

Appendix B
Response to Environmental Assessment Comments
Lift 21
36 C.F.R. 215.6(d)

Response to Comments from Carl Ohgren

Comment #1 – Loss of Windbreaks

The trees that need to be removed for the construction of Lift 21 will cause the lower sections of the mountain to lose valuable, and greatly needed, windbreaks.

Response

No large clearings are created as the lift line for Lift 21 mostly follows existing ski runs and natural openings. As a result, less than ¼ acre of trees (approximately 75 trees over 6 inch in diameter [EA, @ p.6]) will be felled from four existing clumps at four different locations [EA, @ p. 46]. The largest area of tree felling is within the lower section of the lift. Windbreaks were not discussed in the EA because the minimal clearing in the various locations will not increase wind problems for any trails or lifts.

Comment #2 – Computer Model Flawed

The entire idea of Lift 21 is a result of a computer model (“per conversation with Dave Riley”). I am absolutely convinced that the computer model that generated this scenario is flawed.

Response

The concept for this lift came from the approved Master Plan. We are unaware of any computer modeling used by the ski area for planning the lift. Operational matters are left to the expertise of the ski area as Forest personnel have less experience with the details of ski area planning related to skier flow patterns, etc. The Forest works with the ski area to try to fit their proposals onto the landscape to minimize impacts consistent with approved plans.

Comment #3 – Need for Lift 21

The terrain accessed by Lift 21 is easily accessible from the Cascade lift, which is open sporadically for most of the winter due to windy/stormy weather. By the time the weather mellows out in the spring, the snow is soft and slow, and most people have lost interest in skiing. Meadows then becomes a haven for a relatively small but dedicated group of snowboarders. Lift lines become non-existent and, most importantly, the Cascade chair lift is opened daily. Lift 21 is a bad idea. It wastes time, money and energy. It will make Meadows a less desirable place to ski and snowboard.

Response

The terrain accessed by Lift 21 is not easily accessible from the Cascade lift because the intermediate level slope is too difficult for novice skiers to negotiate [EA @ p. 2 & 3]. As a result, the higher

elevation beginner/novice ski terrain that would be accessed by Lift 21 (part of the underlying need for action [EA @ p.2]) is inaccessible to these skiers [EA @ p. 5].

Lift 21, like Cascade Express, would be a high elevation lift with greater exposure to high winds and icing (as noted by commenter). MHM recognizes that because of the weather, Lift 21 may only operate 60-70% of the season [EA @ p.50]. MHM proposes (as a business decision) to build a modern detachable quad in part because in 1999/2000, the ski area saw an increase in beginning skier/riders of 22% over the previous season and a 71% increase since 1995. MHM anticipates this trend to continue if the demand can be met with facilities and terrain to accommodate this use [EA @ p. 50]. The Master Plan precludes development of new beginner terrain in Iron Creek, so the ski area is attempting to optimize the existing terrain for various ability levels of clientele.

Response to Comments from Gisela Ray

Comment #1 – Need for Lift 21

“Need” in the case of MHM is really just the potential for business growth.

Response

There were several other comments received that questioned the need for this lift. As a result, I did further review of the need for this proposal and asked my permit administrator to prepare a report on the topic based on the information in the EA, the comments received, and his professional experience. I agree with his report and have attached it as part of this response document.

Lift 21 was conceptually approved in the MHM Master Plan as a facility that helps disperse skiers within the permit area and to provide the users with state-of-the art equipment that improves their overall recreation experience. There is a “need” to move the area toward its Desired Future Condition outlined in the 1997-ROD, p.8. The underlying physical needs for constructing Lift 21 are to relieve crowded conditions in the Buttercup/Red areas, and to provide the same novice clientele access to existing novice terrain with spectacular high elevation experiences. [EA @ p.2]. Lift 21 will enable MHM to better provide for current and long-range demand for beginner/novice terrain, and thus be responsive to this need as the 1999/2000 ski season at MHM saw an increase in beginning skiers/riders of 22% over the previous season, and a 71% increase since 1995 according to the ski area [EA @ p.50]. While the balance of skiers has been shifting towards the beginner/novice business, the number of all ability types (of skiers) is not exceeding the ski area’s capacity.

Comment #2 – Existing Erosion

Perhaps present problems with compliance by MHM should be fixed first (in reference to erosion gullies 2 – 2 ½ feet deep on MHM maintenance roads) before new permits are issued.

Response

I agree that compliance problems need to be addressed, which is why strong efforts will continue to be made to achieve effective groundcover on old disturbed areas as quickly as possible [EA @ p.13]. Recent hydro-seeding experience with the access road, Shooting Star, and the new water well has been good. Our technical knowledge has improved to the point where successful control of any potential erosion that might be associated with the construction of Lift 21 can be achieved with some degree of confidence [EA @ p. 59]. The latest erosion control techniques soil tackifiers, micorrhizal stimulants

and organic supplements have only been developed and put on the market in the last several years. These materials are now being used by MHM and the nearby Federal Highway access road project.

Comment #3 – Skier/Snowboarder Damage to Krummholz

How will damage to Krummholz by skiers and snowboarders zooming over the tops of young plants be prevented?

Response

Skiers and riders would not use the higher elevation areas until there is adequate snow pack to cover rocks and vegetation and to fill in gullies. Plants beneath the snow are usually not at risk from the users, but some incidental minor damage can be expected throughout the ski area, most often small trees that are growing in the trails.

Comment #4 – Summer Use Increase

Your EA mentions possible “dramatically increased use, contrary to projections” in the summer. Can we be sure that summer use does not increase beyond levels that still preserve the sensitive alpine plant communities?

Response

*The EA @ p. 28, in discussing impacts to the pincushion plant community, states “Such effects are likely to remain tightly localized **unless** (emphasis added)...summer use increases dramatically. There are no proposals for summer skiing or other summer uses at this time [EA @ p.60]. Summer use is not part of this proposal.*

Comment #5 – Impact Creep through Cumulative Effects

All through the EA the impact from building of Lift 21 is called minimal or very small. That of course is comparing the impact to present conditions, but we know the cumulative impact over the years has been quite enormous. It’s this “impact creep” that worries me.

Response

The assessment discloses the effects of this lift project in conjunction with past impacts. Because the Forest has not accepted a formal proposal from Mt. Hood Meadows for other projects (beyond what is proposed for Lift 21), there is nothing in the foreseeable future to include in the site-specific cumulative effects analysis [EA @ p.9]. We acknowledge that development of the ski area would have impacts if elements approved in the master plan are proposed and implemented in the future. That is why we have included the impacts of past actions and tiered this EA to the EIS for the master plan, which disclosed the potential cumulative impacts of development. Before future proposals could be implemented additional environmental analysis would be required including cumulative impacts.

Comment #1 – Forest Service Accommodating Business Motivation

This is public land and accommodating a business motivation (accommodate beginning skiers and snowboarders) should not be the criteria for disturbing more of the natural eco-system of the Mt. Hood Meadows, especially the Krummholz ridges.

Response

Recreation, including skiing, is one of the multiple uses National Forests have been set aside to provide. The Mt. Hood National Forest Land and Resource Management Plan designates the Mt. Hood Meadows Ski Area as A11 – Winter Recreation Area. The goal of this land allocation is: “Recreation facilities will provide areas for high quality winter recreation (and associated summer) opportunities including: downhill skiing, snowmobiling, and snowplay within a natural appearing forest environment”. The government does not have the capacity to provide skiing facilities, so it is in partnership with private developers to provide that type of recreation. In developing any recreation site, there will be some impacts. In the case of Lift 21, a small piece of Krummholz is affected in trade for the new recreation opportunities. These types of resource tradeoffs were recognized in both the Forest Plan and the ski area master plan.

Comment #2 – Need for Lift 21

There is no need for more lifts. It has been clearly documented that there has been a downturn in skiing in Oregon (Pacific NW Ski Areas Association, reported August 6, 2000, in The Oregonian).

Response

Reference Gisela Ray, comment #1 response. Additionally, the EA proposes a new lift to meet the need for accessing more novice terrain, to better balance lift served terrain and to utilize the opportunity for a high elevation novice skiing experience.

Comment #3 – “Temporary” Disturbance

Specifically, I’m concerned about building and usage in the Krummholz ridges, and further disturbance of land by so called temporary roads and the digging of trenches for the power line. Also, the planting and seeding of non-native vegetation. The EA suggest that these disturbances will be temporary, and would not seriously impact the area. However, knowing the history of MHM’s and the FS previous denials of serious impact to the meadows, this conclusion is inconsistent with what one witnesses on site (without snow).

Response

The temporary road and trenching will occur in the same location. Every design system described in the EA, p. 6 to minimize impacts would be utilized, as would the various mitigation measures listed starting on page13. Non-native vegetation is no longer planted at Mt. Hood Meadows for restoration projects.

Comment #4 – Promote Other Ski Areas

Regarding novice skiers there are other ski areas on the mountain that already have beginning runs. The FS needs to promote other ski resorts for this purpose.

Response

The permit holder proposed this lift to address specific needs at this ski area and to progress toward the desired future condition as outlined in their Master Plan. The Forest Service relies on permit holders to meet the needs of the recreating public at the recreation site under permit. Promoting novice terrain at other ski areas would not help this area to move toward the desired future condition and would not meet the need stated in the EA.

Response to Comments from Phyllis Kirk

Comment #1 – Need for Lift 21

I am disturbed by the use of the word “need” to justify the building of yet another chair lift in this fragile high alpine wetland. According to the Pacific Northwest Ski Areas’ Association as reported in the August 6, 2000, Oregonian, MHM had fewer customers in the 1999-2000 ski season than 15 years earlier in the 1984-85 season, their highest during that period. The need for more lifts is not there.

Response

Reference Gisela Ray, comment #1 response. Also, the EA is responding to the needs related to novice terrain access and opportunities.

Comment #2 – Damage to White Bark Pine

I have been increasingly shocked through the years to view the continuing terrible damage inflicted on the white bark pine by trail grooming machines and/or power saws.

Response

The EA, p.6, states that 9 small white bark pines would be removed for construction of Lift 21. Placement of the lift will not greatly change the grooming activities by the ski area. Groomers occasionally nick white bark pine trees that are buried in the snow. There has not been major tree mortality to white bark pines caused by mechanical damage. Since the mechanical damage was noticed, MHM is more careful while moving snow to maintain clearance under the chairs for ANSI codes [EA @ p. 55] or to farm snow for snowboard parks. We are requiring a vegetation management plan from the ski area in conjunction with this lift’s construction and winter operation.

Comment #3 – Snow-making Opposed

I strongly oppose any snowmaking on MHM part.

Response

There is no snowmaking associated with the Lift 21 proposal.

Response to Comments from Cascade Resource Advisory Group

Comment #1- Violation of Laws and Management Plans

If the United States Forest Service issues a Finding of No Significant Impact based upon the EA and approves the project, it will be in violation of the National Environmental Policy Act, the National Forest Management Act, the Federal Water Pollution Control Act, the Administrative Procedure Act, the Northwest Forest Plan and the Mt. Hood National Forest Land and Resource Management Plan.

Response

The analysis covered in the Lift 21 EA is tiered to the Mt. Hood National Forest Land and Resource Management Plan as amended by the 1994 Record of Decision for the Northwest Forest Plan [EA @ p.3] both of which are in compliance with NEPA and NFMA.

Comment #2 – EIS Required

We assert that NEPA requires preparation of an Environmental Impact Statement

Response

The requirements of NEPA are being followed in the preparation of this EA and decision on this proposal.

Comment #3 – Failure to Analyze Site –Specific Cumulative impacts

The Forest Service has failed to analyze the site-specific cumulative impacts of other proposed projects included in the 1997 Master Plan. The Forest Service is avoiding a site-specific cumulative impacts analysis by breaking down the expansion plans that are contained in the Master Plan into conveniently smaller component parts. NEPA regulations clearly state the “significance cannot be avoided by *** breaking [a project] down into small component parts.”

Response

The Forest Service has properly segmented Lift 21 for purposes of compliance with NEPA, and has properly analyzed the cumulative effects of Lift 21.

The Forest Service employs a tiering methodology. Lift 21 is tiered to both the Forest Plan and to the Mt. Hood Meadows Master Plan. EA p.3. Using this tiering methodology, the Forest analyzed Lift 21 in the context of the decision that is proposed to be made for Lift 21, building on the decisions already made and deferring decisions that are not yet to be made.

Lift 21 has independent utility. It is rational to proceed with Lift 21 since it does not trigger any other aspect of the Master Plan. EA p.51. For this reason, Lift 21 can be analyzed by itself.

Other elements authorized by the Master Plan have not yet materialized to the point where they can be meaningfully evaluated. That point may come in the future when such actions are actually proposed and the Forest is actively preparing to make a decision. Some elements may never be proposed.

Lift 21 has been analyzed in the context of past actions from 1967 to the present. It has been analyzed in the context of other present actions. However, there are no other reasonably foreseeable actions pending right now because none of the other actions authorized by the Master Plan have been proposed. EA p. 9. The EA properly discloses the cumulative impact of Lift 21. EA p. 13 (soils), p. 19-25 (hydrology), p. 27-30 (vegetation), p. 32 (botany), p. 37-38 (wildlife), p. 43-44 (aquatics and fisheries), p. 46 (scenery), p.49 (cultural resources), p. 51 (recreation). Refer also to response to Gisela Ray comment # 5.

Comment #4 – Need for Lift 21 Fundamentally Flawed

- (a) The need analysis is fundamentally flawed. Some information is needed on the current capacity of the beginner area surrounding Red and Buttercup and the proposed increase in capacity.
- (b) According to Meadows’ trail map, Lift 21 will provide access to a single green run (Vista Ridge). In fact, a great majority of the terrain accessed by the proposed Lift 21 is intermediate or advanced terrain, and all this terrain is already accessible from one of the other lifts.
- (c) The EA fails to demonstrate a need for increased uphill capacity in this part of the Permit Area, all of the terrain associated with Lift 21 is already accessible from other lifts, and Lift 21 will likely sit idle on many days because of the weather.

Response

(a) Reference Gisela Ray comment #1 response. The need to access more beginner terrain is due to crowding of the Red/Buttercup areas on busy weekends and for improved experiential opportunities.

(b) It is true that Lift 21 would serve only one new designated beginner trail before merging with other novice runs at Mitchell Creek and Wallflower, but it still meets the needs for terrain access and high altitude opportunities. Not all novices can reach this terrain from Cascade Express because the trails in between are too challenging for many of them.

(c) The EA demonstrates the need for access to novice terrain. MHM recognizes that because of the weather, Lift 21 may only operate 60-70% of the season [EA @ p.50].

Comment #5 – Unacceptable Range of Alternatives

The Forest Service has not considered an acceptable range of alternatives, such as an alternative that avoids placement of towers in riparian reserves, avoids removal of trees in the Krummholz ecosystem, or avoids construction of a new road.

Response

The Forest Service analyzed four alternatives. One alternative, the over the snow- no road alternative, was eliminated from further study when it became apparent that it was: a) logistically difficult and unsafe; b) an unreasonable added expense; c) would not significantly reduce the overall effects to the natural resources as compared to the proposed action alternative [EA, @ p. 7].

The 1997 Master Plan conceptual alternative was studied and dropped from further consideration as the new location (proposed action alternative 2), not only better addressed the resource concerns

expressed, but also better served novice skiers operationally [EA, @ p. 8]. This was a different location alternative.

The proposed action's alignment was chosen to best avoid wetlands, riparian reserves and to minimize vegetation impacts in the sub-alpine and Krummholz areas.

The comment seems to propose an alternative that completely avoids riparian areas, cutting Krummholz trees and the need for roads. There is no reasonable way to do that. Some vegetation/riparian areas would be crossed or affected by any lift alignment accessing the terrain needed. The heavy machinery of a top terminal requires a construction road for access.

Comment #6 – Effects of Soil Inadequately Analyzed

(a) The EA fails to adequately analyze the environmental affects of spreading 8,200 cubic yards of soil material in a high-alpine ecosystem containing wetlands, riparian areas, clear-cuts, roads, steep grades and sensitive hydrology. The EA provides absolutely no data supporting the conclusion that this process (soil spreading) can be completed without imposing a significant impact on the environment.

(b) The EA also fails to adequately analyze environmental impacts of excavating soil from the tower locations in the riparian reserves. How much soil will be taken from the site? What are the environmental impacts of the mitigation measures? How much soil will be placed on the temporary road above Daisy?

(c) The “temporary road” does not look very temporary. What data supports the conclusion that placing the soil in the temporary road will not result in increased erosion, channelization, peak flow and sedimentation?

(d) Evidence suggests that recent re-vegetation efforts have failed to prevent erosion and mitigate impacts to vegetation communities.

Response

(a) All areas with erosion potential would be heavily screened with silt fence or straw wattles during work and be properly restored with native vegetation, mulch, rock and/or erosion matting as approved by the District Ranger [EA, @ p. 6].

(b) Tower footings can be up to 10'x10'x10'. Excess soil from the two towers in question would be packed off away from the site (and riparian zone) by hand or in small trail toters, and dispersed elsewhere (placed as restoration fill on the temporary road above Daisy) such as was done for all the lower tower footings of the Heather Canyon chairlift. These details will be in final construction plans.

(c) Although appearance is rather subjective, the utmost effort will be taken to reduce the existing compaction, reshape, and revegetate the road to match the surroundings. Experience has proven this is an achievable goal. Mitigations for the road obliteration (page 14) reduce the chance of erosion from the obliterated road.

(d) Strong efforts will continue to be made to achieve effective groundcover on these areas as quickly as possible [EA @ p.13]. Recent hydro seeding experience with the access road, Shooting Star, and the new well has been good. Our technical knowledge has improved to the point where successful control of potential erosion that might be associated with the construction of Lift 21 can be achieved with some

degree of confidence [EA @ p. 59]. New techniques and products that were not available 10 years ago are proving very effective at MHM and the nearby highway project.

Comment #7 – Non-Compliance With the Ninth Circuit Court of Appeals Regarding ACS Analysis

The EA has failed to adequately analyze compliance with the ACS objectives. The Ninth Circuit Court of Appeals clearly stated that the analysis must include a determination of whether the project will meet ACS objectives at the site-specific scale, and not at the 5th and 6th field watershed scale (EA at pg. 21).

Response

The Ninth Circuit Court of Appeals in Pacific Coast Federation v. National Marine Fisheries Service, 253 F.3d 1137 (9th Cir.2001), held that NMFS was arbitrary and capricious when implementing the Endangered Species Act. That case, and that holding, does not apply to the present circumstances. Lift 21 will have “no effect” on any listed fish species. EA p. 41.

Here, the Forest Service is making a determination of consistency with the objectives of the Aquatic Conservation Strategy (ACS) under authority of the National Forest Management Act (NFMA), not the Endangered Species Act. Under NFMA, the Forest Service must act in compliance with the Forest Plan. The Forest Plan, as amended by the Northwest Forest Plan (NFP), states that the ACS “seeks to prevent further degradation and restore habitat over broad landscapes as opposed to individual projects or small watersheds.” NFP B-9

The methodology chosen by the Forest Service to determine ACS consistency is to focus on the watershed scale. The EA for Lift 21 shows that this methodology was applied to Lift 21, and a finding of consistency with the ACS was reached. EA p. 21-25; 43-44.

Comment #8 – Violation of MHNF Standards and Guidelines

The implementation of the Lift 21 project would likely violate the following MHNF Land and Resources Management plan standards:

- (a) FW-060 – Management practices causing detrimental changes in water temperature or chemical composition, blockages of watercourses, or deposits of sediment shall not be permitted.

The EA lacks any data and merely relies on the basic assumptions that the project will prevent erosion and deposit of sediment in watercourses. The description of the project, the history of past environmental damage within the permit area and a visual review of the project site all indicate that the proposed construction will result in erosion and sediment.

- (b) FW-078 – Major groundwater recharge areas (e.g. flood plains, riparian areas, and intermittent and ephemeral drainages) shall be managed to maintain natural infiltration and permeability rates.

The EA fails to include any data or analysis establishing that the project will not violate FW-078. Even more interesting is the fact that the EA completely omits any reference whatsoever to FW-078 in the hydrology portion of the analysis.

(c) FW-054 – Water quality associated with management activities shall be in compliance with Oregon State requirements established in accordance with the Federal Clean Water Act.

The Forest Service appears to have omitted a discussion and analysis of compliance with the state water quality standards.

How can the Forest Service trust or cite to a study that clearly relies upon an inadequate control (using Mitchell Creek as a control basin, measuring anthropogenic effects)?

(d) FW-057/058 – Evaluations of ability to implement and estimate effectiveness of BMPs shall be made at the project level.

The Forest Service has again failed to provide the public with adequate information to determine whether BMPs are, in fact, effective within the Permit Area and whether they will be implemented.

(e) RM-1 – New recreational facilities within Riparian Reserves *** should be designed to not prevent meeting Aquatic Conservation Strategy (ACS) objectives. Construction of these facilities should not prevent future attainment of these objectives.

Since the EA does not demonstrate compliance with the ACS (reference comment #5 above), it is also in violation of RM-1.

Response

(a) There will be no change in water temperature or chemical composition, nor any watercourse blockages resulting from the proposed lift construction and operation. As stated the EA, there is a slight chance small amounts of sediment may enter watercourses, primarily near the two lift towers closest to perennial streams in the South Canyon tributary watershed. With the required mitigation measures outlined in the EA, any sediment entering the watercourse would be immeasurable against background levels.

The LRMP standard referenced in this comment (FW-060) refers to water quality as it relates to Oregon State requirements established in accordance with the Federal Clean Water Act. These requirements are geared toward protecting and preserving the beneficial uses of any given watercourse. Beneficial uses in the South Canyon watershed area primarily are for cold, clean water to downstream watercourses that harbor fish populations. Surface water in this watershed is not used for drinking water and the streams carry a naturally high level of fine sediment due to the parent volcanic geology. The small amount of sediment that may enter streams as a result of this project would be immeasurable against natural background levels and, thus, would not detrimentally affect beneficial uses downstream.

(b) Due to the small amount of localized disturbance associated with this project, modification to groundwater discharge and movement rates are not expected to be detectable. Precipitation is expected to be shed of the tower footings and terminal pads and enter groundwater recharge areas a short distance away. Water will not be displaced long distances to other adjacent recharge zones. Mitigation that requires decommissioning of the temporary access road will include de-compaction of the road surface, which will restore permeability.

(c) Water quality effects for this project are displayed in the EA, p. 15-20. As stated in that write-up, implementation of this project will not result in increased stream temperature or measurable turbidity above background levels. Natural sediment amounts are so high in this area that introduction of minor

amounts of material from the upper terminal would be overwhelmed by the natural sedimentation during the course of a year.

(d) *Time-tested and proven products and techniques described in the mitigation measures and construction design are prescribed to reduce the risk of erosion. Effects analysis is based on the fact that they are implemented.*

(e) *The construction and operation of Lift 21 would not retard or prevent the attainment of ACS objectives. Natural processes and disturbance regimes will be maintained throughout the South Canyon tributary watershed and at larger scales. Sediment routing would be maintained in the South Canyon watershed because possible sedimentation from construction is negligible against background levels, no stream channels will be physically moved or channelized, no watercourses will be blocked, and no vegetation directly adjacent (w/in 20 ft) to streams would be disturbed. Streams in this watershed are too small to act as wood routing mechanisms except during catastrophic events (debris flows, eruptions, etc.). If a catastrophic event were to occur, the 10-20 trees proposed for felling would make up a negligible portion of the total amount of wood and debris transported downstream.*

Comment #9 – Impact to Vegetation Inadequate

(a) The EA contains inadequate information regarding impacts to vegetation. The comments made in the EA results from assumptions or unsubstantiated conclusions without any supporting evidence.

(b) We request that the Forest Service clarify its definition of the Krummholz ecosystem and reconcile the inconsistent statements in the EA regarding impacts to the high-alpine Krummholz communities.

(c) The EA dismisses impacts from fragmentation, claiming that impacts “are likely to remain tightly localized unless, contrary to projections, summer use increases dramatically. In fact, the Master Plan includes a 1,000% increase in the maximum capacity of persons at one time during the summer.

Response

(a) *Table 3-11 of the EA shows cumulative impacts to vegetation by broad community types. The analysis is based on professional opinion in interpreting GIS data, aerial photographic evidence, and vegetation plot data for composition, extent and environmental conditions affecting the plant communities. The relevant GIS layers, digital orthoquads, and plot data are available resource information at Mt. Hood Forest Headquarters.*

(b) *Krummholz refers to single trees or small groves of dwarfed and wind-deformed trees that occur at the highest margins of timberline. Timberline can be separated into three types: forest line (upper boundary of contiguous closed forest), tree line (upper boundary of erect tree growth)-{at MHM generally found at the upper extent of the sub alpine/meadow mosaic}, and the scrub line (upper boundary of Krummholz) (Franklin and Dyrness, 1987). All of these “lines” are actually somewhat diffuse and very irregular ecotones, modified on the ground by local environmental factors determined by topography: ridges or small valleys, rocky areas, moister areas, sites exposed to or protected from the wind or snow.*

Krummholz patches are irregularly spaced. These single trees or small groves are scattered among a variety of microsites. The matrix in which they are set may be barren, or host a number of low stature plant species. GIS mapping of the Krummholz includes those areas where tree clumps predominate. At

the upper extent, the “scrub line”, widely scattered single trees or tiny clumps occurring in a matrix of pincushion communities are generally mapped with the pincushion type.

The Lift 21 upper terminal location does affect up to 9 white bark pines that are growing as single trees or small groves as Krummholz at such low density that they are considered as inclusions within the pincushion community map unit on the GIS layer.

The comment asserts that the EA claims white bark pine will be removed “just below the Krummholz and pincushion communities”. However, this reference from the EA addresses trees proposed for felling from the margins of the existing artificial clearing in the sub alpine forest-meadow mosaic near the Daisy lift, not the upper terminal. These trees are mountain hemlocks.

(c) There is no summer use associated with this proposal.

Comment #10 –Effects Analysis of Snow Farming and Grooming to Krummholz Ecosystem Inadequate

(a) The EA fails to provide any information regarding threats to the Krummholz ecosystem from snow farming and grooming activities. The EA includes a discussion of impacts to the Krummholz from snow farming, but it fails to apply that analysis to this project. The EA also fails to consider impacts from grooming on the Krummholz ecosystem.

(b) The EA lacks any discussion of whether this practice has had a cumulative impact on the Krummholz and pincushion communities within the permit area. The EA also lacks any discussion of whether any snow farming will take place in the terrain accessed by Lift 21.

(c) The EA fails to discuss whether past grooming operations have had a cumulative impact on the high-alpine ecosystems (a recent visit to the top of high Cascade indicates that many of the trees have been severely damaged by groomers), and whether grooming activities in the terrain accessed by Lift 21 will pose any additional threats to these communities.

(d) We request that the Forest Service collect and provide data on damage done to trees within the Krummholz ecosystem resulting from grooming, snow farming and skier/snowboarders. We also request that Meadows discontinue snow farming within communities of white bark pine, and that they (MHM) should mark the location of Krummholz communities before the beginning of the ski season and then rope off these areas to prevent skiers, snowboarders and groomers from damaging this sensitive ecosystem.

Response

(a) The additional weight of a snow-cat on compact snow base is considered inconsequential to impacting vegetation as no discernable differences to vegetation growth has been observed in August between groomed and un-groomed ski runs at Mt. Hood Meadows [EA @ p.54].

Groomers occasionally nick or damage white bark pine trees that are buried in the snow [EA @ p.55].

(b) Table 3-11 shows the cumulative effects of Mt. Hood Meadows across broad alpine/sub alpine vegetation types as mapped in GIS for the entire mountain. Acreage changes from implementing Alternative 2 for Lift 21 are not large enough to change the acre summaries from existing impacts [EA,

@ p. 29]. Grooming already occurs in the area accessed by Lift 21. The area is likely to receive increased grooming to assure smooth slopes on the terrain designated for novice snow riders. As discussed elsewhere in the EA, snow farming and grooming have been determined to have little detrimental effects to resources. For a discussion on direct and indirect, short and long term effects of alternative 2, as related to snow farming/trampling the reader is referred to EA, @ p. 26.

(c), (d) Some tree damage from snow farming and grooming is visible along cleared areas and along natural edges of the sub alpine area. Some damage outside of clearings is also evident to dwarfed, wind-deformed trees, whether growing as singles or clumps within the pincushion community or in denser Krummholz stringers. Tops are sometimes broken off, bark scraped, or branches broken. However, it is difficult to determine, in many cases, whether the agent of damage was natural or mechanical. Impacts away from clearings were not considered in Table 3-11 of the EA. The overall impact of snow machines cannot be readily determined on an acre-by-acre basis given the low and varied density of trees in the area; the low severity range of mechanical damage, and the difficulty in determining the cause of damage.

Damage to the cambium on the main bole is the most immediate threat to these trees and this type of damage will be minimized by operator training and snow grooming procedures in the required vegetation plan to avoid eventual tree mortality.

Comment #11 – Cumulative Effects to Krummholz Plant Communities

(a) The Forest Service appears to have underestimated cumulative effects to the Krummholz plant communities. How has the Forest Service determined that only 8 of 220 acres (of Krummholz) have been cleared? We hope to see both GIS mapping and supporting documentation providing information on the methodology of determining impacts to Krummholz system in the Analysis File after issuance of the Decision Notice.

(b) The information in the EA is simply inadequate in supporting the conclusions of the Forest Service and in analyzing future site-specific cumulative impacts.

Response

(a) See response #10. Data used for this analysis is in the Headquarters Office databases and files.

(b) See response #10. Also, no other projects are in the reasonably foreseeable future to consider.

Comment #12 – Vegetation Mitigation Measures Inadequate

(a) Vegetation mitigation measures are inadequate. The EA claims simply that Meadows has started to transplant vegetation from cleared areas into areas suitable for reforestation. The EA completely fails to tie these efforts to the impacts from the Lift 21 project. The EA fails to discuss the scale of these projects. The EA fails to consider whether the area receiving transplanted trees includes the Krummholz ecosystem, which will suffer many of the impacts to vegetation.

(b) What is the survival rate of the 25 white bark pine transplants?

(c) Meadows cut trees after installation of the lift, and the analysis documents (for Heather Canyon and Gulch/Cascade Lifts) did not analyze the impacts of these unplanned cuts. Why should we not expect similar unplanned cuts and damage to vegetation in this instance?

(d) The Forest Service simply assumes that planting a few trees mitigates direct and site-specific cumulative impacts to the Krummholz ecosystem. The Forest Service has provided the public no data to support that conclusion.

Response

(a) *The area where MHM has begun transplanting trees is in the sub-alpine areas of the resort where unwanted vegetation growing in trails is being moved to areas where it can grow without conflicting with operations. No Krummholz transplanting is planned, as the pine cannot be transplanted given significant taproots.*

(b) *Of the 25 white bark pine seedlings planted as an experiment by the Forest Reforestation coordinator, 6 have survived. Considering they were planted in the summer vs. during fall rains, this is a fair success rate.*

(c) *Some “Unplanned cuts” at any ski area are inevitable as the resort responds to operational needs or changing operational methods. The trees in Heather Canyon were cut to allow access of grooming equipment. During planning of the Heather Canyon lift, no one envisioned using groomers in the canyon above the lift area. If cuts were proposed in the future, they would be evaluated per applicable rules and policies.*

(d) *The EA did not state that cumulative Krummholz effects were totally mitigated. The EA concluded the cutting of 9 additional small trees would have little effect on these plant communities (EA @ 28).*

Comment #13 – Inadequate Information Regarding Impacts to Aquatic Resources

(a) The EA fails to adequately analyze impact from soil disturbance (in reference to placement of two towers in riparian reserves). Without any analysis, the EA concludes that, “if any material did erode, the amount would be extremely small and likely to only move a matter of a few feet.”

(b) How much material will be excavated from the two lower towers locations? How deep will the excavation be? How many cubic yards of material will be spread around the footing, and within the riparian reserve? How does the Forest Service know that re-vegetation efforts will prevent erosion when Meadows has had constant re-vegetation problems? What is the grade of the slope where the towers will be placed and where the soil will be spread and reseeded? How stable is the slope? How much material is likely to escape during the excavation process? Can Meadows guarantee that no material will get into the South Canyon Tributary?

(c) The EA also fails to adequately analyze impacts from removing trees within the riparian reserves.

(d) The EA also fails to include appropriate mitigation measures. The only mitigation measures listed suggested that Meadows would be placing downed logs “in and along streams.” We strongly urge the Forest Service to prohibit this type of activity.

(e) The measures listed on page 12 also fail to mitigate impacts to the stream but simply list a number of management practices that are not proven to prevent sediment delivery.

Response

- (a) *The area where Lift 21 is proposed is dominated primarily by two soil types, both of which are described in the 1979 Mt. Hood National Forest Soil Resource Inventory [EA @ p.9]. Soil type 379, occurring below the top of Daisy Lift down to the proposed bottom terminal (of Lift 21) is a sandy, well-drained soil identified as having a low sediment yield potential (i.e. sediment levels of silt and clay particles are not expected to be significant following management activities [EA @ p.10].*
- (b) *Tower footings can be up to 10'x10'x10'. Excess soil from the two towers in question would be packed off away from the site (and riparian zone) and dispersed elsewhere such as was done for all the lower tower footings of the Heather Canyon chairlift. These details will be in final construction plans.*
- (c) *Impacts from riparian tree felling were disclosed in the EA p. 20, 35, 42-43. The effects are minimal (less than 0.1% riparian area disturbed in the analysis area). There would be no loss of shade, no increase of peak flows, and the stream along which the trees would be felled is not dependent on large wood as a channel forming and/or maintaining component.*
- (d) *Mitigation requirements outlined at EA p. 12-13 will protect aquatic resources during and after construction. The only additional mitigation requirement deemed necessary by the District Fisheries biologist to protect aquatic resources is at EA p. 44.*
- (e) *Time-tested and proven products and techniques described in the mitigation measures are prescribed to reduce the risk of erosion. Sediment delivery implies that eroded soil particles will make it to a watercourse. While there is always a chance that some soil particles from this project will make it into a watercourse, it is very unlikely that it would be a measurable addition to the water (or measurable degradation of water quality).*

Comment #14 – ARP Calculations Understate Risk

We question the calculations of Aggregate Recovery Percentage and feel that the EA may have understated the risk of damaging peak flows in Mitchell Creek and South Canyon Tributaries watershed. We hope to see fully detailed information regarding the peak flow analysis in the Analysis Files once we reviewed them following issuance of the Decision Notice.

Response

The aggregate recovery percentage (ARP) model is only one tool utilized in the peak flow analysis for this EA. Refer to the EA p. 18-20 for a full discussion of peak flow effects. Findings of this analysis are further supported by other documentation and field visits. As stated in the EA p.16, the watershed analysis didn't identify significant bank erosion or scour in area stream channels. Bank erosion or channel bed scour can be indicators of increased peak flow.

Response to Comments from Kate McCarthy

Comment #1 – Need for Lift 21

Every foot of the area to be served by Lift 21 can be skied with existing lifts, and that the easier area for beginners can be reached by a trail down from the top of Cascade lift.

Response

See EA p. 5 under the No Action Alternative. The terrain to be used cannot be accessed by many novices given the intermediate-level trails from Cascade Express. After some mileage skiing the higher terrain, some users would be comfortable trying Cascade Express while some may never get the confidence and Lift 21 would be as high as they ever try.

Comment #2 – Obliteration of Temporary Road

I am particularly concerned with the 3270-foot road. From my observation this road is not obliterated as stated, but much of it is very visible.

Response

Yes, the lower 1/3 of the Cascade Express construction road is visible, but we note no detrimental erosion problems with that segment. It is that segment where our latest soil stabilizing and revegetation techniques would be applied – materials and technology not available when Cascade Express was built.

Comment #3 – Erosion from Road Construction

I do not agree that erosion is unlikely from road construction at this elevation.

Response

The ground is so well drained and rocky, the chances of water erosion are extremely small as is indicated by un-vegetated portions of the former Cascade construction road, which has not seen significant erosion. The amount of fine material blown out should be small and not measurable [EA, @ p.12]. The erosion from the temporary road will exceed the naturally occurring wind erosion in the upper reaches of the ski area, but not to a measurable extent.

Comment #4 – Comparability of White Bark Pine Planting Location

The location of the planted white bark pine trees (most of them have died) is not comparable to the location of those to be removed.

Response

It is true that most of the trees died. Although planting white bark pine seedlings can help to mitigate losses, the statement in the EA on page 56 that the removal of nine small white bark “...has been mitigated by the planting of twenty-five white bark pine...” is not accurate. The 25-planted trees (with 6 survivors) were an experiment done by the Forest’s reforestation coordinator. They were not planted in anticipation of being mitigation for Lift 21 activities. This statement was the result of some misunderstanding among the ID team members on the purpose of the plantings. Thank you for pointing this out. (See also response to Cascade Resources Advisory Group comment #12)

Comment #5 – Protection of Krummholz-pincushion Areas

There is no way Mt. Hood Meadows can guarantee that the thousands of skiers and snowboarders, and drivers of grooming and snow farming equipment can be 100 percent careful (in reference to damage to the Krummholz-pincushion areas, particularly in regards to inadequate snow levels).

Response

Groomers occasionally nick white bark pine trees that are buried in the snow [EA @ p.55]. The ski area trains groomers each year to be as careful as possible when farming snow around Cascade, but some trees continue to be damaged. No tremendous tree mortality from grooming operations has occurred to put the stands at serious risk. Skiers and snow boarders have very little physical impact on the trees because the area is not opened to use until an extensive snow cover is in-place to cover the very rocky area.

Comment #6 – Concerns about Cumulative Impacts

In addition to the concerns about Lift 21, I am concerned with the cumulative impact, past, present and future, of all the lifts planned for this high elevation area. This large increase in use appears to be overstepping any reasonable limits for protection of high altitude ecosystem.

Response

There are no other lifts proposed for this area at this time. The Forest Plan EIS addressed cumulative effects of ski areas on the forest, and the Master Plan EIS addressed potential cumulative effects of all proposed MHM elements including several high altitude lifts. The Lift 21 EA added further effects analysis to those data of past, current and reasonably foreseen projects. The ID Team looked at the effects of development from 1967 to the present time including, in some cases, on-going projects like lower Cascade revegetation, and revegetation of the new access road from Hwy 35. Because the Forest has no formal proposal from Mt. Hood Meadows for other projects (beyond what is proposed for Lift 21), there is nothing in the foreseeable future to include in cumulative effects analysis [EA @ p.9]. Refer also to response to Cascade Resource Advisory Group comment #3.

Comment #8 – Need for Lift 21 Unclear

The need for expansion is not clear. Non-structural approaches – such as encouraging more mid-week and night skiing could increase use of existing facilities.

Response

Reference Gisela Ray comment #1 response. More midweek and night skiing would not meet the need of providing access to underutilized terrain for novices and would not improve the balance of skiing terrain. It would also not provide novices with an above tree line skiing experience. MHM's marketing does attempt to spread use over the week, but the skiing public is only so flexible with its leisure time.

Response to Comments from Peter Cornelison

Comment # 1 – No Additional Lifts at MHM Needed

I see no need for additional lifts there (MHM), except for corporate greed. I have skied at Meadows many times, at different hours of the day, and witness only a fraction of available lifts operating. There is already an abundance of beginner, intermediate terrain available.

Response

Reference Gisela Ray comment #1 response. This lift proposal does not involve the use of other lifts on the mountain and is not meant to increase area-wide uphill capacity other than for the novice users.

Response to Comments from Mary Lou Daily

Comment #1 – Need for Lift 21 Questioned

(a) The main slope accessible from the Daisy lift is already crowded by skiers and snowboarders of all levels of expertise. Another chairlift will exacerbate the problem by restricting space and increasing the number of people using this slope.

(b) The “open spaces and panoramic views” can be reached by taking the Daisy lift followed by the Cascade Express lift to ski the Texas trail.

(c) From my observation of beginning skiers and snowboarders, it is not long before they are capable of negotiating intermediate level runs.

(d) There are steps that management could take to aid novice skiers and snowboarders, such as using more personnel patrolling the slopes to slow the speed of skiers and snowboarders in areas used by novice; or replace the Daisy Lift with a modern detachable lift, which would make it easier for novices to use.

Response

(a) *The people using Lift 21 will mostly funnel into the Red/Buttercup areas, not into Daisy Bowl.*

(b) *As stated in other responses, most novices cannot negotiate Texas Trail their first trips up high and many may never get the confidence to do so.*

(c) *Some users progress to steeper terrain, others may not or simply are comfortable not trying to go beyond a certain limit. There will be a continuous flow of new users taking advantage of the lift.*

(d) *MHM is doing all of these things, but they have their limits. Regardless of speeders, beginners still need space amongst themselves. The ski area just modified Red into a more beginner-friendly chairlift (now called “Easy Rider”) with new chairs and a variable speed drive to go slower. A replacement of Daisy with a high-speed detachable lift is envisioned by the Master Plan, but not all of the trails from Daisy are “green” ability ratings. The upgrade of Daisy has not been proposed by the permittee for site-specific evaluation.*

/s/ Kim M. Titus

KIM M. TITUS
District Ranger

December 13, 2001
Date