped quality (Landres et al. 2008). The existing recreation use, including pack and saddle stock outfitter guides does not depend on or result in these indicators, and therefore is not impacting this quality. Building and cabins were constructed in the past for mining activities at the Tungsten Mine, trapping, the construction and maintenance of the Pasayten Airstrip, and Forest Service administration. Many of these structures remain today, and degrade the undeveloped quality of the wilderness.

### Natural Quality

The natural quality refers to wilderness ecosystems that are substantially free from the effects of modern civilization. Ecological systems inside wilderness are directly affected by things that happen inside, as well as outside wilderness. Indicators of the natural quality are plant and animal species communities, physical resources, and biophysical processes (Landres et al. 2008). Recreation activities, including pack and saddle stock outfitter-guides, can impact plant communities through stock grazing, and animal communities through disturbance of individuals or habitat. Pack and saddle stock use can also impact physical resources if watering spots or trail crossings change water quality, lead to streambank erosion, or disturb soils.

The current recreation use, including outfitted and non-outfitted, was evaluated in terms of impacts to plant communities and wetlands, terrestrial and aquatic species, water quality, and soil. Each analysis found localized impacts to these indicators in some locations (campsites, stock watering areas, grazing areas, and trail crossings), but no impacts wide-spread or intense enough to adversely affect the natural quality of either wilderness. Refer to the mentioned sections in the FEIS (USFS 2013), the DSEIS (2016) and supporting data in the analysis file for more information.

Monitoring has highlighted geographic areas where resource conditions are more impacted by recreation use in the Pasayten and Lake Chelan-Sawtooth. Outfitter-guide activities may need to be limited in these areas at some point in the future to ensure that the activities do not degrade the wilderness character. These analysis areas are described below.

## Pasayten Analysis Areas

There are areas within the Pasayten where use is higher, and there is a higher density of established campsites. Outfitter-guide activities may need to be limited in these areas in the future if monitoring shows that the recreational activities are causing more intense or widespread adverse impacts to any of the four qualities of wilderness character; untrammelled, natural, undeveloped, or opportunities for solitude or primitive or unconfined recreation.

### *Lakes in the vicinity of Harts Pass and the Pacific Crest Trail*

Silver Lake, Buckskin Lake, Ferguson Lake, Fred Lake, and Doris Lake are all popular destinations with limited campsites. They are frequently used by non-outfitted backpackers and/or stock users. Full-service stock outfitter camps may not be appropriate at the lakes, and stock drop camps and outfitter backpacking camps need to be coordinated to avoid proportionally occupying too many sites, not leaving campsites for non-outfitted recreationists.

### *Hidden Lakes*

Hidden Lakes are located along the Hidden Lakes trail, beginning at the Billygoat Trailhead. The lakes are located in a narrow valley, with approximately five campsites around the lakes. The only graze in the area is located up Stub Creek, which flows into the Middle Hidden Lake. Recommend limiting the number of outfitter camps at any one time to ensure campsites will be available to non-outfitted recreationists.

### *Crow and Corral Lakes/Sheep Mountain Area*

Crow and Corral lakes are located along the Larch Creek Trail, which begins at the Billygoat Trailhead. The trail continues to Sheep Mountain after passing the lakes. There is an existing assigned site for a stock outfitter-guide at Corral Lake, and another on Sheep Mountain. These assigned sites are for the exclusive use of the outfitter-guides, and typically have a camp set up all season long. It is recommended that no more assigned sites be established in this vicinity to keep camping areas open for non-outfitted use.

### *Spanish Camp*

The Spanish Camp area is reached by the Andrews Creek Trail, beginning at the Andrews Creek Trailhead. It includes Rimmel Lake, Cathedral Peak, and Bald Mountain. There are two assigned sites for stock outfitter-guides in the area. This is one of the most popular areas in the Pasayten all season for non-outfitted recreationists, and is especially popular during high hunt in September. Use approaches capacity during this time of year because encounters are more frequent, and established campsites are often used. Recommend not establishing another assigned site in the Spanish Camp or Amphitheater area to avoid additional campsite creation, and to protect the opportunities for solitude in the area.

### *Black Lake*

Black Lake is located approximately 4 miles from the Lake Creek Trailhead, along the Lake Creek Trail. It is a very popular day-use site for non-outfitted recreationists. Bull trout, a federally listed threatened species, live in the lake. There is CFR prohibiting camping with pack animals within ½ mile of the lake shore. There are a very limited number of campsites. Recommend not allowing outfitter-guide camps at Black Lake on weekends and holidays between and including Memorial Day and Labor Day.

### Lake Chelan-Sawtooth Analysis Areas

As in the Pasayten, some areas in the Lake Chelan-Sawtooth have higher levels of use, and resource conditions that are more susceptible to damage from recreation activities. The Lake Chelan-Sawtooth spans the geographic mountain divide between the Methow and Chelan watersheds. The destination lakes in the Chelan watershed are clustered near the divide in an area characterized by south-facing slopes, with scattered clumps of trees among large open meadows. The portion of the wilderness in the Methow watershed is roughly divided between north and south facing slopes, with more deeply incised drainages (compared to the upper elevation destinations on the Chelan side) around the tributaries to the Twisp River.

Many of the destination lakes are located in small basins in the Twisp River watershed with limited flat ground and graze, and accessed by one-way trails offering no loop opportunities to other areas. In comparison, there is more graze for stock animals, and more flat, open areas for campsites on the upper slopes of the Chelan side than in the Twisp River drainage. Since nearly all the trails into the wilderness begin along the Twisp River from roadways, use is more highly concentrated in this area than from the Lake Chelan boat-in trailheads. The steep slopes, limited flat ground, and little graze coupled with the higher use has led to more impacts, and more specific areas of concerns on the Twisp side. These are described below.

#### *Oval Lakes*

West, East, and Middle Oval lakes are accessed by the Oval Lakes Trail, beginning at the Eagle/Oval Trailhead along the Twisp River. There is a CFR prohibiting stock camping at West Oval Lake. The area around Middle Oval Lake has very little graze, and can be quickly overgrazed if large stock parties frequent the area. It is recommended that a very limited number of stock full-service camps be allowed in the area. The trips should not be back-to-back, but separated in time to allow the graze to recover. A controlled number of drop camps could be supported since stock do not remain in drop camps, and graze availability is not an issue.

#### *North Lake and Surrounding Area*

North Lake is accessed by the North Lake Trail that begins at the Gilbert Trailhead on the Twisp River. It is a very popular day-trip destination, and an easy hike or ride. There are a limited number of campsites. Since it receives higher levels of use by non-outfitted visitors, it is recommended that approval for outfitter-guides (hiking or stock) camps be made on a case-by-case basis considering time of year, number of clients, camp location, and other factors.

#### *Twisp Pass*

Twisp Pass is another popular day-trip destination and is along the Twisp Pass Trail, which also leaves from the Gilbert Trailhead. It has very few camping spots, and very little appropriate graze. The Pass is approximately 3.5 miles from the trailhead. It is recommended that no outfitter-guides be allowed to camp at Twisp Pass.

#### *Louis Lake*

Louis Lake is located approximately 5 miles from the South Creek Trailhead. There are a very limited number of campsites, and no alternative camps in the area away from the lake. There is also little graze. It is a popular destination, and the campsites are often full on

weekends and holidays. It is recommended that no full-service stock outfitter-guide camps be allowed at the lake, and drop camps be approved on a case-by-case basis.

#### *Williams Lake*

Williams Lake is located approximately 7 miles from the Williams Creek Trailhead. There are a limited number of campsites, but graze is available. Recommendation is to allow drop camps, with full-service camps being approved on a case-by-case basis.

#### *Libby Lake*

Libby Lake is approximately 6 miles from the trailhead. The last ½ mile of trail leading to the lake is not recommended for stock due to a large rock creating an unsafe tread. The area around the lake is not suitable for stock due to fragile vegetation. Recommendation is to not allow stock outfitter-guide camps.

#### *Star Lake, Tuckaway Lake, Bernice Lake, and Surprise Lake*

These areas are too small to allow stock outfitter-guide camps because of limited graze and popularity with non-outfitted users. Recommendation is full-service camps not be allowed. A controlled number of drop camps could be supported, however stock are not allowed in lake-side camps.

## **2. Social Capacity**

Social capacity is determined by the Forest Plan standards and guidelines that include limits for encounters, number of campsites visible or audible from other campsites, party size limitations, and campsite conditions. User perspectives provide an additional important source of information to assess perceptions of crowding, resource condition, opportunities for solitude or primitive and unconfined recreation, and other visitor input. Three sources (summarized below) were used to determine that the current amount of use is well within the social capacity for both wildernesses.

First, the Forest Service conducted encounter studies to evaluate compliance with the Forest Plan standards and guidelines on the number of encounters. Second, the Forest Service gathered input during scoping of proposals to issue 10-year priority use permits to stock and backpacking outfitter guides. Finally, the Forest used the results of the 2009 Wilderness Use Study (Burns, et al. 2010).

### **Encounter Studies**

The Okanogan and Wenatchee Forest Plans have standards addressing social capacity by setting goals/limits for the number of encounters a recreationist should not exceed in a day. The Okanogan Forest Plan states that there needs to be an 80% probability of not encountering more than one other group per day in management area 15A (trailless), and not more than 7 in management area 15B (trailed). The Wenatchee Forest Plan also has these same two levels for pristine and primitive, respectively, and includes an 80% probability of not more than 10 groups or individuals traveling along in semi-primitive, and not more than 10 to 20 groups or individuals in transition areas of wilderness. Pack and saddle outfitter-guides are not permitted to use the trailless portion of either wilderness on the Okanogan or the pristine portion of the Lake Chelan-Sawtooth on the Wenatchee.

The Forest Service has had backcountry rangers gather encounter data since 2001. Rangers record the number of groups they encounter for each section of trail and associated destinations. Encounters with previously contacted groups are counted as a separate encounter when more than 20 minutes passes between contacts. Rangers patrol high use areas more often and are generally scheduled for the busiest use periods such as holidays and weekends. Thus their encounter data might be slightly skewed to the high end. Data collected in over 1,129 ranger patrol days and 2,400 encounters indicates that both wilderness areas are meeting Forest Plan standards for encounters.

Since certain portions of each wilderness are more popular, the data was examined for different trail and travel corridors to see if standards were being exceeded at specific locations. The following tables show data for common trails and travel corridors in the two wilderness areas. Some travel corridors include several sections of trail in order to best capture typical visitor travel patterns.

The Wilderness Use Study found that about half of the responders saw other groups twice on their trips, and slightly less saw groups 3 to 5 times. The average was seeing 4 other groups per trip (Burns et al. 2010).

#### Pasayten

In the Pasayten, the highest encounter rates occurred on the Pacific Crest Trail, and this was the most likely location for a visitor to have more than seven encounters. Data for the Pacific Crest Trail may be slightly skewed higher as backcountry rangers did not always differentiate encounters on the Pacific Crest Trail between the Harts Pass trailhead and Windy Pass which is a popular day hike and outside of the wilderness. Other locations that occasionally exceeded seven encounters were: the Hidden Lakes, Buckskin Ridge, Boundary Trail, Devils Dome, and Pasayten River trails. The highest likelihood of more than seven encounters generally occurred on weekends and holidays in July, August, and September, but also occurred randomly during the week. Trails such as the Pacific Crest Trail, Billy Goat, Buckskin Ridge, Chewuch, and Andrews serve as primary access routes into the wilderness so it is not uncommon for encounter rates to be higher near the trailhead and drop further into the wilderness as people disperse to various destinations. Other factors have also influenced the amount and distribution of use, which influences encounters. Weather, fire activity, featuring a particular trail or trip in the media, can cause an obvious increase or decrease at specific in use on a yearly basis on an individual trail.

**Figure B-13. Probability of Encountering More Than Seven Parties By Pasayten Travel Corridor.**

Travel Corridors/Trails	Trail Numbers	Patrol days	Total Encounters	Days exceeding seven encounters	Probability of encountering more than seven groups
West Fork Pasayten	472	9	24	0	0%
Hidden Lakes	477, 458	405	647	2	0%
Robinson, Mainstem & Middle Fork Pasayten River	478, 474, 451	78	144	1	1%
Monument Creek	484	3	2	0	0%
Tatoosh Buttes	485	21	32	0	0%
Buckskin Ridge	498	28	65	1	4%
Lake Creek	500	25	78	0	0%
Larch Creek Trails	502, 502A	88	173	0	0%
Andrews Creek	504	103	196	0	0%
Chewuch	510, 360	71	118	0	0%
Crystal Lakes	517	2	6	0	0%
Boundary Trail	533	136	243	1	1%
Devils Dome, Canyon Creek	752, 738, 754	27	49	1	4%
Pacific Crest Trail	2000, 472A, 473	70	279	9	13%

These all meet the standard and guideline for having a 80% probability of encountering 7 parties or less.

Lake Chelan – Sawtooth

The Lake Chelan-Sawtooth receives more day use than the Pasayten. Popular destinations include: South Creek, North Lake, Louis Lake and Twisp Pass. The highest likelihood of more than seven encounters generally occurs on weekends and holidays in July, August and September. As in the Pasayten, there are many factors influencing amount and distribution of use, which influences encounters. Weather, fire activity, or featuring a particular trail or trip in the media, can cause an obvious increase or decrease in use on a yearly basis on an individual trail.

**Figure B-14. Probability of Encountering More Than Seven Parties By Lake Chelan-Sawtooth Travel Corridor.**

Travel Corridors/Trails	Trail Numbers	Patrol days	Total Encounters	Days exceeding seven encounters	Probability of encountering more than seven groups
South Creek	401	9	12	0	0%
Reynolds Creek	402	1	0	0	0%
Williams Lake	407	16	12	0	0%
War Creek	408	12	49	0	0%
West Fork Buttermilk	411	6	4	0	0%
North Lake	413	22	61	1	5%
Slate Lake	414	1	0	0	0%
Libby Lake	415	6	2	0	0%
East Fork Buttermilk	420	4	1	0	0%
Copper Pass	426	9	10	0	0%
Scatter Lake	427	10	22	0	0%
Louis Lake	428	13	42	1	8%
Twisp Pass	432	18	97	0	0%
Wolf Creek	527	3	35	0	0%
Scaffold Ridge	436	18	97	0	0%
Summit Trail	1259	18	97	0	0%

These all meet the standard and guideline for having an 80% probability of encountering 7 parties or less.

#### Public Scoping

The Forest Service has asked for comments on proposals to issue 10-year permits to the existing stock outfitter-guides. Scoping will be initiated soon for the backpacking outfitter guides.

The Forest Service has received approximately 100 letters in response to scoping for the stock outfitter-guides. Some of these letters supported the stock activities, and felt the use and resource conditions were acceptable and appropriate for wilderness. Over half of the letters expressed concern about stock. The issues raised formed the cornerstone for the environmental analysis for the proposed permit issuance, and are evaluated in detail in the Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement (USDA Forest Service, 2013) and the Draft Supplemental EIS (USDA Forest Service, 2016). The letters demonstrated that there is both strong support and strong opposition to stock outfitter-guides, and controversy about whether the effects of the activity are acceptable, and in compliance with the Wilderness Act.

#### 2009 Wilderness Use Study

Talking to people visiting the wilderness to understand the level of satisfaction on a number of issues, such as crowding, condition of the resources, and interactions with others is

another important source of information for determining social capacity. These factors are very subjective, and vary from person to person depending on their expectations, past experiences, and personalities. The Forest Service typically hears most frequently from people who are unhappy or dissatisfied with their experience. The people who are happy with their trip usually do not contact the Forest Service. This can lead to a perception that most people disagree with the management of the wilderness, and with those they encounter on their trip. To give a balanced voice to all visitors, the Forest Service contracted with the research group to conduct a monitoring survey to gather and analyze data on these topics.

During the 2009 recreation season, the researchers interviewed people as they finished their trips into the Pasayten and Lake Chelan-Sawtooth. They asked questions about perceptions of crowding, acceptable number of times to see others, reasons for recreating, quality of facilities and services, how others impact their experience, and other topics. The responses were combined and analyzed, with the results documented in the 2009 Wilderness Use Study (Burns et al. 2010).

The survey found that virtually everyone (97%) reported that they did not have any conflicts with other groups during their trip. In addition, 90 to 95% did not feel crowded at all or felt only slightly crowded. The feeling of crowds is grounded in a person's expectations, and about three-quarters (72% in the Pasayten and 79% in the Lake Chelan-Sawtooth) of the people saw as many or fewer people than they expected. Roughly one-half (55% in the Pasayten and 42% in the Lake Chelan-Sawtooth) of the visitors felt solitude is part of the wilderness experience, while the other half (43% in the Pasayten and 48% in the Lake Chelan-Sawtooth) felt that they did not expect complete solitude and expected to see other people some of the time.

Nearly all of the responders were repeat users – 74% in Pasayten and 91% in Lake Chelan-Sawtooth. On a typical year, the average number of visits each person made to the National Forest was 18.81 for Pasayten, and 19.71 to the Lake Chelan-Sawtooth. Almost half (47% in the Pasayten and 40% in the Lake Chelan-Sawtooth) chose to visit the wilderness to enjoy the place itself, while roughly one-third (40% in the Pasayten and 35% in the Lake Chelan-Sawtooth) went there because it's a good place to do the outdoor activities they enjoy.

When asked if other people increased the enjoyment of the trip, visitors were to some degree evenly divided between feeling that seeing others increased their enjoyment, feeling neutral about others, and feeling that seeing others decreased their enjoyment. In the Pasayten, 45% of the visitors were neutral, 29% felt that seeing others increased their enjoyment, and 26% felt that seeing others decreased their enjoyment. In the Lake Chelan-Sawtooth, the split was similar, with 32% feeling neutral, 34% feeling that seeing others increased their enjoyment, and 34% felt that seeing others decreased their enjoyment.

The condition of the wilderness was evaluated by asking about the balance between social and biological values in the management of the wilderness, and the condition of the areas. In both wilderness areas, 32% of the visitors had no opinion about the balance between social and biological values, while 61% in the Pasayten and 54% in the Lake Chelan-Sawtooth felt that wilderness management struck a good balance between the values. The majority of

visitors (81% in the Pasayten and 87% in the Lake Chelan-Sawtooth) thought the wilderness was in good condition.

David Cole and Troy Hall found similar satisfaction levels when they conducted surveys and analyzed the data from wilderness areas around Oregon and Washington. In their paper titled *Wilderness Visitors and Experiences in Oregon and Washington: Trailhead Surveys in Thirteen Forest Service Wildernesses*, 2005, they reported that most visitors appeared to be highly satisfied with their trip and with wilderness conditions. They categorized trailheads into very high use, high use, and moderate use, with moderately used trails receiving less than one-third of the use of the very high use trails. The differences among visitors to each category of trailhead were surprisingly small. It appeared that visitors to more highly used trailheads had adjusted their tolerance of other wilderness users. Most knew what conditions they were likely to find, adjusted their expectations accordingly, and found their trips enjoyable. Most people were able to find solitude, or at least have what they considered a real wilderness experience (Cole and Hall 2005).

## 5. EXTENT OF COMMERCIAL SERVICES NECESSARY

The Wilderness Act prohibits commercial activities, except to the extent necessary for realizing the recreational or other purposes of the wilderness area. This step determines the extent necessary.

The amount of commercial services needed to provide for the public purposes of wilderness is not a number that can be easily calculated. Rather, several factors are considered to establish the number of service days that would provide the extent necessary of commercial services. The factors include:

- A. need for commercial services,
- B. historic number of service days,
- C. proportional relationship between outfitter and non-outfitted use levels,
- D. current resource conditions and impacts from recreation use on wilderness character,
- E. wilderness capacity,
- F. anticipated future changes in overall number of recreationists and need for outfitter guides, and,
- G. necessary pools for management flexibility.

### A. Need For Commercial Services

The Forest Service has a need for the two existing types of commercial services: pack and saddle stock and backpacking in order to provide for wilderness appropriate recreation opportunities, based on the analysis of need discussed in pages Appendices-3-18. Most people go into the wilderness on their own, without an outfitter-guide (see Figure B-5, page Appendices-8 and Figure B-8, page Appendices-11). A percentage of wilderness users choose to hire an outfitter-guide due to lack of skill, knowledge, or equipment, physical limitations, or other reasons, including personal preference. No data are available to break down these categories of need or to calculate what percentage of need falls into different categories.

Direction for disclosing incomplete or unavailable information, such as the lack of data concerning the reason to hire an outfitter-guide, is found in 40 CFR 1502.22. In accordance with the direction, the means to obtain the incomplete or unavailable information pertaining to the percentage of clients who hire an outfitter for the categories are not known. There are too many variables, such as how much skill or knowledge is enough to no longer need an outfitter, or what

income level would be adequate to afford the specialized equipment, or the physical conditions, or a combination of factors, would make hiking or backpacking impossible or impractical. The answer to such questions would be different for every person.

No reasonably foreseeable significant adverse impacts on the human (social) or biological environment were found in evaluating the direct, indirect, or cumulative effects of commercial services in either the Pasayten or Lake Chelan-Sawtooth Wildernesses at the current levels of use. Therefore, determining the exact percentage of people in the different potential categories of needed services is not necessary. Refer to the earlier discussion concerning the social capacity, and the environmental analysis included in the *Pack and Saddle Stock Outfitter-Guide Special Use Permit Final Environmental Impact Statement, 2013*, for complete analysis, including summaries of existing credible scientific evidence relevant to evaluating reasonably foreseeable impacts, and scientific methodology used. Lacking specific information about the number of clients within different categories of need would not have catastrophic consequences since no significant impacts would occur. The 2016 SDEIS also evaluates the extent necessary use determined by this report and found no significant impacts.

Therefore the Forest Service must consider several factors to determine the extent necessary for commercial outfitter-guide services in the Pasayten and Lake Chelan-Sawtooth Wildernesses. These factors include: historic service day levels (including historic use levels), the proportional relationship between outfitted and non-outfitted uses, current resource conditions and impacts on wilderness character, wilderness capacity, the anticipated changes in need/demand as a result of population growth and demographic changes, a pools necessary for management flexibility. Each of these is summarized below from more detailed analysis earlier in this document.

#### **B. Historic Actual Use Levels**

The range of years examined for this determination was from 2004 to 2013. There has been a decline in outfitter guide service days in the past five years. As discussed earlier in this document, the decline may be a result of wildfires, the downturn in the economy, decreased demand, or other factors. The ten year span was selected in case the factors affecting the use change and the need returns to the levels seen earlier in the 10-year span.

As shown in the tables of actual use from 2004-2013, there is a variation in annual patterns of use. The number of people needing the services of an outfitter-guide will vary from year-to-year, and may be influenced by outside factors such as wildfires and public awareness about opportunities available to them.

To provide adequate services to the public, it is necessary to offer services to the extent of the actual highest use year where this level of use does not adversely impact wilderness character. If the FS considered a lesser number (i.e. the average or lowest use year) to be the extent necessary, members of the public who require the services of an outfitter-guide to access wilderness may be unnecessarily refused a wilderness experience.

The highest number of hiker/backpacker outfitter-guide service days in the Pasayten Wilderness was 2,984 in 2005, and the highest number of stock service days was 1,316 in 2004. In the Lake Chelan-Sawtooth, the highest hiker/backpacker days were 1,397 in 2009, and 662 stock service days in 2003. These numbers are displayed in the following figures.

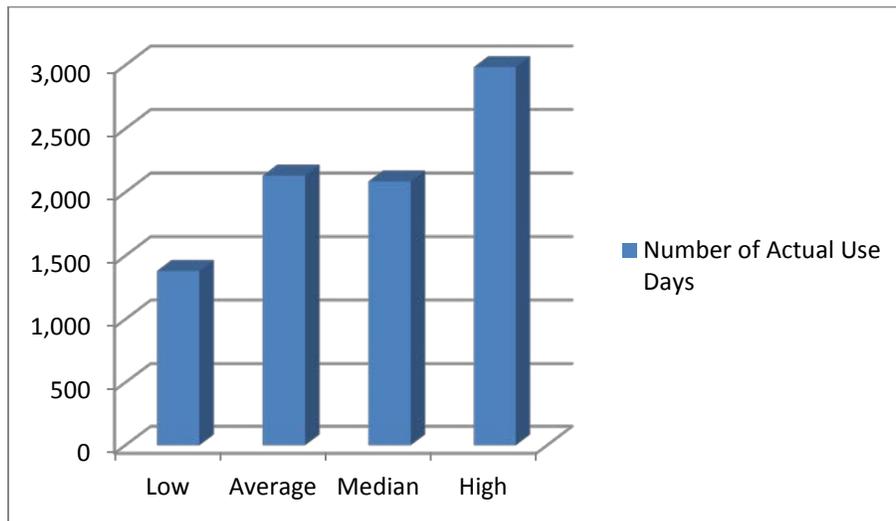
As displayed in the following figures, there is a considerable amount of variation in actual use from year to year. The following figures show the lowest and highest actual use, in addition to the average and median. The average and median levels are relatively close, however the median level better represents what could be considered a typical year since half of the years are higher than this level, and half are lower.

**Figure B-15. Low, Average, Median, and High Actual Use Backpacking Service Days in Pasayten, 2004-2013**

	Number of Actual Use Days	Year
Low	1,380	2009
Average	2,130	
Median	2,084	
High	2,984	2005

This information is shown in chart form in Figure B-16 below.

**Figure B-16. Low, Average, Median, and High Actual Use Backpacking Service Days in Pasayten, 2004-2013**

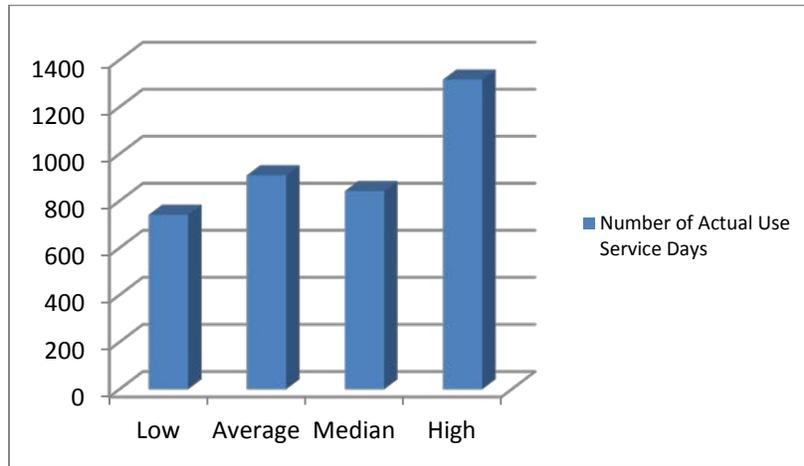


**Figure B-17. Low, Average, Median, and High Actual Use Pack and Saddle Stock Days in Pasayten, 2004-2013**

	Number of Actual Use Days	Year
Low	741	2013
Average	909	
Median	842	
High	1,316	2004

This information is shown in chart form in Figure B-18 below.

**Figure B-18. Low, Average, Median, and High Actual Pack and Saddle Stock Days in Pasayten, 2004-2013**

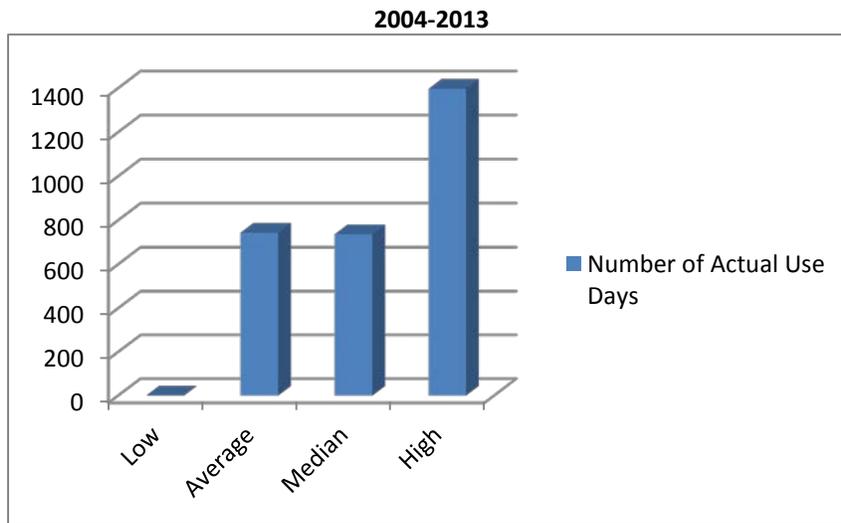


**Figure B-19. Low, Average, Median, and High Actual Use Backpacking Days in Lake Chelan-Sawtooth, 2004-2013**

	Number of Actual Use Days	Year
Low	0	2012
Average	743	
Median	736	
High	1,397	2009

This information is shown in chart form below in Figure B-20.

**Figure B-20. Low, Average, Median, and High Actual Use Backpacking Days in the Lake Chelan-Sawtooth, 2004-2013**

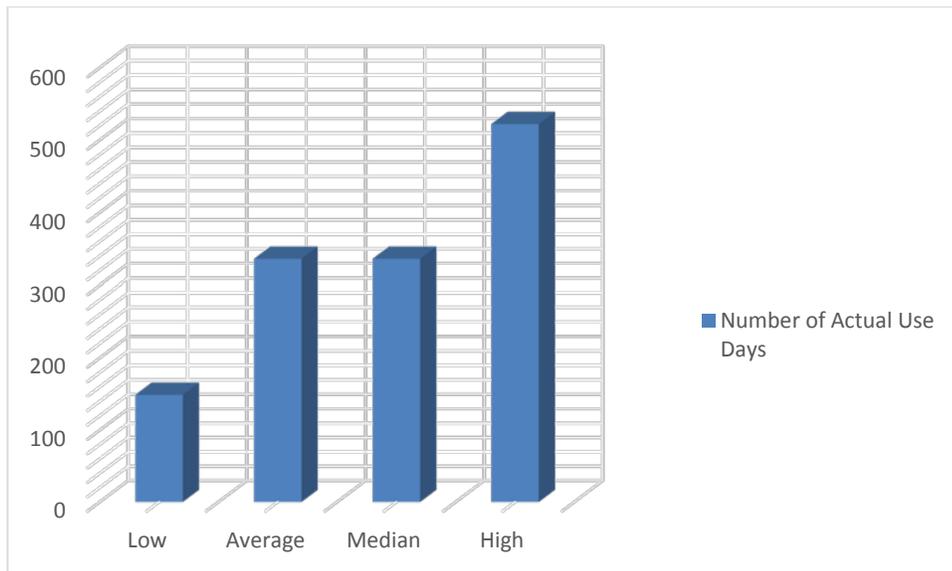


**Figure B-21. Low, Average, Median, and High Actual Use Pack and Saddle Stock Days in Lake Chelan-Sawtooth, 2004-2013**

	Number of Actual Use Days	Year
Low	149	2011
Average	336	
Median	336	
High	522	2003

This information is shown in chart form below in Figure B-22.

**Figure B-22. Low, Average, Median, and High Actual Use Pack and Saddle Stock Days in Lake Chelan-Sawtooth, 2004-2013**



### C. Proportional Relationship Between Outfitted and Non-outfitted Use Levels

Calculating the proportion of outfitter-guide use to non-outfitted use by the general public is based on the current estimate of total visitor days highest past use. The information generated from the 2005 NVUM information (USDA Forest Service, 2012b) is the best available information concerning use levels (see Public Use and Trends section above). Therefore, these estimates are used as the current annual visitor day totals.

The current visitor days are compared to the highest actual use levels for each user group for the Pasayten (Figure B-23) and the Lake Chelan-Sawtooth (Figure B-24).

**Figure B-23. Current Number of Visitor Days by User Group in the Pasayten, and Highest Use 2004 through 2013**

User Group	Total Visitor Days*	Highest Outfitter-Guide Actual Use 2004 - 2013	% of Total Visitor Days
Backpackers	13,090	2,984	23%
Stock Users	5,610	1,316	23%
<b>TOTAL</b>	<b>18,700</b>	<b>4,300</b>	<b>23%</b>

\*Includes Outfitter-Guide Service Days

**Figure B-24. Current Number of Visitor Days by User Group in the Lake Chelan-Sawtooth, and Highest Use 2004 through 2013**

User Group	Total Visitor Days*	Highest Outfitter-Guide Actual Use 2004-2013	% of Total Visitor Days
Backpackers	23,790	1,397	6%
Stock Users	12,810	662	5%
<b>TOTAL</b>	<b>36,600</b>	<b>2,059</b>	<b>6%</b>

\*Includes Outfitter-Guide Service Days

### D. Current Resource Conditions and Impacts on Wilderness Character

The analysis of the impact of existing recreation use (including outfitter-guides) on wilderness character has shown that there are localized impacts to the opportunities for solitude, but these are not interfering with the current upward trend in wilderness character for the Pasayten or Lake Chelan-Sawtooth wildernesses. Refer to the *Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement, 2013* and its DSEIS for the complete analysis. Current conditions meet or exceed the expectations of the vast majority of wilderness visitors (Burns, et al. 2010).

### E. Wilderness Capacity

The existing amount of stock use was determined to be well within the biophysical and social capacity of the wilderness areas. The resource conditions in the Pasayten and Lake Chelan-Sawtooth were thoroughly evaluated during the analysis of a proposal to issue 10-year outfitter-guide permits to the existing stock outfitters. Refer to the *Pack and Saddle Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement, 2013* (USFS, 2013), the corresponding resource reports and the DSEIS for detailed information. Resource specialists found concentrated areas of impact around campsites, but overall wilderness character is not being degraded by the recreation activities because the effects are limited and localized. The use was also determined to be well within the social capacity for both wildernesses, based on the

number of encounters, and opinions expressed during public scoping and while gathering data for the 2009 Wilderness Use Study (Burns, et al. 2010).

The focus of the DSEIS associated with this Needs Assessment was stock use only. The second use described in this Needs Assessment is backpacking, an activity with a different set of impacts on the social and biophysical capacity of the wilderness. Based on outdoor recreation trend analysis, it is likely that demand for backpacking will increase in the coming decade. Should there be an increased interest in outfitter-guide provision of backpacking services beyond the numbers assessed here, additional analysis will need to be conducted.

#### F. Anticipated Changes in Need and Demand

As stated earlier in this document, there will be increasing demand for recreation in the coming years. The technical report *Outdoor Recreation in the Pacific Northwest and Alaska: Trends in Activity Participation* (Hall et al. 2009) and Washington State’s Interagency Committee on Outdoor recreation (Interagency Committee on Outdoor Recreation, 2003) both predict the increase. The Interagency Committee estimates that there will be a 13% increase in the number of people hiking and backpacking, and a 3% increase in the number of people riding horses in the year 2022 (Interagency Committee on Outdoor Recreation, 2003). These projections are used to estimate the demand for recreation in the Pasayten and Lake Chelan-Sawtooth in 2027.

**Figure B-25. Current Number of Visitor days by User Group in the Pasayten, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in 2027
Backpackers	13,090	13%	14,792
Stock Users	5,610	3%	5,778
<b>TOTAL</b>	<b>18,700</b>		<b>20,570</b>

\*Includes current outfitter-guide service days

**Figure B-26. Current Number of Visitor days by User Group in the Lake Chelan-Sawtooth, Estimated Increase, and Future Number of Visitor Days.**

User Group	Current Visitor Days*	Estimated Future Increase	Estimated Number of Visitor Days in 2027
Backpackers	23,790	13%	26,883
Stock Users	12,810	3%	13,194
<b>TOTAL</b>	<b>36,600</b>		<b>40,077</b>

\*Includes current outfitter-guide service days

#### G. Extent Necessary Calculation

The extent necessary is displayed below for both the Pasayten and Lake Chelan-Sawtooth, by the two major categories of transportation, hiking (includes hiking and backpacking) and using stock. The official allocation of service days to outfitter-guides (using the extent necessary service days established in this document) must be made in a NEPA decision document. The decision must be based on the site-specific analysis of effects to wilderness character and other resources.

The extent necessary was determined following these steps:

1. Identify the highest actual use from 10 years of use from 2004-2013. The individual year with the highest use when all outfitters use is combined is used.
2. Determine the potential maximum percentage of use of outfitter-guide services by dividing the current total recreation visitor days by the highest actual use.
3. Determine the approximate demand for total recreation days expected in 2027 based on the Washington State Interagency Committee on Outdoor Recreation projections of increase in recreation use.
4. Multiply the percent highest use from step 2 times the future demand for visitor days to determine Allocated Priority Use days.
5. Determine the Priority Use Pool for pack and saddle stock outfitter guides by calculating the highest actual use of each outfitter-guide for 10 years of use (2004-2013) and subtracting that from the Allocated Priority Use days. The remainder is the pool.
6. Add an Allocated Priority Use Days to the Pool to determine the extent necessary.
7. Evaluate potential impact to wilderness character.

**Figure B-27. Calculations to Determine Outfitter-Guide Allocated Priority Use Days for Pasayten Wilderness**

Activity	A Current Total Use (OG and private)	B Highest Actual Use in Past ~10 Years (OG only)	C % of OG Use of Total Use (B/A)	D Future Total Demand (From Figure B-25)	E Priority Use Days Allocated for OGs (CxD)
Backpacking	13,090	2,984	23%	14,792	3,402.16, rounded to <b>3,400</b>
Stock	5,610	1,316	23%	5,778	1,328.94, rounded to <b>1,330</b>

**Figure B-28. Calculations to Determine Allocated Outfitter-Guide Priority Use Days for Lake Chelan-Sawtooth Wilderness**

Activity	A Current Total Use (OG and private)	B Highest Actual Use in Past ~10 Years (OG only)	C % of OG Use of Total Use (A/B)	D Future Total Demand (From Figure B-26)	E Priority Use Days Allocated for OG (CxD)
Backpacking	23,810	1,397	6%	26,883	1,612.98 rounded to <b>1,615</b>
Stock	12,820	508	4%	13,194	527.76, rounded to 530

Outfitter-guide special use permits are either “priority” or “temporary.” Priority special use permits are issued for recurring activities, and typically have multi-year terms (such as 5 or 10 years). These permits are structured such that a certain number of service days is allotted to each permit as priority use days – days guaranteed annually to the permit holder. These days cannot be transferred between the permits once the permits are issued. Service day allocations in 10-year permits are adjusted at the 5-year mark to reflect actual use to distribute priority use days based on actual use.

Forest Service Handbook direction allows for the creation of pools of service days. Priority use pool days can be assigned on an as-needed basis to allow outfitters with priority use permits extra days if bookings exceed assigned priority use days. These days return to the priority use pool at the end of each season, making them available to outfitters with priority use permits who need them in subsequent seasons.

Temporary use is defined as non-recurring use. Days in a temporary use pool are available for outfitters wanting to guide a one-time trip, or a series of non-recurring trips within the same season. These days are returned to the temporary use pool at the end of each season, and distributed the following year based on applications for use. Days can be shifted between the priority and temporary use pools depending on demand. Although, no temporary use days are included for stock outfitter guides in the Lake Chelan-Sawtooth or Pasayten Wildernesses to ensure that wilderness resources are protected, some may be used for backpacking outfitter guides.

Pools are useful in managing commercial activities in wilderness because they help ensure that an adequate number of service days are available during years when the need is high, without inflating the number of priority use days assigned to individual outfitter-guides. By assigning a conservative number of priority use service days to outfitter-guides, the Forest Service can keep the number of guaranteed service days to a minimum, and still be able to assign days from a priority or temporary use pool on an as-needed basis to cover the peaks in need, in both priority and temporary special use permits

The Forest Service does not expect the overall need for service days to exceed the allocated priority use days disclosed in Tables 27 and 28 above; however it is reasonable to establish a pool that is equal to the highest single year of use for each outfitter guide individually over the 10 year period (2004-2013) to determine the extent necessary for a variety of reasons. Priority use days are not shared by outfitters, so the priority use pool provides flexibility to meet public need and choice within the constraints of the extent necessary. For example, it is common that area closures due to wildfires and other natural events force outfitters to adjust trips to different locations both within and outside wilderness, such as in 2003 and 2005 when pool days were assigned in the Lake Chelan-Sawtooth Wilderness to compensate when Pasayten priority use outfitters were unable to provide services in the Pasayten because of wildfire closures. The proposed service day pools will help respond to fluctuations in public need and provide flexibility for stock outfitters to meet that need while working within the confines of the extent necessary calculations.

The following tables recommend the number of priority use days to be assigned to priority use permit holders, the number to be placed in the priority use pool, and the number to be placed in the temporary use pool. These recommendations can be adjusted to respond to changing conditions, but not exceeding the extent necessary calculations.

**Figure B-29. Allocated Priority Use and Pool Days for the Extent Necessary, and Recommended Distribution of Service Days Between Priority and Temporary Use By Activity in the Pasayten**

Outfitter-Guide Activity	Service Days Allocated as Priority Use Days	Service Days in Pool (priority-use days x 20%)	Total Service Days (Allocated + Pool)	Recommended Service Days in Priority Use Pool	Recommended Service Days in Temporary Use Pool
Backpacking	3,100	300	3,400	200	100
Stock	1,330	310	1,640	310	0*

\* Tight administration of stock outfitter-guide permits is needed to minimize resource damage, so it is recommended that no service days be placed in a temporary use pool for this activity.

**Figure B-30. Allocated Priority Use and Pool Days for the Extent Necessary, and Recommended Distribution of Service Days Between Priority and Temporary Use By Activity in the Lake Chelan-Sawtooth**

Outfitter-Guide Activity	Service Days Allocated as Priority Use Days	Service Days in Pool (priority use days x 20%)	Total Service Days (Allocated + Pool)	Recommended Service Days in Priority Use Pool	Recommended Service Days in Temporary Use Pool
Backpacking	1,315	300	1,615	200	100
Stock	530	207	737	207	0*

\* Tight administration of stock outfitter-guide permits is needed to minimize resource damage, so it is recommended that no service days be placed in a temporary use pool for this activity.

## 6. CONCLUSIONS

Based on the determination that outfitter-guide services are necessary in the Pasayten and Lake Chelan-Sawtooth Wildernesses, and the analysis of extent necessary by type of service provision, the recommended distribution of service days described here (Figures B-27 and B-28) reflect the best professional judgement of the preparers, based on available data and a clear, structured process of evaluation. The amount of necessary outfitting and guiding must be limited to a level that preserves wilderness character, and is subject to evaluation through the appropriate NEPA process. A draft Supplemental Environmental Impact Statement has been prepared to reflect these service days, the pools and their effects (USDA 2016a).

### Desired Condition and Management Objectives of the Area Found in the Forest Plans

The desired future condition and management objectives for the Pasayten and Lake Chelan-Sawtooth wilderness areas are included in the Okanogan and Wenatchee Forest Plans (USDA, 1989b, and USDA, 1990). The desired conditions are areas with unmodified or predominately unmodified primitive environments. The standards and guidelines ensure a non-degradation approach to wilderness management and activities by controlling activities that could impact the untrammled, undeveloped, and natural qualities of wilderness, and the opportunities for solitude or primitive and unconfined recreation.

In some areas, as described in the Pack and Saddle Stock Outfitter-Guide FEIS (USFS, 2013), some current Forest Plan standards are not being met. This issue is addressed through a Forest Plan amendment that increases the amount of barren core acceptable in campsites used by outfitter-guides and allows them to use existing campsites within 200 feet of lakes, streams, and meadows. The overall wilderness character of the area will not be negatively impacted as a result of this amendment.

## **Defined Analysis Areas and the Existing Conditions**

The overall condition of both the Pasayten and Lake Chelan-Sawtooth has been on an upward trend since the time of designation (1964 and 1984 for the Pasayten, 1984 for the Lake Chelan-Sawtooth) (Kovalchik 2003, Campsite monitoring 1989-2015). The elimination of commercial livestock grazing and establishment of forest plan standards and guidelines (including but not limited to party-size limitations) have improved wilderness character by reducing existing or potential impacts to the untrammelled, natural, and undeveloped qualities, and improving opportunities for solitude by reducing impacts to existing campsites. The current amount of recreation use (including the outfitter-guide use included in this document) is having localized, limited adverse impacts to the opportunities to solitude, but when considered cumulatively with other actions, wilderness character is improving across the areas. The following analysis areas have been identified as areas where use levels are higher or resource conditions are more fragile. Restrictions on outfitter-guide activities and close monitoring is needed to ensure that wilderness character is not adversely impacted:

### Pasayten Wilderness

*Lakes in the vicinity of Harts Pass and the Pacific Crest Trail*

*Hidden Lakes*

*Crow and Corral Lakes/Sheep Mountain Area*

*Spanish Camp*

*Black Lake*

### Lake Chelan-Sawtooth Wilderness

*Oval Lakes*

*North Lake and Surrounding Area*

*Twisp Pass*

*Louis Lake*

*Williams Lake*

*Libby Lake*

*Star Lake*

*Tuckaway Lake*

*Bernice Lake*

*Surprise Lake*

## **Potential Effects to Wilderness Character**

The effects of stock outfitter-guide use on wilderness character is included in the *Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement, 2013*<sup>13</sup>. The analysis considered impacts to the four qualities of wilderness character: untrammelled, undeveloped, natural, and opportunities for solitude or primitive and unconfined recreation. The impacts were evaluated in terms of context, duration and intensity. The effects from the existing long-term backpacking and wilderness skills outfitter are included in the 2009 Decision Memo for that issuance. Additional analysis will be completed prior to issuing other backpacking permits in the future.

The analyses for the stock outfitter-guides found that existing recreation use, including the extent necessary amount of outfitter-guide service days included in this Needs Assessment, will have limited,

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<sup>13</sup> The Stock Outfitter-Guide Special Use Permit Issuance Final Environmental Impact Statement, 2013, is incorporated by reference.

localized effects in and around established campsites because of other campsites within view and encounters with others. The impacts will not significantly affect opportunities for solitude. The impacts will be long-term since campsites will be perpetuated by continued use. Recreation use (outfitted and non-outfitted) will not directly or indirectly affect the untrammeled or undeveloped qualities of the wilderness character since the use will not interfere with wilderness ecosystems, or lead to additional developments in wilderness. The natural quality is being impacted where stock are allowed to graze, but these impacts are localized and have very little to no impact on the plant communities or wetland ecosystems. The stock are also having localized, limited impacts to stream banks and soil where they water and congregate, but these effects are having little to no impact on aquatic or riparian habitat, or water quality due to the small size and frequency of impact.

Opportunities for solitude or primitive and unconfined recreation will be provided to those who do not have the skill or knowledge to experience wilderness appropriate recreation without the services of an outfitter-guide. On the other hand, opportunities for solitude will be reduced as the overall number of people recreating in the wilderness increases over time. While outfitter-guide parties may affect solitude, their use will be capped at the level specified in this document. The duration of the impacts (beneficial and adverse) to opportunities for solitude from outfitter-guides would equal the duration of permitted activity. If outfitter-guides activities cease, solitude impacts will be immediately eliminated.

## **7. MONITORING PLAN**

Ongoing monitoring is essential to ensure the wilderness areas (and their wilderness character) remain on a stable or upward condition trend. Outfitter-guide activities will be modified or controlled if impacts to wilderness character become unacceptable. Specific areas that will be closely monitored include lakes in the vicinity of Harts Pass and the Pacific Crest Trail, Hidden Lakes, Crow and Corral Lakes/Sheep Mountain area, Spanish Camp, and Black Lake in the Pasayten Wilderness, and Oval, North, Louis, Williams, Libby, Star, Tuckaway, Bernice, and Surprise Lakes and Twisp Pass in the Lake Chelan-Sawtooth Wilderness.

### Campsite Monitoring

The number of wilderness campsites used by outfitter-guides inventoried and monitored annually will vary with the budget and workforce, but the assigned sites will be monitored at least once per year of use, and a representative sample of non-assigned sites will be monitored frequently enough to assess the outfitter's compliance with the terms and conditions of the permits. Biophysical conditions at sites will be measured using indicators such as barren core, number of trees with exposed roots, number of mutilated trees and number of access trails. Water sources and water bodies near campsites will be checked for evidence of soap, other chemicals, food and biological contaminants that may be introduced by human activity. Additional physical and social related indicators will be recorded. Pack and saddle stock outfitter-guide use of campsites will be adjusted if necessary to address new resource concerns.

### Encounter Monitoring

Wilderness rangers will record encounter data on a daily basis while in the field; this includes time, location, number of people, number of stock, number of parties, type of use, and wilderness permits (where applicable). If encounters begin to exceed the Forest Plan standard and guidelines, adjustments may be made in pack and saddle stock outfitter-guide activities to reduce encounters. Potential adjustments could include limiting the number or size of outfitted parties in crowded areas.

# APPENDIX C

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*The following updates Appendix C, found on FEIS page Appendix C-1, to show how the barren core calculation for a party of 12 people and 18 head of stock, was rounded to 5,250 square feet.*

## CAMPSITE BARREN CORE CALCULATIONS

The amount of barren core that would be perpetuated by different party sizes was calculated by estimating the amount of heavily used area within a typical pack and saddle stock camp.

A typical camp has a fire pit area, wall tent used as a kitchen, highline, saddle area, and sleeping tents.

### For a party-size of 12 people and 18 head of stock

Fire Pit Area, 20 feet x 20 feet	400 square feet
Wall Tent, 20 feet x 40 feet	800 square feet
Saddle Area, 20 feet x 30 feet	600 square feet
Sleeping tents, 4, 56 square foot tents	224 square feet
Highline:	
8 feet between animal, 18 animals; $8 \times 18 = 144$	
8 feet between tree and first animal: $8 + 8 = 16$	
$144 + 16 = 160$ feet long x 20 feet wide	3,200 square feet
Total	5,224, rounded to <del>5,225</del> <b>5,250</b> sq. ft.

### For a party-size of 12 (total of people and animals)

A group consisting of 5 people and 7 head of stock was used for these calculations

Fire Pit Area, 10 feet x 20 feet	200 square feet
Wall Tent, 20 feet x 40 feet	800 square feet
Saddle Area, 20 feet x 15 feet	300 square feet
Sleeping Tents, 2, 56-square foot tents	112 square feet
Highline:	
8 feet between animal, 7 animals: $8 \times 7 = 56$	
8 feet between tree and first animal; $8 + 8 = 16$	
$56 + 16 = 72$ feet long x 20 feet wide	1,440 square feet
Total	2,852, rounded to 2,800 sq.ft.

## APPENDIX E

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*The following updates Appendix E, found on FEIS page E-2, deleting Deli Llama outfitters, which is no longer operating.*

### CURRENT OUTFITTER-GUIDES

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#### ~~Deli Llama Wilderness Adventure~~

~~Deli Llama has been operating since 1993. The current permit is for 151 service days the Pasayten Wilderness and North Cascade areas. Campsites most consistently used in the past five years include:~~

- ~~● Billygoat Pass, Larch Pass, Larch Creek Area, Pasayten Wilderness~~
- ~~● Snowy Lakes Camp, South Crest Area~~

~~This company has no assigned sites or base camps.~~

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