

**Appendix E
Response to Comments
Ice Caves EA**

[Note: Page numbers reference the September 2007 EA and may be slightly different than the preliminary EA that was released in February 2007 for a 30-day comment period.]

USFWS	Ken Berg	US Fish & Wildlife Service Western Washington Fish and Wildlife Office 510 Desmond Dr. SE, Suite 102 Lacey, WA 98503
FWS1	If Alternative A is selected, recommend that provisions from Alternative B be adopted to exclude all grazing from Petersen Prairie meadows and eliminate holding area for cattle. Continued use as holding area would result in adverse effects to Mardon skipper population.	
	The potential effects to the Mardon skipper from the continued use of Peterson Prairie are discussed on pages 97 and 98 of the EA. The EA states that enforcing the utilization standard in Peterson Prairie would improve habitat conditions for Mardon skipper (EA, 97). The EA also states that since the utilization would be reduced from historic levels and vegetation condition should improve, the risk of extirpation at Peterson Prairie is most likely low (page 98). The wildlife biologist determined that the Mardon skipper may be able to persist in meadow areas (such as Petersen Prairie) where there is a 30 percent utilization standard. The greater impact may occur in transitional range where a 40 percent utilization pattern exists. Only a small portion of the Mardon skipper population is found in transitional range areas and therefore implementing this alternative, <i>would impact individuals, but would not contribute to a trend towards federal listing, and is not likely to jeopardize the continued existence of the species</i> (EA, 98).	
FWS2	If Alternative B is selected, recommend that provisions from Alternative A be adopted to exclude grazing in Lost Meadow. The apparent low numbers of Mardon skippers (EA, p. 85) may be a result of over utilization. As a natural meadow, this habitat is important to Mardon skippers because it is likely to persist as suitable habitat longer than transitional range.	
	The potential effects to Mardon skipper resulting from the continued use of Lost Meadow are described in the EA on pages 97-100. The EA states that enforcing a 30-percent utilization standard in the natural meadows would be a significant improvement over the current condition (EA, 99) and it is expected that the Mardon skipper could be maintained in the allotment in the long-term. The option of excluding grazing from Lost Meadow is included in the Adaptive Management Monitoring Plan accompanying the decision (Appendix F). Mardon skipper populations will be monitored and if long-term population trends on the grazed areas show a decline compared with protected areas even though the utilization standards have been met, the unprotected sites (i.e. Lost Meadow) could be fenced, or cattle use reduced or eliminated.	
FWS3	Although Mardon skippers have not been extirpated from the grazed meadow habitats within the allotment, the populations are small and apparently isolated from each other and at risk from stochastic events (fire, etc.) Considering their candidate status, removal of grazing may preclude the need for listing the species.	
	The effects to the Mardon skipper are discussed on pages 97-100 of the EA. The Forest Service wildlife biologist determined that implementing the alternatives as described would not contribute to a trend towards federal listing of the species because of the number of known sites in the southern Washington Cascades. The potential loss of Mardon skippers within the transitional range in the Ice Caves Allotment would represent a loss of an insignificant portion of the known Mardon skipper population in the Washington Cascades (EA, 98, 99).	

DFW	Tim Rymer	Washington State Department of Fish & Wildlife 2108 SE Grand Blvd. Vancouver, WA 98661
DFW1	Conservation measures for M. skipper should include protection of existing sites and restoration of degraded habitat. The 6 sites are not comparable. Those proposed for fencing under Alternatives A and B are old harvest units and not comparable to high quality meadow habitat (Lost Meadow) or grassy openings (Peterson Prairie meadows) which appear to support the largest populations. These sites would not receive adequate protection under Alternatives A or B.	
	The enclosure at Cave Creek, which supports the largest population of Mardon skippers in the allotment, would be expanded with either of the action alternatives (EA, 97-99). It is likely that the natural grass meadows have served as source sites for population expansion in the allotment, and, as disclosed in the EA on pages 98 and 99, the enforcement of the 30-percent utilization standard is expected to improve habitat at the unfenced sites and at Peterson Prairie.	
DFW2	Based on forage estimates in the EA, DFW believes that the permitted 511 AUMs would be inadequate to meet needs for big game populations. Forage quality and quantity vary during the year. Deer and elk consume more during the summer (at the same time as cattle), when high quality forage is available. Demand on riparian and wet meadow habitats would be high during this period. Removing cattle one month earlier would ensure that big game have sufficient forage to gain weight for the winter. Without these measures, deer and elk in the allotment will continue to decline over time.	
	<p>The estimated total forage available for cattle is equivalent to 511 AUMs (EA, 33; Appendix A). This is the estimated capacity based on all acres capable of producing forage (14,142 acres). However, not all of those acres are considered suitable for grazing. A suitability determination was completed on the allotment (by alternative) to estimate the amount of AUMs that could be utilized sustainably (EA, 36; Appendix A). This determination concluded that the amount of AUMs available was reduced to 323 for Alternative A and 308 for Alternative B.</p> <p>As stated in the EA, cattle would be excluded from about 450 acres of meadows in Alternative A, and this may allow elk to make use of the forage in the large enclosures (EA, 103). In Alternative B, important grazing areas for elk would be excluded from cattle grazing behind a drift fence (EA, 104). In addition, the EA states that enforcing the utilization standard on the rest of the allotment would reserve more forage for deer and elk in primary range area for increase use by elk in late summer (EA, 103, 104). Enforcing the utilization standards would require that cattle be moved when the 30% or 40% level is reached regardless of whether cattle or wild ungulates grazed the area. This would result in more forage remaining in the allotment after cattle are removed that what has occurred previously. It is possible that elk and deer numbers would decline in the allotment because of the reduction in timber harvest, but the amount of forage lost to cattle grazing would be reduced with Alternatives A and B.</p>	
EPA	Christine B. Reichgott	Environmental Protection Agency Region 10 1200 Sixth Ave. Seattle, WA 98101
EPA1	It is unclear (1) how the grazing livestock would be contained within the allotment under Alternatives A or B, and (2) how livestock would be effectively prevented from entering sensitive areas by the drift fence proposed in Alternative B. Costs of fencing and maintaining fencing for the entire allotment should be disclosed. If fencing the allotment is impractical, recommend selecting Alternative C (similar to GPTF2).	

	Currently, the perimeter of the 31,966 acre grazing allotment is not fenced. Occasionally, cattle will stray outside the boundary until the permittee, public, or Forest Service discovers their presence and the permittee transports them back into the allotment. Overall the herd stays within the boundary, where they are acclimated to known water and feed sources year after year. The proposed drift fence within Alternative B is designed to tie into the lava beds on the westside of the allotment and tie into steep ground on the east side of the allotment, requiring less fencing maintenance in the long term. These tie-off points are not cattle friendly and are designed to prevent further access to areas that are restricted from cattle grazing. The costs of the fences are disclosed on page 44 and 45 of the EA. Once the fences are implemented, the permittee is responsible for all maintenance (EA, 44, 45).
EPA2	Impacts to rosy owl clover could be avoided by relocating the road during roundup that accesses the holding pen and Peterson Prairie.
	The wheel track that passes through the rosy owl clover occurrence at Peterson Prairie is used by both Forest Service personnel (when accessing the spring that provides water to Peterson Prairie Campground) and by the allotment permittee, to access the cattle holding pen, during round up. Impacts to the rosy owl clover population are disclosed on pages 120, and 121 of the EA.
EPA3	Unclear in the EA whether South Prairie bog would be protected in Alternative A.
	South Prairie bog would be protected by an enclosure fence proposed in Alternative A.
EPA4	Unclear whether the forage calculations provide for the forage needs of deer and elk. Since forage within enclosures may not be accessible to some deer and elk, recommend that not all available forage outside of the enclosures/drift fence be allocated to livestock grazing.
	The needs of forage for deer and elk are addressed with the utilization standards. When the 30% or 40% utilization level is met the cattle would need to be moved. This is regardless of whether cattle or wild ungulates ate the forage (see response to DFW2). Effects to deer and elk are addressed on pages 103-105.
EPA5	Recommend that adaptive management be included in both Alternatives A and B and include provision to remove livestock earlier, if necessary to provide adequate forage for deer and elk.
	Utilization monitoring during the grazing season will dictate when livestock would have to be moved based on the 30% and 40% utilization standards. Both Alternative A and B require the livestock to be removed from the allotment once utilization standards have been met.
EPA6	Recommend that monitoring include all Sensitive species, species of concern and their habitats.

	<p>According to FSM 2672.4, the Forest Service is required to review all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed or sensitive species. In the process of analyzing effects, the impacts of activities on species' individuals, as well as habitat, are evaluated. The biological evaluation is the means of conducting the review and of documenting the findings. The process for conducting a biological evaluation was followed and the results documented within the Existing Condition and Environmental Consequences sections of the botanical and wildlife input to the EA (EA, 79-106 and 106-123). The designation of 'species of concern' is a status designation under the U.S. Endangered Species Act (ESA). It is an unofficial status, indicating that the species appears to be in jeopardy, but there is insufficient information to support listing. Within the analytical process described above, the Forest Service sensitive species designation accounts for species with the designation of 'species of concern' under ESA.</p> <p>The decision to conduct monitoring of specific species and habitats is based on species rank (global and state), rarity at the Forest level, and risks to the species. The level and amount of monitoring conducted is based on funding levels, which are variable from year to year. A monitoring plan was completed (Appendix F) to accompany the decision and include site-specific monitoring protocol, including indicators for sensitive species. Monitoring the vegetation response to the new utilization standards under the action alternatives would indicate the trend of habitat condition for Sensitive wildlife species in the allotment. Increased cover and vigor of vegetation in riparian areas and in the grass meadows would improve habitat for the Sensitive species that may be found in the allotment and that could be impacted by livestock grazing.</p>	
EPA7	<p>Because of the documented use by tribes, recommend there be more effort to engage the tribes in government-to-government consultation prior to making the decision.</p>	
	<p>Both the Cowlitz Indian Tribe and the Confederated Tribes and Bands of the Yakama Nation were contacted during scoping and during the 30-day comment period. No comments from either of the confederated tribes were received. In addition, a representative (Lee Carlson) from the Yakama Nation Department of Natural Resources and Forest Service liaison serves on the Southwest Washington Province Advisory Committee (PAC). Lee attended the Forest Service, Forest Plan Monitoring field trip on September 29, 2004 which was a review of activities on the Ice Caves Allotment. He also attended the November 9, 2006 PAC meeting in which Forest Service staff gave a slide presentation and update on Ice Caves Allotment planning and proposed alternatives. Also, the Forest Service has a Memorandum of Understanding (MOU) with the Yakama Nation for cooperative management of treaty resources. The MOU includes coordination on grazing activities. Representatives from the Forest Service and Yakama Nation meet annually to discuss on-going activities and necessary management improvements. At the February 15, 2007 MOU coordination meeting, District Ranger Nancy Ryke discussed the status of the Ice Caves Allotment NEPA effort.</p>	
Fr	Dan & Joan Frey	Permittee via fax
Fr1	<p>30% utilization in transitional range is unreasonable. If DFC is for forage, then re-growth of trees should be discouraged. If DFC is for trees, grasses should be discouraged.</p>	
	<p>The utilization standard for transitory range is proposed at 40% in both alternatives A and B. Due to the current, season-long grazing period, this threshold is designed to protect the plants and allow them to overwinter without causing permanent physiological or compositional changes in vegetation. The desired condition for the allotment is to provide for some level of livestock use while preventing unacceptable damage to other resource values from commercial livestock grazing (EA, 4).</p>	
Fr2	<p>Streambank erosion by cattle is misrepresented by photos in the EA.</p>	

	<p>The narrative in the EA on page 68, which refers to photos on pages 67 and 68, states that the Lost Creek drainage has flood flows estimated to be greater than 10% above natural conditions, has a high road density, is heavily harvested, and is an easily erodable “C” channel type. The EA states that constant summer grazing is one more factor which exacerbates the erosion problems in Lost Creek. It is not meant to imply that all erosion is attributed to cattle. The photos help to illustrate the type of cattle bank trampling occurring. On page 69 of the EA, the narrative which refers to the photo on page 70, describes the amount of down-cutting and degradation. The EA explains that grazing has “contributed to reduced plant cover and root stability along the stream margins likely resulting in an increased level of sediment input and may have contributed to changes in stream morphology.” The photo helps to illustrate the vulnerable condition of the stream in that area. Page 66 describes a “C” channel type and states that “the unstable streamside conditions in the allotment streams are not likely created by livestock grazing, but grazing is a contributing factor to the channel conditions.”</p>
Fr3	<p>Capacity/suitability analysis: cattle utilize forage on >40% slopes or in >60% canopy closure.</p>
	<p>The capacity analysis does not account for forage on slopes greater than 45 percent (considered too steep for cattle) and the suitability analysis does not account for forage in stands with a canopy cover greater than 60 percent (the understory vegetation is mostly shaded out and sparse. Requirements to perform analysis of rangeland suitability are found in NFMA at 16 U.S.C. 1604(g)(2)(A) and at 36 CFR 219.20 (Appendix A). There is no corresponding manual or handbook direction, however the Rocky Mountain Region 2 Desk Guide was used to as an example to conduct this analysis for the Ice Caves Grazing Allotment. The capacity/suitability analysis that was conducted for this allotment is consistent with national practices.</p>
Fr4	<p>Private and State lands within/near the allotment are not considered as additional forage and represent as much as 70 AUMs.</p>
	<p>It is true that currently the permittee also has grazing leases/agreements on State and private land on approximately 4,000 acres. This is disclosed in the EA (EA, 31). The Forest Service can only authorize grazing on National Forest Systems lands; however, and so the forage capacity analysis numbers were based on National Forest System lands only for a 3.5 month summer period. The cumulative effects of grazing on private and state land were analyzed in the EA on pages 43-45.</p>
Fr5	<p>Exclosure at Cave Creek resulted in the loss of SISA inside the fenced area. Based on this observation, removing cattle would have a significant effect on this species.</p>
	<p>The exclosure at Cave Creek has not resulted in the loss of SISA inside the fenced area (see Cave Creek Exclosure Data, June 1995-1997). The EA discloses the effects to SISA from livestock grazing on pages 113-119. Direct impacts of livestock grazing on pale blue-eyed grass include mortality by uprooting, leaf, flower and fruit herbivory, and trampling (EA, 114, 115). In 2003, a field study conducted from 1996-2000 concluded that pale blue-eyed grass plants inside the exclosure at Cave Creek were 72 percent taller than unfenced plants with no herbivory (EA, 115, 116).</p>
Fr6	<p>FS should have prepared an EIS based on the potential impacts from removing grazing (on the balance between species and grazing, refer to Fr5).</p>
	<p>A Finding of No Significant Impact (FONSI), which evaluates the significance of the project’s direct, indirect, and cumulative impacts, was completed for this project and is part of the Decision Notice. The Mt. Adams District Ranger made a finding that the project would not have significant impacts to unique characteristics or pose unknown risks (DN, 8-10).</p>
Fr7	<p>True cause of sedimentation in South Prairie is a result of road decommissioning practices in the Lost Creek drainage (and in general).</p>

	<p>The EA on page 57 refers to the amount of silt/sediment in South Prairie. Lost Creek disperses into several channels adjacent to South Prairie, some of which terminate in South Prairie creating a pond and depositing the sediment load the water is carrying during those high flows into the Prairie. This flooding and sediment deposition helps in keeping South Prairie an open meadow by preventing tree establishment. Throughout the Aquatics section in the EA references to the highly sensitive stream banks which are easily destabilized (EA, 59), and the elevated peak flows in the drainage, among other factors, help to create high levels of bank erosion.</p> <p>The EA does not attribute all of the existing sedimentation to livestock grazing. The EA discloses that roads and stream crossings by roads are often a major contributor to sediment; and that stream bank erosion is being accelerated by livestock grazing (EA, 62). Specifically, the EA states that several factors contribute to the unstable conditions causing sedimentation; however, the actual amount of sediment introduction into streams created solely by cattle grazing or any other sources (i.e. roads) above baseline conditions is difficult to measure and has not been determined (EA, 68).</p> <p>Road decommissioning in the Lost Creek drainage has not been identified as a contributor. Road decommissioning decreases sediment contributions to streams once vegetation becomes established along the road prism. Road decommissioning reduces the effective drainage density of a subwatershed by eliminating portions of the roadside ditch network. The ripping and re-vegetation of the road surface and installation of water bars limits concentration of water on the ground surface. Ripping of the road surface allows infiltration of precipitation and snowmelt on the former road surface. These measures will help in reducing the amount of sediment currently being transported to stream channels. Culvert removal during road decommissioning may add short term sediment into stream channels, but is known to decrease sediment input over the long-term. The decommissioned road 6030080 at the headwaters of Lost Creek is a very small contributor to the large sediment load Lost Creek carries during high flows.</p>	
Fr8	<p>Adaptive management impractical for cattle. Moving cattle causes impacts to cattle that have not been addressed in the EA. Moving cattle to transitional range to maintain 30% may not be necessary.</p>	
	<p>The adaptive management strategy may cause cattle to be moved more often, but should not create impacts to the animals during the grazing season above or beyond the normally required movement that is needed to currently comply with utilization levels. Moving cattle to transitional range may be critical to maintaining 30% utilization within the riparian areas. Under adaptive management, monitoring will occur over time with evaluation of the results then being used by the Forest Service Natural Resource and Range Staff and the Mt. Adams District Ranger to make adjustments to management as needed to ensure adequate progress toward the defined objectives. If it is determined that 30% utilization is not deemed necessary, it can be adjusted, as appropriate. Any adaptive management adjustments would be within the scope of effects documented in the Ice Caves EA.</p>	
CNW	<p>Angel Drobnica</p>	<p>Conservation Northwest 1208 Bay St. #201 Bellingham, WA 98225</p>
CNW1	<p>(refer to GPTF15)</p>	
CNW2	<p>Given WA status report for Mardon skipper, potential for extirpation would be more significant than implied in the EA.</p>	

	<p>The potential effects to the Mardon skipper are discussed on pages 97-100 of the EA. The allotment contains 6 of the known 37 sites on the Forest (as of 2007), which was estimated to be 10 to 15 percent of the known population in the western Cascades. Each of the alternatives would protect some of the sites in the allotment with fencing, and the unfenced sites would be protected with strict utilization standards. The EA states that enforcing a 30-percent utilization standard in the natural meadows would be a significant improvement over the current condition (EA, 97-99) and it is expected that the Mardon skipper could be maintained in the allotment in the long-term. The EA also states that since the utilization would be reduced from historic levels and vegetation condition should improve, the risk of extirpation is most likely low (EA, 98, 99).</p>	
CNW3	(refer to Ha)	
GPTF/CNW	<p>Ryan Hunter Derek Churchill</p>	<p>Gifford Pinchot Task Force 917 SW Oak St., Suite 410 Portland, OR 97205</p>
GPTF1	<p>Could adversely impact unique characteristics, pose unknown risks, etc. and therefore an EIS is required.</p>	
	<p>A Finding of No Significant Impact (FONSI), which evaluates the significance of the project's direct, indirect, and cumulative impacts, was completed for this project and is part of the Decision Notice. The Mt. Adams District Ranger made a finding that the project would not have significant impacts to unique characteristics or pose unknown risks (DN, 8-10).</p>	
GPTF2	<p>The EA does not assess the effects of grazing occurring outside of the allotment (Goose Lake, meadows, and vicinity of Forlorn Lakes) or propose mitigation. Recommend fencing the allotment perimeter.</p>	
	<p>Currently, the perimeter of the 31,966 acre grazing allotment is not fenced. However, this decision does not authorize grazing outside of the allotment. Occasionally, cattle will stray outside the boundary until the permittee, public, or Forest Service discovers their presence and the permittee transports them back into the allotment. Overall the herd stays within the boundary, where they are acclimated to known water and feed sources year after year. Effects from cattle outside of the allotment are discussed on pages 82 and 97 with respects to bald eagles. No other effects were expected in these areas outside of the allotment.</p>	
GPTF3	<p>No assessment of whether the grazing alternatives meet ACS objectives. Believe that the analysis indicates that riparian objectives could not be met (Alternative A). 30% utilization would not meet ACS objectives (see GPTF4).</p>	
	<p>A complete discussion of ACS objectives was developed and added to the EA (Appendix D). ACS objectives were met in both alternatives, including the proposed 30% utilization in riparian areas.</p>	
GPTF4	<p>No determination of how quickly 30% utilization would occur and how frequently these levels should be checked. How will over-utilization be prevented?</p>	
	<p>The Ice Caves Allotment will be monitored by a Forest Service employee qualified in grazing permit administration. Monitoring of the utilization standards are done throughout the grazing season with the general administration of the grazing permit. Usually, monitoring begins to become more frequent toward August and September, when past history has shown that utilization of the primary range nears 30 percent in certain areas. Documentation of allotment inspections are completed as soon as possible and the permittee is notified of the results and of any items needing attention. If utilization monitoring results show a portion of the primary range approaching the 30 percent threshold, the permittee is given advanced notice to closely monitor the utilization and area. At that point it will be determined if cattle need to be distributed in other areas of the allotment (through salting, herding, or movement to the transitory range), or removed from the allotment (see Adaptive Management Monitoring Plan, Appendix F).</p>	

GPTF5	Lost Creek diversion results in water temperatures that exceed State standards and therefore a finding of compliance with the Clean Water Act and LRMP cannot be made.
	The water temperature will be monitored in the summer. Each summer that the temperatures in the ditch reach the state standard (16°), the diversion to the ditch is shut off. This has been necessary in previous summers and been successful in lowering water temperature in Lost Creek (EA, 62). Compliance with the LRMP (Forest Plan) is disclosed on page 9 and 10 of the Decision Notice. Compliance with the Clean Water Act in the Decision Notice on page 10. An Adaptive Management Monitoring Plan was developed to detail all monitoring actions and timelines, including the shut off of the diversion (see Adaptive Management Monitoring Plan, Appendix F).
GPTF6	Dam remains a fish passage barrier at low flows and is required to be removed under State law.
	Under Alternative A, the dam would continue to be a fish migration barrier (EA, 75); however, when future NEPA analysis is conducted to determine the exact location of the pipe, the dam will be assessed for compliance with state law. In Alternative B, piping of the ditch would allow a higher volume of water flowing over the dam, and no longer serve as a barrier (EA, 78).
GPTF7	No information regarding water temperature/water quality in Lost Creek and therefore cannot make a finding of consistency with ACS.
	Water quality is discussed in the EA on pages 62, 75 and 76. The EA states that Lost Creek is the only stream in the allotment where stream temperature monitoring has been done (EA, 62). Temperature monitoring in Lost Creek has been a priority due to the diversion. Grab temperature sampling in the other fish bearing streams in the past did not indicate temperature concerns. No monitoring of contaminants has been done because there are no domestic water uses in the allotment. A complete discussion of ACS objectives was developed and added to the EA (Appendix D).
GPTF8	Lack of confidence that 30% utilization will be adequate to protect LS habitat for great grey owls or terrestrial mollusks (see GPTF4) and therefore does not comply with NFP standards for LSR.
	Late-successional timber stands do not produce forage that is used by cattle. Cattle may rest in these areas due to the shade provided there, and they may trail through between grazing areas, but cattle do not have an effect on the late-successional elements of forest stands (i.e. large trees, multi-story canopy, snags and logs). The impacts of loafing or trailing by cattle are not sufficient to affect nesting habitat for great gray owls (EA, 102, 103). The potential effects to mollusks would be at small, discrete sites and documented on page 102 of the EA.
GPTF9	Special Interest Area standards are not met. Grazing and the presence of cattle detracts from the special feature(s) and public use and enjoyment.
	The 260-acre South Prairie Bog is identified in the Forest Plan as a Special Interest Area. The special features of interest in the South Prairie Bog are botanic and geologic. It is clear that botanical species, primarily <i>Sisyrinchium sarmentosum</i> , a Region 6 sensitive species, are one of the primary reasons this area was established as a special interest area (Forest Plan, C-2). The Forest Plan states that livestock grazing may be permitted if it does not detract from the special feature(s) and public use and enjoyment. Although the issue of public use and enjoyment was not raised during scoping, both action alternatives restrict grazing in the Special Interest Area; and therefore Special Interest Area standards are being met.
GPTF10	Based on the importance of the allotment area as a recovery area for SISA, recommends protection of all SISA sites and dispersal corridors from grazing and trampling. Alternative A falls short of protection and Alternative B depends on adequate funding for fence construction and monitoring.

	<p>EA discloses the effects to SISA from livestock grazing on pages 113-119 Direct impacts of livestock grazing on pale blue-eyed grass include mortality by uprooting, leaf, flower and fruit herbivory, and trampling (EA, 115). Under Alternative A, livestock exclosures would be constructed around individual major populations of the species and provides limited protection to all major known pale blue-eyed grass. It would exclude grazing from entering South Prairie proper, the Lost Creek drainage population, and the Forest Road 6610 population, but would not exclude grazing from other small satellite populations found within South Prairie (EA, 118). Because of this, the alternative <i>may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species</i> (EA, 118). The drift fence in Alternative B would provide substantial protection to all major known pale blue-eyed grass populations within the allotment, though it does not protect every individual from livestock grazing; therefore, the alternative <i>may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species</i> (EA, 118).</p>
GPTF11	<p>EA does not consider impacts on pollinators, soil compaction, nitrification, or altered hydrology except as potential cumulative effects.</p>
	<p>No studies have been done that allow for informed, definitive statements of grazing effects on pollinators, soil compaction, nitrification, or altered hydrology within Ice Caves; however, the EA discusses impacts to these elements. Indirect and cumulative effects to pollinator diversity (resulting from changes in plant communities), soil nitrification and alteration of hydrology is discussed in the botanical section of the EA (116, 117, 121). The EA considered impacts to Mardon Skipper butterfly, which is a pollinator. In the discussion of potential effects to Mardon skippers, the EA states that with enforcement of the utilization standards, the vigor of grasses and forbs would be improved (EA, 97-99). Improved vigor of the herbaceous plants due to the reduction in grazing would benefit other pollinators as well. Altered hydrology is discussed further under peak and low stream flows (EA, 56). Because the hydrology of the subwatersheds in the allotment have been altered in the past, mainly by timber harvest and road construction, determining to what extent the local hydrology has been or will be altered by grazing alone cannot be determined. Therefore stream morphology attributes (width/depth ratio, number of pieces of wood/mile, average # of pools/mile, channel stability rating), and direct impacts to streambanks by bank trampling were examined (EA 60, 61). Page 68 and 69 of the EA describe changes in stream morphology by grazing. Nitrification was not studied because there are no domestic water sources in the allotment (EA, 62).</p>
GPTF12	<p>Neither Alternative A nor B provide adequate protection to rosy owl clover since Peterson Prairie could be extirpated during a single year when optimum conditions could correspond to the time when cattle are corralled and transported.</p>
	<p>As disclosed in the EA, field observations of the population's phenological succession at this site suggest that plants are generally able to grow, flower and release seeds before livestock are released into the meadow (EA, 120). In the Adaptive Management Monitoring Plan, the seed set on rosy owl clover in Peterson Prairie will be monitored annually prior to round-up to make sure that it has set and released seed by that time. If the seed is not ripe and dropping by that time, other round-up options would be evaluated and/or a temporary exclosure fence would be constructed (see Adaptive Management Monitoring Plan, Appendix F).</p>
GPTF13	<p>Recommend exclusion of cattle from Riparian Reserves to protect sensitive habitats and species (lesser bladderwort, bog cranberry).</p>

	<p>Lesser bladderwort (<i>Utricularia minor</i>) and bog cranberry (<i>Vaccinium oxycoccus</i>) are both found at South Prairie bog. Under all alternatives, the bog will be protected from cattle grazing (either by fencing exclosures or cessation of cattle grazing) (EA, 123).</p> <p>Protection of <i>Sisyrinchium sarmentosum</i>, a riparian associated botanical species, was a driver in the development of the fencing alternatives (A and B). Surveys of areas within Ice Caves that are frequented by cattle did not reveal occurrences of additional Endangered, Threatened, Proposed or Sensitive botanical species. The 30% utilization standard (in contrast to the 40% utilization standard for uplands) provides a certain measure of protection for botanical species with potential habitat within riparian areas of the allotment.</p>
GPTF14	EA does not address mitigation for preventing spread of noxious weeds within the allotment, only from bringing noxious weeds into the allotment.
	<p>Under both fencing alternatives, fencing in and/or adjacent to the Cave Creek Wildlife Special area will be expanded, with the intent of encompassing the houndstongue (<i>Cynoglossum officinale</i>) population, in order to prevent cattle from spreading houndstongue within the allotment, and to allow the population to be more effectively treated. Additional invasive control measures within the allotment include continuing implementation of the Forest invasive control program, which includes treatment of houndstongue, Canada thistle and tansy infestations at Cave Creek, Canada thistle at South Prairie (cattle would be excluded from South Prairie), and various species found growing along roadsides within the allotment. Other noxious weed prevention standards and recommendations have been added to the decision (DN, 4 and 5). Implementation of invasive species treatment within the allotment is based on Forest prioritization and funding, which varies from year to year.</p>
GPTF15	Lack of knowledge about impacts to Mardon skippers at 30 to 40% utilization would mean that Alternative A would risk extirpation at Peterson Prairie.
	<p>Peterson Prairie has had a long history of grazing by livestock beginning when it was homesteaded in the late 1880s, and continuing when the site was used as a ranger station in the 1930s and the prairie was used as a corral for horses. More recently, cattle have been placed in the Peterson Prairie exclosure during September as the cattle are rounded up. The continued fall grazing under Alternative A along with a 30% utilization standard would contribute to the gradual restoration the cover and vigor of the grass (EA, 97, 98). On page 98 of the EA it is acknowledged that there would be a risk to Mardon skippers with continued use at Peterson Prairie, but the risk is estimated to be low due to the reduced grazing pressure and the resulting improvement compared to historical conditions. See response to FWS1.</p>
GPTF16	Alternative B would not provide protection to Mardon skippers at Lost Meadow or fully at Peterson Prairie.
	<p>Alternative B would not provide protection to these areas through fencing. However, it is expected that enforcing the 30 percent utilization standard in these areas would be effective in maintaining Mardon skippers at these sites. See response to FWS2.</p>
GPTF17	EA does not assess cumulative impacts to Mardon skipper from deer/elk and other sites on the District.
	<p>The effects of grazing on Mardon skippers are indistinguishable between deer and elk, and cattle. The important factor is the percent utilization regardless of which ungulate is responsible. The cumulative effects of grazing on the other known sites on the Gifford Pinchot National Forest area shown on pages 98 and 99 of the EA.</p>
GPTF18	Table on p. 93 is inaccurate. Indicates no effect for some species when there clearly is an effect.

	The table accurately reflects the effects/impacts determinations shown in Chapter 3. Errors were found in the column disclosing species habitat presence; however, the narrative in Chapter 3 adequately represents species habitat. Corrections have been made to the table in the EA (now on page 95 and 96).
GPTF19	Livestock grazing reduces forage for deer and elk, even as mitigated by using a 30-40% utilization standard. Enclosures allow access for deer, but not for elk. Recommend removing cattle from the allotment one month earlier than proposed.
	The utilization standards disclosed in the EA include deer/elk forage requirements. See response to DFW2. Based on a DFW, December 3, 2004 memo, deer and elk within the allotment require 165 AUMs during the 3.5 months which the cattle are on the allotment. The enclosure fencing in Alternative A or the drift fencing in B would be built to standards that allow elk and deer to jump over (EA, 103, 104). The environmental consequences section for elk and deer beginning on page 103 of the EA states that the utilization standards in the action alternatives would result in more forage being available for elk and deer than under past management. In addition the standards would result in long-term improved vigor of the forage plants.
GPTF20	EA does not adequately address impacts from enclosures (wildlife being caught within the enclosures) or spread of diseases from cattle to wildlife.
	Potential effects to deer and elk due to the fencing are described on pages 103 and 104 of the EA. Any enclosure fences would be built to allow movement by elk and deer, with a prescribed wire spacing and a smooth top wire, that are known to not be barriers to these animals. Transmission of diseases between cattle and elk has not been reported as a problem in the allotment. There are currently no known diseases that can be spread between cattle and elk or deer that are a concern in Washington (<i>Thomas, Jack Ward, and Dale E. Towell. 2002. North America Elk: ecology and management. Smithsonian Institution Press. 962 pp.</i>). In addition, chronic wasting disease has not been documented in the Washington (Washington Department of Fish and Wildlife website); therefore, neither the spread of diseases, nor chronic wasting disease was discussed in the EA.
GPTF21	Impacts to Oregon spotted frog and Northwestern pond turtle at South Prairie bog: wildlife analysis indicates conditions are too wet at the bog margins for grazing, but botanical analysis indicates that cattle enter these areas later in the season.
	The EA states that the pond northeast of South Prairie is potentially suitable for western pond turtles and Oregon spotted frog; the bog is not included as suitable habitat for turtles, but may be suitable habitat for Oregon spotted frog (EA, 87). South Prairie bog would be protected by fencing with both action alternatives, and so habitat for Oregon spotted frogs would be improved with implementation of any of the alternatives (EA, 101).
GPTF22	Economic analysis fails to consider full costs to FS of implementation (mitigation for noxious weeds, restoration, administration, monitoring, etc.) (refer also to Ha)
	The EA discloses pertinent costs in order for the Mt. Adams District Ranger to make an informed decision.
GPTF23	Offset grazing within Twin Buttes is not addressed in the EA (cumulative impacts) or covered by NEPA (for public disclosure).
	This decision does not authorize the use of the Twin Buttes Allotment and therefore the analysis was not included in the EA. The current permittee was authorized to use a small portion of the vacant Twin Buttes Allotment in the years 2004-2007, in order to reduce grazing pressure on the primary range of the Ice Caves Allotment. The authorized area consisted of forage available from recent clear cuts. With the design features proposed in the Ice Caves EA (including reduced cow/calf pairs) and associated mitigations, it is not expected that use of Twin Buttes would be necessary in future years. If future use is expected, a separate NEPA analysis would be conducted that would include cumulative effects from the Ice Caves Allotment.

WNPS	Mike Marsh	Washington Native Plant Society 6310 NE 74 th St., Suite 215E Seattle, WA 98115
WNPS1	Only certain habitats and populations would be protected from grazing in Alternatives A and B. The EA does not discuss the importance of providing dispersal areas for existing populations.	
	It is true that only certain habitats and populations of botanical species will be protected from grazing under the fencing alternatives. The botanical analysis does discuss the importance of providing dispersal areas for existing populations of <i>Sisyrinchium sarmentosum</i> ; this consideration was one of the drivers in the development of the drift fence alternative, which does provide dispersal corridors for some (but not all) <i>Sisyrinchium sarmentosum</i> occurrences. See also response to GPTF10.	
WNPS2	Cattle should be maintained on weed free forage for at least 3 days prior to release on the allotment; cattle should be excluded from known weed infestations.	
	There is currently no policy direction that allows the Forest Service to require that permittees utilize weed free forage before coming on to National Forest System lands. There are project design features and recommended mitigations incorporated into the Ice Caves EA that provide mechanisms allowing for control of cattle movement within known invasive plant infestations, in order to prevent spread and facilitate treatment (EA, 17, 20, 25, 26,; DN, 4, 5).	
WNPS3	Cattle should not be introduced into the allotment until flowering and seed production of Sensitive species has occurred. For SISA, this can mean mid-August for higher elevations.	
	Impacts of cattle grazing on the flowering and fruiting of SISA are discussed in the EA on pages 115-117. It was determined in the analysis that both alternatives A and B, combined with the design features and utilization standards, <i>may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species</i> (EA, 118). A Rest/Graze Alternative was considered that would allow the flowering and seed production to occur during two years of rest. This alternative was not carried forward in analysis because it was not deemed feasible (EA, 27).	
WNPS4	Since estimates of forage needed for deer and elk are in excess of what was shown in the EA (refer to DFW2), a utilization level of 30% would be quickly reached and may be exceeded if not closely monitored.	
	See response to DFW2 and GPTF4.	
WNPS5	Clarify whether South Prairie and South Prairie bog are within fenced enclosures under Alternative A.	
	Both South Prairie and South Prairie Bog are fenced and excluded from cattle grazing in both Alternative A and B.	
WNPS6	Refer to historical vegetation conditions to guide restoration in South Prairie and Peterson Prairie and other areas that have been degraded by grazing.	
	If any restoration activities are planned in the future, a detailed NEPA analysis will be completed and historical vegetation conditions may be considered.	
WNPS7	EA does not address ethnobotanically important plants, such as Camas, berries, and medicinal plants found in South Prairie bog.	
	The EA does not explicitly address ethnobotanically important plants. However, the project design features incorporated into the alternatives, including excluding cattle from South Prairie bog, as well as implementation of a 30% utilization level in riparian zones and special habitats, and a 40% utilization level in the uplands, is intended to maintain a healthy, diverse, native plant community. Under all alternatives, South Prairie Bog will be excluded from cattle grazing.	

WNPS8	Use consistent vegetation monitoring, done annually at representative sites (method suggested includes permanent plots or transects in each major community type, comparing grazed to ungrazed areas by point sampling or Daubenmire cover measurements and clipping and weighing a randomly chosen sample).	
	The Forest Service Handbook provides direction for conducting rangeland monitoring and analysis in the Pacific Northwest Region of the Forest Service (FSH 2209-21-2007). It also provides permittees, Forest Service officers, cooperating agencies, Tribes, and the public an opportunity for mutual understanding of rangelands. The intensity and accuracy of the studies made on rangelands will vary depending on the need for information and the land management and/or allotment objectives. The purpose of rangeland monitoring and analysis is to provide for informed decisions regarding land management on Federally-administered lands. An Adaptive Management Monitoring Plan has been developed that includes both implementation as well as effectiveness monitoring indicators with associated timelines for completion.	
WWP	John G. Carter, Ph.D.	Western Watersheds Project PO Box 280 Mendon, UT 84325 utah@westernwatersheds.org
WWP1	The EA has not considered much of the best available science in its analysis.	
	The commenter may not agree with the conclusions; however, the analysis in the EA details effects from livestock grazing to invasive species (46-53), aquatic resources (53-79), wildlife species (79-106), botanical species(106-123) and heritage resources (127-130) using the best available, peer-reviewed science.	
WWP2	Exclosures are a maintenance issue and the cost is excessive. They fragment habitat and entrap wildlife in the fences.	
	Potential effects to deer and elk due to the fencing are described on pages 103, 104 and 105 of the EA. Any enclosure fences would be built to allow movement by elk and deer, with a prescribed wire spacing and a smooth top wire, that are known to not be barriers to these animals.	
WWP3	The EA has not analyzed the effects of the water developments on the habitats in which they are located, nor has it analyzed the economic value of the water lost in terms of other uses, including fish and wildlife. The effect of water developments are significant and can extend for large areas around water sources.	
	The exact locations of water troughs will be determined and analyzed in future NEPA along with the exact location of the pipe for the diversion. The effects to fish and wildlife from the diversion was analyzed in the EA on pages 61, 62, 74-79.	
WWP4	The EA admits the role of livestock in causing weed infestations, but ignores the role of livestock in selecting the desirable grasses and forbs, resulting in the gradual replacement of these desirable species by less desirable native and non-native plants. Thus a shift in ecosystem productivity and diversity can occur which is not addressed because many of these are invasives or increasers, which can be native or non-native, but not classified as noxious weeds.	
	Plant community dynamics were discussed within the botanical analysis (EA, 106-123). It is true that selective grazing of native grasses and forbs may convey a competitive advantage to invasive species within the allotment. Implementation of the utilization standards (40% in the uplands, 30% in riparian and special habitats), annual invasive species control, as well as fencing of special habitats (such as South Prairie), are all incorporated into both the fencing alternatives, and are meant to mitigate for the effects of cattle grazing (sometimes selective grazing) upon native plants.	

WWP5	(In relation to significant issue #7) The analysis of stocking rates must also address the increase in animal weights over the past decades and adjust the AUM levels accordingly. Forage consumption rates must be calculated based on the current weights and consumption rates of livestock in order to provide the forage needed for wildlife, plant community sustainability and watershed protection and to <u>ensure the public trust is not violated by undercharging for the actual weights of cattle and calves grazed.</u> (Carter sites studies showing an increase in animal weights-refer to letter if necessary.)	
	Appendix A illustrates the methodology used in determining the grazing capacity analysis. A 34 lbs Daily Dry Weight Consumption Rate for a cow with calf was used.	
WWP6	By proposing an alternative that does not provide time for recovery, over-allocates forage to livestock without regards to ecosystem needs, the EA has failed in its duty to take a hard look at the consequences of its proposal and has not balanced resource uses, instead has biased its proposed decision to benefit a single permittee while continuing the resource degradation and displacement of natural values it is compelled to consider under the laws cited above.	
	Both action alternatives include a decrease in the amount of authorized AUMs or cow/calf pairs (EA 16, 19). In addition, the proposals include design features and mitigation measures centered around ecosystem needs. Utilization requirements have been reduced from 40-50% down to 30-40% in the riparian areas and uplands respectively and exclosure fences have been proposed to exclude grazing from sensitive habitats. The analysis in the EA details effects from livestock grazing to invasive species (46-53), aquatic resources (53-79), wildlife species (79-106), botanical species(106-123) and heritage resources (127-130) to complete a “hard look” of the proposed consequences of the proposal.	
WWP7	Here once again the Forest Service panders to “lifestyles” while ignoring the actual contribution of the livestock grazed on this allotment. (He lists several factors that the economic analysis should include—page 17.)	
	The EA discloses pertinent costs in order for the Mt. Adams District Ranger to make an informed decision. Quantifiable economic information on the benefits of alternatives is not available because of the difficulty in obtaining quantifiable data of the relationship between project outputs and resource impacts. For example, the economic benefits from maintaining or enhancing riparian areas are difficult to quantify from an economic standpoint. Ecological resources are not typically allocated through a market system. This, along with the incomplete information between project activities and a quantifiable effect on a given resource, makes it difficult (to impossible) to identify and measure all economic benefits. The EA does contain a social and economic discussion of livestock grazing, both nationally and within Klickitat County. The effects analysis displays the economic consequences of the alternatives to both the permittee and the general public. Economic impacts are one of many factors that are considered by the responsible official in deciding whether or not to authorize grazing of National Forest System lands.	
WWP8	The EA should address the loss of carbon storage in the soils and plants of the Ice Caves Allotment due to erosion and grazing by livestock.	
	The effects of cattle grazing in relation to erosion was disclosed on 60, 61, 63-74.	
Ha	Bob Hansen	Individual PO Box 452 Lyle, WA 98635
Ha1	Rather than funding fencing and monitoring, recommends Alternative C with financial mitigation of permittee for no longer being able to graze.	

	Compensation can only be made to a grazing permittee who contributed to the cost of placing or constructing any permanent range improvement. Compensation for permittee interest in range improvements will be made if: the term grazing privilege on a specific allotment is cancelled in whole or in part to devote the land to another use which excludes grazing by livestock; and, the current permittee has made an investment in improvements on that portion of the allotment. The current permittee does not qualify for financial mitigation. Current policy does not allow for this agency to “buy-out” permittees in order to stop grazing their allotment.
Ha2	Questions benefit to Skamania County, where grazing takes place.
	Benefits and costs of the Ice Caves Grazing Allotment to Skamania County is minimal, since the nearest town (Trout Lake), the permittee’s base property (Lyle, WA), and other leased lands are within Klickitat County. Klickitat County was considered a better economic measure due to the potential direct and cumulative effects of the alternatives. The economic effects are disclosed in the EA on pages 42-46.
Ha3	Considering the value-added worth, value of the cattle supported by the permit is insignificant compared to the value of the livestock industry in Klickitat County.
	Intangible values in addition to the value of cattle are the loss of open space and the loss of the agricultural lifestyle (EA, 46).
Ha4	Rather than assuming that there would be higher indirect costs associated with shifting summer grazing opportunities elsewhere, there might be an indirect cost savings if these alternative opportunities are closer to permittee’s operation base and providing income to Klickitat County pasture owners.
	The permittee utilizes the Ice Caves Grazing Allotment for summer, high elevation, rangeland. The permittee would have to find similar pasture land in Klickitat County, most likely irrigated and at a much higher cost (EA, 46).
Ha5	Observes that it would cost the Forest Service between \$8,000 (Alternative A) and \$10,000 (Alternative B) to save the permittee \$5,500.
	The Forest Service does not base its economic analysis on how much money it can save a permittee. The basis of this analysis is to provide the decision maker with a clear illustration of the financial differences between alternatives, which would lead to a better informed decision.