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FINAL ENVIRONMENTAL IMPACT STATEMENT

Mt. Ashland Ski Area Expansion

Rogue River -Siskiyou National Forest
Ashland Ranger District

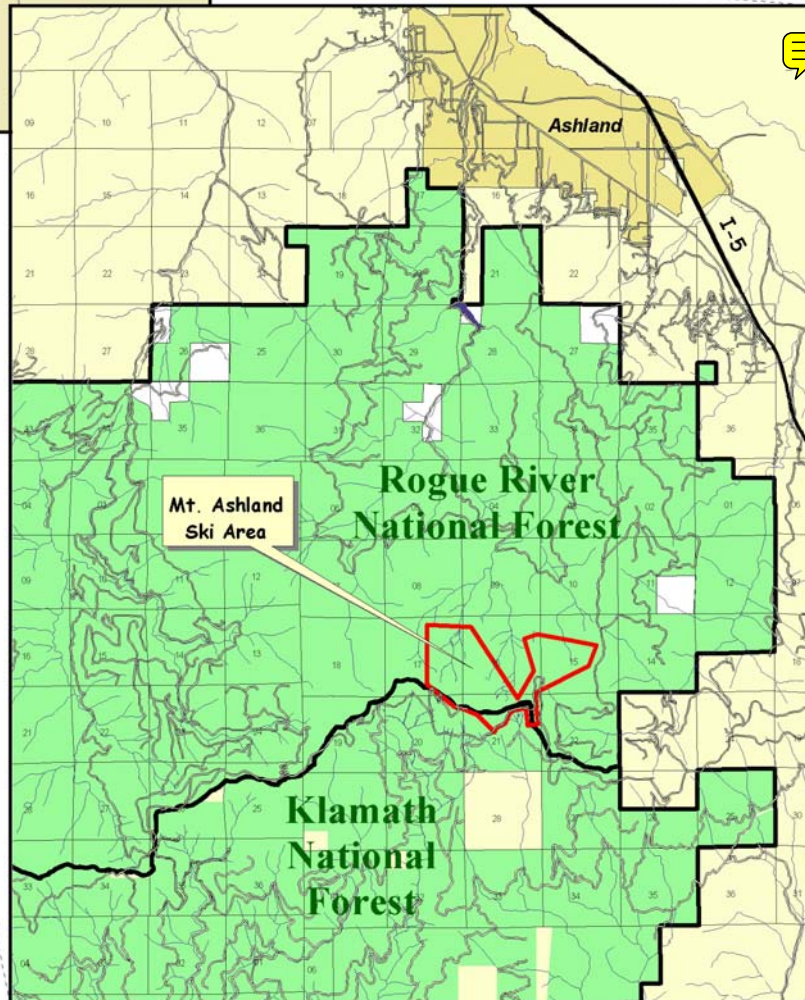
Klamath National Forest
Scott River Ranger District

Volume 3





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RESPONSE TO COMMENTS

Appendix A

Final Environmental Impact Statement Mt. Ashland Ski Area Expansion

Summary of Responses to Comments Received on the July 2003 Draft EIS

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Appendix to Final Environmental Impact Statement Mt. Ashland Ski Area Expansion

Summary of Responses to Comments Received on the July 2003 Draft EIS

The Draft EIS was made available for public review and comment under the provisions of the National Environmental Policy Act (40 CFR 1500-1508), and Notice, Comment, and Appeal Procedures for National Forest System Projects and Activities, (36 CFR 215). The Forest Service accepted written, electronic and oral comments as provided in §215.6. Pursuant to 36 CFR 215.6 (b), (1), this appendix documents the Responsible Official's consideration of all substantive comments submitted in compliance with paragraph (a) of this section.

PUBLIC INVOLVEMENT

A 60-day public comment period for the Mt. Ashland Ski Area Expansion DEIS formally began on July 25, 2003 with publication of a Notice of Availability in the Federal Register (FR 44080). A press release announcing the availability of the DEIS was sent to local media in southern Oregon and northern California on July 22, 2003. At the request of the City of Ashland, the public comment period was extended for an additional 30 days on August 18, 2003. This extension allowed for a 90-day comment period that closed on October 23, 2003.

Three hundred paper copies and 75 compact discs of the full DEIS were produced along with 150 paper copies of the Summary. Copies of the full DEIS were distributed to federal and state agencies, local governments, elected officials, six Federally recognized tribes, media representatives, libraries, organizations, and businesses (See DEIS, Chapter VII, for a listing). The full DEIS was provided to others upon request, until all copies had been distributed. The document was also made available on the Rogue River National Forest website at <http://www.fs.fed.us/r6/rogue/>. Copies were available at five libraries in Jackson and Siskiyou Counties. Copies were also available for review at Forest Service offices in Medford and Ashland.

Numerous radio, television and newspaper stories followed publication of the DEIS. A variety of organizations throughout the region discussed the DEIS in their newsletters, websites, and/or prepared special mailings for their memberships.

Forest Service employees, including the IDT that analyzed the six alternatives in the DEIS, held an Open House to facilitate public comment and to clarify the alternatives before the October 23 public comment deadline. A formal public hearing was also conducted on this date where numerous individuals provided oral comments to the Forest Supervisor (Scott Conroy) and the Acting Ashland District Ranger (John Schuyler). Four public field trips to the MASA were lead by Forest Service personnel. Further field trips were also conducted for City of Ashland officials. Other organizations also led field trips to the ski area.

City of Ashland staff and council members conducted one study session and two city council meetings devoted to the DEIS. Public attendance at these meetings showed a high interest in issues associated with the proposed expansion of MASA. The City, as part of their comments to the DEIS, included over 230 pages of comments that they received from the public. All of these comments were carefully read by Forest Service personnel.

SUMMARY OF PUBLIC RESPONSE

A total of 3,269 comments to the Draft EIS were received by the Ashland Ranger District. All comments received by the close of the Comment Period were reviewed and were considered as part of the comment analysis process. Comments received following the close of the Comment Period were reviewed for substantive content but were not entered in the database (these people do not have “standing” for appeal under 36 CFR 215). All comments were read and coded based on content and intent, by a Forest Service planning team, with District Ranger oversight, review and concurrence. The District Ranger read all unique comment letters.

The following statistics are provided for information only to show the basis and diversity of public response and comment to the Draft EIS.

Form Of Response

The Forest Service tracked the various types of comments by form of response communication. Approximately 145 (4%) of the comments were received via the electronic site established by the Forest Service to receive comments on the Draft EIS. Approximately 57 comments were received via an electronic site established to facilitate an electronic response (that contained a pre-determined viewpoint). Nine comments were received via facsimile machine.

Approximately 2,760 (84%) of the responses were received as “form cards” with a pre-determined viewpoint. These included viewpoint supporting a particular alternative, including Alternative 2, 5, No-Action, or a call for supporting a “Community Alternative.” Many of these cards were designed to be submitted to the District Ranger (at Ashland) and concurrently to the Forest Supervisor (in Medford). These types of form cards were tallied once when received from the same person. Many of these form cards provided space for comments, which were read and coded for substance, as applicable.

Approximately 45 (1%) of the responses were generated (via court recorded transcripts) or received as a result of the public hearing held by the Forest Service (October 23, 2003). Several “petitions”, sometimes containing hundreds of signatures were also received.

Approximately 246 (8%) comments were submitted as handwritten or typed letters or postcards with uniquely generated comment.

Type of Respondent

The Forest Service tracked the various types of comments by type of respondent. The following table shows the type or respondent tracked and the number of comments received by each type. As required by Forest Service policy, copies of the actual letters received by government agencies and elected officials are contained at the end of this Appendix.

3,216	Individual/family
2	Federal agency
1	State agency
5	City agency or official
3	County elected officials
2	Chambers of Commerce
4	Industry interest (skiing or other, including clubs)
12	Environmental organization
4	Business/business organizations
4	School representative (includes Special Olympics, MARA, etc.)
16	Mt. Ashland Association (proponent) and/or permit holder (City of Ashland)
3,269	Total

Geographic Location

The database developed for tracking comments allowed the Forest Service to determine the geographic location of those providing comment. This is for informational purposes only and only offers a sensing of the location of those who chose to comment on the DEIS.

Approximately 2,429 (74%) of the respondents were from the general southern Oregon area. This included comments from the Oregon cities or communities of Applegate, Ashland, Butte falls, Cave Junction, Eagle Point, Gold Hill, Grants Pass, Jacksonville, Medford, Merlin, Murphy, Phoenix, Rogue River, Ruch, Selma, Shady Cove, Talent, Trail, White City, Wilderville, and Williams. Of these, 1,103 were from Ashland, 785 from the Medford/White City area, 182 from Grants Pass, 100 from the Talent/Phoenix area, 90 from Jacksonville, 36 from Eagle Point, 35 from Williams, 32 from Gold Hill, and 22 from Cave Junction.

Approximately 26 (<1%) of the respondents were from northern California, including the cities or communities of Burney, Forks of Salmon, Fort Jones, Happy Camp, Hornbrook, Lakehead, Montague, Mt. Shasta, and Yreka. The remaining percentage of respondents were from elsewhere, most notably within the State of Oregon and in an around the Portland area.

Summary Of Preference

The database developed for tracking comments also allowed the Forest Service to summarize the preference, by alternative, of those providing comment. This analysis and forthcoming decision is not based on a vote and respondents were not asked to provide a preference. Of those commenters who did provide preference, the recognition of preference was sometimes unclear, or viewed as conflicting. In tracking preference, the Forest Service did not attempt to interpret what the preference was intended to be, rather tracked what was stated (or not stated) as a clear preference. Because of this inherent subjectivity, preference is provide for informational purposes only. Because a number of petitions were received that indicated preference, two methods of displaying preference are provided; 1) preference by comment letter, and 2) preference by number of signatures. Note that many letters contained more than one signature, hence the difference in preference depending how it is tracked.

The preference by **comment letter** (number of responses = 3,269) **by percent** is as follows:

Not expressed or conflicting	11
Alternative 1 (No-Action)	14
Support expansion - no preference identified)	2
Alternative 2	47
Alternative 3	1
Alternative 5	21
Alternative 6	.6
Alternative 2 or 6	.3
Alternative 4 or 5	< .1
Modified Alternative 3 (Headwaters)	3

The preference by **number of signatures** (total signatures = 6,235), **by percent** is as follows:

Not expressed or conflicting	6
Alternative 1 (No-Action)	24
Support expansion - no preference identified)	1
Alternative 2	54
Alternative 3	.5
Alternative 5	12
Alternative 6	.4
Alternative 2 or 6	.1
Alternative 4 or 5	< .1
Modified Alternative 3 (Headwaters)	2

Summary Of Comments

Substantive comments received generally focused on the transparency of analysis, and the detail and basis of assumptions of analysis. There were some comments that provided new information or sources of new information, or expanded on existing issues. A number of comments offered suggestions or ideas for component action, i.e., locations or types of lifts, runs, facilities, etc. There were several comments that offered a “package” of actions suggested as a new alternative. There were several comments that suggested methodologies for implementation, mitigation, or quality control.

The majority of comments received were not considered substantive, as they primarily offered opinions or rationale for their viewpoint. These viewpoints tended to focus on support for expansion in terms of the Proposed Action, no support for ski expansion at all (especially in the Middle Fork Area), or support for expansion that would have reduced impacts over those associated with the Proposed Action. Many of these non-substantive comments were sincerely written and offered some detail in support of their opinion, from all perspectives (i.e., for or against expansion).

RESPONSE TO COMMENTS

This section contains the comment statements and responses. After analyzing the comment statements as described below, the Planning Team with assistance from the Interdisciplinary Team grouped the related topics to avoid duplication and responded to the comments. The comments and responses are intended to be explanatory in nature; if there are any inadvertent contradictions between this Appendix and the text of the Final EIS, the Final EIS prevails.

Coding Assumptions

As noted above, individual comments were reviewed and sorted into two types – substantive and non-substantive. A working definition of **substantive** was utilized that categorizes **substantive comments** as those that:

- Provide new information pertaining to the Purpose and Need, Proposed Action or an alternative
- Identify a new relevant issue or expand upon an existing issue
- Identify a different way (alternative) to meet the underlying need
- Identify a specific flaw in the analysis
- Ask a specific relevant question that can be meaningfully answered or referenced
- Identify an additional source of credible research, which if utilized, could result in different effects

Substantive comments were coded on individual letters with a four or five digit numerical code placed on the right margin of the letter. A tracking list was developed that organized the substantive comments in an order approximating the structure of the DEIS document. The main point of the comment was also underlined on each letter. Unique substantive comments were identified only once among all letters, and were assigned the same number code when contained in multiple comments. A database was established that tracked individual comments, their source and the number of times a substantive code was read. These comments and codes are presenting and responded to in this Response to Comments Appendix to the Final EIS.

A working definition categorizing **non-substantive comments** (and associated letter codes) include those that:

- 0001 - Primarily focus on personal values or opinion or simply provide or identify a preference (vote) for an alternative considered**
- 0002 - Restate existing management direction, laws or policies that were utilized in the design and analysis of the project (or provide personal interpretation of such), or restate analysis or information documented in the DEIS)**
- 0003 - Provide comment that is considered outside the scope of the analysis (not in compliance with current laws and policies, is not relevant to the specific project proposal, or is outside of the Responsible Official's decision space)**
- 0004 - Lack sufficient specificity to support a change in the analysis or permit a meaningful response, or are composed of general or vague statements not supported by a rationale, data or research**
- 0005 - Outside scope: comments on the opinions or view of others**
- 0006 - Outside scope: comments that focus on the difference between the 2000 DEIS and the 2003 DEIS**
- 0007 - Outside scope: comments made in regard to FOIA requests and/or information provided or not provided under the FOIA**

Non-substantive comments were also coded on individual letters with the above **numerical codes (0001 - 0007)**. Typically, each paragraph or group of similar comment theme was assigned a code placed on the right margin of the letter.

Each substantive comment is captured in **bold** below, followed by the agency's response to each. To minimize duplication, substantive comments addressing essentially the same topic or concern have been consolidated among the various letters. Each comment contains an example citation and/or reference to the comment letters where contained. Every comment was read, reviewed and considered, regardless of whether it was one comment repeated many times by many people, or a comment submitted by only one person. Emphasis was placed on the content of the comment. Responses to comments were provided by the Forest Service planning team and resource specialists with interdisciplinary review.

Minor Corrections, Clarifications, & Changes for Consistency: Text

The following set of comments were identified as minor editorial corrections, and/or comments that could be easily responded to with clarification, supplementation, explanation or text improvement in the Final EIS. They were identified in the comment letters with a four-digit code preceding the content.

Comment #1: Ability level ratings for Caliban and Dream runs (not Beginner) (0010)

Currently, beginners must navigate terrain that is significantly more challenging at the top of the Ariel lift in order to get to the beginner and intermediate terrain of the dream and Caliban runs. (D03-3221, page 11; D03-3225, page 4)

Response: Beginners do not navigate terrain from the top of Ariel. As stated at DEIS page III-198, access to the easier parts of Dream and Caliban is via Upper Dream which has an Upper Intermediate rating. While it is somewhat common for Lower Intermediate and Intermediate skiers to use this run, especially during ideal conditions, the runs at the top of Ariel lift are not used by Beginner or Novice skiers.

Comment #2: Clarification of glading methods (developmental & iterative to proposed conditions) (0011)

Allow experimental glading; it is our understanding that the glading activity is intended to be experimental... (D03-3221, page 11; D03-3225, page 7)

Response: Glading would not actually be experimental. The word “adaptive” is a better term to describe glading implementation. The DEIS states on page II-34 that 20-40 percent of the trees (up to 17 inches DBH) would be removed. These are maximum numbers. It is expected that fewer trees would be cut in the first year of implementation. After a season of skiing, MAA and the Forest Service would determine if further selective tree removal would contribute to a more high quality ski experience. The goal is to cut as few trees as possible while still providing for wind protection and open routes through the stand. In some cases that may only require 10-20 percent of the trees to be removed. This will be clarified in the FEIS.

Comment #3: Susceptibility to windthrow - spruce stand and wetlands (0012)

The DEIS does not address the openings in the Englemann spruce stand created by the project and the corresponding susceptibility for the Englemann spruce to blow down, especially in wetland areas. (D03-3226, page 13)

Response: Edge effects and susceptibility to windthrow is discussed in relation to the Middle Fork and wetland areas at DEIS page IV-155 through 157. Effects on Engelmann spruce are specifically discussed at DEIS page IV- 150 through 155. Also see response to Comment #173)

Comment #4: Clarify northwest and national visitation rates (0013)

Although the DEIS (ref III-188, 189) state Oregon and Washington growth has exceeded national averages in most ski season over the past 10 years, this contradicts statement in previous paragraph that says Northwest visitation has been flat. (D03-3224, page 7)

Response: The DEIS stated that skier visits were “relatively” flat both nationally and in the Northwest. Although skier visit growth in Oregon and Washington has exceeded national averages, that annual average growth rate was 1.1 percent between 1987/88 and 2001/02 (DEIS page III-189). Growth in Oregon and Washington during this period should not have been described as “flat.” It should have been described as moderate, as evidenced by the fact that it exceeded national averages during this period. This data will be summarized in a table in the FEIS.

Comment #5: Clarify regional ski areas and 5 hour, 250 mile radius assumptions (0014)

How did the FS determine “Regional ski areas...draw skiers from within a 5 hour driving radius of approximately 250 miles”? The DEIS says that Dyer mountain would only attract visitors from 3 ½ to 4 hours drive away (IV-248). Yet the DEIS also assumes that MASA will attract visitors from 5 hours drive away...how can this be possible when the Dyer Mountain facility will be much larger and be a destination resort? (D03-3224, page 7 & 10)

Response: The DEIS states on page III-189 that regional ski areas “typically” draw skiers from within a 5-hour driving radius or 250-mile radius. This factor is used to estimate the number of skiers in Mt. Ashland’s regional market. Page IV-248 refers to a specific market analysis performed for the proposed Dyer Mountain ski area. These types of assumptions often vary among analyses for individual areas, depending on the nature of the specific facility and market area, including the type and number of other ski areas in the market area.

Comment #6: Clarify statements regarding expansion at Mt. Bachelor and resulting visitation (0015)

The first key assumption on page IV-236 fails to state that ski area have expanded and failed to attract more visitation. A prime example is Mt. Bachelor, which has expanded continuously but has less visitation today than at any time in the last fifteen years. (D03-3224, page 8)

Response: It is true that some ski areas have expanded without seeing significant increases in visitation. Mt. Bachelor is one example of this. And, there are numerous examples of other ski areas which have seen increased visitation after expansion. Mt. Hood Meadows in Oregon, Stevens Pass in Washington, Mt. Shasta Ski Park in California and Whistler/Blackcomb in British Columbia are a few examples from the Pacific Northwest. Other examples can be found throughout the United States. Mt. Bachelor is in the highly competitive, regional destination resort category; it is a resort that is challenged by the lack of on-mountain overnight lodging. It competes not just in Oregon but regionally and nationally for skier visitation. Largely as a result of the lack of slope-side accommodations, much of the growth in visitation that Mt. Bachelor may have realized with this amenity has gone to competitor resorts in British Columbia and California. Numerous other variables may also affect Mt. Bachelor visitation, including marketing, personal income in the Northwest, market competition, available leisure time, etc.

Comment #7: Clarify projected skier visits regarding assumptions for stated years (e.g., drought) (0016)

The fourth key assumption on page IV-236 is faulty because it used a drought year to compare 1990/1991 visitation with 2001/2002, a non drought year. (D03-3224, page 8)

Response: This assumption is not comparing these two seasons. It is comparing the average overall growth from 1990/1991-2001/2002. These years include drought years and years with above normal snowfall, as would any time period selected during the past 20 years. Data for 1984/85 through 2001/02, the longest continuous time period for which Forest Service data was available when the EIS was written, shows an increasing trend in visitation at Mt. Ashland (see Figure III-10 on DEIS page III-193). This period begins with a heavy snow year.

Comment #8: Clarify projection of skier visits (math on Tables IV-45, IV-46 and IV-49) (0017)

Visitation data is incorrect. Tables IV-46 and 49 state that base visitation is 88,927 in 2002/2003. Assuming this base continued through 2003/2004, the numbers used for the 2005/2006 visitation are well above the 1.2-1.7% shown in Table IV-45. (D03-3224, page 10)

Response: The projected visitation for 2005/06 includes skiing and tubing visits and assumes that visitation increases by between 1.2% and 1.7%, depending on the alternative, each year. Taking *Alternative 2 low growth rate* as an example, Visitation in 2005/06 = (Base visitation in 2002/03) x (1 + growth rate for 2002/03-2003/04) x (1 + growth rate for 2003/04 - 2004/05) x (1 + growth rate for 2004/05 - 2005/06) + (tubing visits for 2005/06) = (88,927) x (1 + .012)x(1 + .012) x (1 + .012) + (4,495) = (88,927) x (1.012) x (1.012) x (1.012) + (4,495) = 92,167 + 4495 = 96,662 as shown in DEIS Table IV-49 on page IV-240.

Comment #9: Clarification on expected success of revegetation efforts (II-96 and II-103) (0018)

The DEIS state that 100% revegetation will not occur, but then states that “...all disturbed ground will be revegetated.” This is a contradiction. (D03-3224, page 19)

Response: The complete text at DEIS II-96 provides general statements to describe the conditions at this elevation within the Special Use Permit. What is meant is that an attempt to revegetate all disturbed areas would be made; 100% success of this revegetation is not (and cannot) be expected. Revegetation is expected to be effective.

Comment #10: Clarification on success of restoration projects (IV-65 from III-34) (0019)

The DEIS discusses the numerous “...restoration practices (that) have been tried...” but does not disclose the success or lack of success of restoration practices. (D03-3224, page 20)

Response: A history of local restoration practices was provided at DEIS III-34 through II-41. This section discusses practices that have been successfully implemented as well as those that have failed.

Comment #11: Clarification; acres inclusive of all clearing? (0020)

The DEIS repeatedly states that 71 acres will be cut in proposed Alternative 2.....does this figure include other cutting, such as run widening, the tubing hill, and clearing for facilities, etc? (D03-3224, page 13)

Response: The 71 acre figure describes the total additional skiable terrain proposed under Alternative 2. As stated at DEIS page II-70, 68 acres (of 71) would require clearing and tree removal. The Tubing Facility is not included within the 71 acre skiable terrain figure; as stated at DEIS page II-33; it would include an additional 3.8 acres of clearing.

Comment #12: Clarification on use of “spider” excavator (e.g., example or equivalent) (0021)

The FS should specify disturbance or compaction standards and allow the contractor to choose equipment and method to meet those standards. (D03-3220, page 5)

Response: The Forest Service made reference to a type of equipment known as a “spider” to represent a type of low ground pressure machine that would reduce impacts from run clearing and other excavation work. This was not meant to imply a restriction or requirement for a specific type of equipment. The disturbance or compaction standards are the focus. This will be clarified in the FEIS.

Comment #13: Clarification on use of rock drills (e.g., example or equivalent) (0022)

The FS should specify disturbance or compaction standards and allow the contractor to choose equipment and method to meet those standards. (D03-3220, page 5)

Response: As noted above, the Forest Service made reference to a type of equipment known as “rock drills” to represent a type of equipment that would reduce impacts from run clearing and other excavation work. This was not meant to imply a restriction for a specific type of equipment. The disturbance or compaction standards are the focus. This will be clarified in the FEIS.

Comment #14: Clarification of ski area boundary management (0023)

The boundary management plan should limit MASA signage to the permit area and should discourage out-of-area use by lift-assisted users.....such signs should state entering a backcountry area, not patrolled and responsible for their own safety and survival... (D03-2241)

Response: The MASA Ski Patrol formerly signed portions of Road 20 on the south side outside of the Special Use Permit. That practice was discontinued in the 2002/2003 season. At the same time, the Patrol and the Forest Service cooperatively installed signs as suggested by this comment. Skiers have used the “south side” of Mt. Ashland for forty years, primarily between the summit and Mt. Ashland Campground. This practice is consistent with Forest Service policy which allows backcountry access by lift-assisted skiers. As discussed at DEIS page IV-252, it is expected that interactions between Nordic skiers and lift-assisted skiers would remain the same or decline under Alternatives 2, 3, 4, and 6 and increase in Alternatives 1 and 5.

Comment #15: Clarification of bridge crossing and LHZ 1 terrain affected (IV-9) (0024)

The DEIS says “bridge footings would primarily be located outside of LHZ 1 terrain” which means some portion of the footing would be located on unstable ground (p. IV-9). The document fails to quantify how much of the footings would directly affect LHZ 1 lands. (D03-3223, page 4)

Response: The bridge footings would be located outside of the LHZ1 areas as mapped. The LHZ 1 area where the bridge would be located includes just the streambank. The DEIS text should not have used the word “primarily”; this will be clarified in the FEIS.

Comment #16: Clarification of “eroded wetlands” and “mitigation measures to clear timber” (IV-9) (0025)

On DEIS p. IV-9, it states “Mitigation measures would be implemented to clear timber and/or trim brush through these LHZ 2 areas”. Clearing timber is not a mitigation measure. (D03-3223, page 6)

Response: This statement was poorly written and did not mean to imply that clearing timber is a mitigation measure. It was intended that mitigation would be employed *during* timber clearing or other activities within LHZ 2 areas. This will be clarified in the FEIS.

Comment #17: Clarification of “High Elevation Glaciated Granitics” - Chapter III and IV-13 (0026)

The DEIS states that High Elevation Glaciated granitics are “the most stable of granitic terrain” p. IV-13. This is misleading to lay people who may not know that granitics are the most unstable parent material found on the RRNF. (D03-3223, page 7)

Response: This statement was poorly written and meant to say that the High Elevation Glaciated granitics is the most stable of the granitic terrain types found in the area. This will be clarified in the FEIS.

Comment #18: Clarification of “no measurable increase in sedimentation (IV-92 v. IV-101) (0027)

The claim “No increase or measurable sediment delivery is anticipated” contradicts the DEIS at page IV-92: road-stream and wetland crossings, lift construction and logging would measurably increase sedimentation in drainages. (D03-3223, page 25)

Response: These statements were in reference to sediment delivery at different scales. There would be measurable sediment delivery at the site scale (true of any ground disturbing action). The statements at IV-101 were made from the watershed scales, where no measurable increase of sediment delivery is expected.

Comment #19: Clarification of sewage disposal circumstances during a power failure (0028)

If a pumping system is planned for the Moraine Lodge toilet facility - to transport sewage east to the main septic system - discussion of the planned system for power failures should be included. (D03-3191, page 3)

Response: The proposal for the Moraine Lodge toilet facility system includes a pumping tank of sufficient size to hold sewage produced over multiple days. In the event of a long-term power failure (over one day), the ski area would be closed and there would be no visitor use at the Moraine Lodge until power was restored. In a worst-case scenario where the Moraine Lodge was at capacity and the power went out for an extended period, skiers and boarders would be encouraged/directed to return to the Base Area, which makes use of a gravity fed wastewater system.

Holding tanks at the Base Area and Wastewater Treatment Plant have sufficient capacity for short term use (6,000 gallons or approximately 2 days use), and an automatic auxiliary power system would continue to operate the plant. Installation of a wastewater system at the Moraine Lodge would require conformance to all State and County standards. In addition, the Forest Service and MAA would incorporate safeguards in their annual Winter Operating Plan to address this issue.

Comment #20: Clarification of “skiable Area” - Table III-43 (0029)

This table compares “skiable area” of Mt. Bachelor listed as 3,686 acres with Mt. Ashland listed as 110 acres. This is incorrect...Mt. Bachelor is the accessible acreage, not the marked ski runs, according to the Mt. Bachelor website. (D03-3204, page 1)

Response: The error in this table will be corrected in the FEIS. The “skiable” or “accessible” area at Mt. Ashland is currently 238 acres, as defined by the ski area boundary (DEIS page III-199).

Comment #21: Correction to skiable area listed for MASA (0030)

The comparable “accessible” area including the south side is closer to 450 acres (not 110) and will be over 800 acres if Alternative 2 or 6 is developed. (D03-3204, page 1)

Response: The “skiable” or “accessible” area is defined at DEIS page III-199. It includes all terrain that can be accessed from a ski lift and where the skier/boarder can return to a lift via gravity. The DEIS used the term ski area boundary to describe and calculate the acreage for this terrain. Only a portion of the south side is included within this boundary. Ski area boundary acres for all alternatives are shown at DEIS Table IV-53, page IV-250. The ski area boundary is 506 acres for Alternative 2 and 498 acres for Alternative 6.

Comment #22: Inconsistency in Alternative 5 map vs. table in text (0031)

The fold out map for Alternative 5 does not show Run 20A: Correction to Table II-16, p. II-84; should not include Run 20A.

Response: This is noted as a typographical error: the Alternative 5 map is correct and the table at DEIS II-16 should *not* have included Run 20A. This will be corrected in the FEIS.

Comment #23: Clarify mitigation of soil displacement and fertility (II-95) (0032)

What does “mitigating soil fertility” mean? (D03-3224, page 19)

Response: This statement was poorly written and meant to say mitigation to actions that would result in maintenance or improvement to soil fertility. This will be clarified in the FEIS.

Minor Corrections, Clarifications, & Changes for Consistency: Maps

Comment #24: Run 15 location is not accurate to end of current run (Alternatives 2 & 6) (0700)

The DEIS states that the runs on the crest have been deleted. However Alternative 2 and 6 maps both show a run 15 that connect to the ridge run. There is no discussion regarding the increased amount of traffic this run would create and the impacts on plants by grooming. (D03-3224, page 23)

Response: The DEIS states that proposed Run 12A and proposed grooming of the West Ridge as described in the 2000 DEIS was eliminated based on MAA's 2002 proposal (pages IV-257 and C-1). The formerly proposed Lower West Ridge Run was also eliminated in MAA's 2002 proposal. There is no discussion of grooming effects to plants on the West Ridge because grooming is not proposed. Increased skier traffic is discussed at DEIS page IV-162. Run 15 does connect to the existing West Ridge Run, but it's almost entirely located on the north side of the ridge.

Comment #25: Contour lines on alternative maps are difficult to see (0701)

Photos without topographic lines are hard to examine and follow. (D03-3226, page 9)

Response: The alternative maps are a compilation of many layers of data. Contours were provided to assist the reviewer for location and elevation. The color of the contour lines did not show well on the paper copies as received from the printer of the DEIS document. An effort will be made in the FEIS to improve the visibility of contour lines on the paper copies.

Specific maps with contours are available on request. Reviewers are also encouraged to view these maps on the internet or in PDF format, which allows for "zooming" to much larger scales, allowing the contour lines to be more easily seen.

SUBSTANTIVE COMMENTS - PURPOSE AND NEED

General

Comment #26: Explain “active citizen participation” & lack of response to comments on 2000 DEIS (1002)

The DEIS does not state how or when this “active citizen participation” occurred. Comments made during the 2000 comment period were never answered. (D03-3224, page 24)

Response: The DEIS discusses the ongoing scoping process at I-1, and I-28 through I-31. This is what was meant as “active citizen participation”. It is this citizen participation that led the agency to re-issue a DEIS with additional alternatives and more analytical content. Because the 2000 DEIS did not result in a FEIS, the comments made on that draft were not responded to in a formal Response to Comments document. They were instead utilized in the preparation of the revised 2003 DEIS.

Comment #27: Purpose and Need too narrow (1101)

The DEIS creates a very specific purpose and need that artificially eliminates other viable alternatives. (D03-3224, page 3)

Response: The Purpose and Need section under this EIS is very detailed and contains many elements of need and purpose. It is not designed to eliminate alternatives; it was designed to show indicators of response to attainment of purpose and need.

Comment #28: Substantiate expansion and captured market share re: Mt. Bachelor (I-13) (1102)

Per the DEIS, “Ski areas that have invested in faster and more comfortable lifts, terrain expansion, increased run grooming and other quality improvements have typically maintained or captured additional market share. This is certainly not true at Mt. Bachelor. (D03-3224, page 21)

Response: It is true that Mt. Bachelor has invested in high speed lifts, terrain expansion, improved snow conditions and other facility improvements without recognizing additional growth in skier visitation. Instead, these improvements have helped to maintain market share over the last five years, which has averaged around 500,000 skier visits (per communication with Scott Kaden, Executive Director of PNSAA, 4/2/04). As noted in Response 0015, Mt. Bachelor operates in a highly competitive, regional destination resort category, and is challenged by the lack of on-mountain overnight lodging. Competitive resorts in British Columbia and Lake Tahoe have a substantial impact in visitation at Mt. Bachelor. British Columbia resorts have continually developed new recreational amenities and on-site accommodations, which has resulted in a substantial shift in market share within the Northwest region.

Not only is British Columbia the leader in skier visitation across Canada, British Columbia resorts have grown faster than any other region in North America during the last decade (National Ski Areas Association and Canada West Ski Areas Association). Between 1992/93 and 2001/02 British Columbia witnessed a 58% change in skier visitation compared to 21% and 13% in Washington and Oregon, respectively (Canada West Ski Areas Association and Pacific Northwest Ski Areas Association). Similar to British Columbia, Northern California ski areas (primarily Lake Tahoe areas) have also undergone major improvements in ski facilities as well as expansion and modernization of the resort bed-base.

Planning is currently underway for further development in the Lake Tahoe area, as well as British Columbia. In fact, with Vancouver hosting the 2010 Winter Olympics, combined with the goal of the British Columbia government to double tourism in the next eight years through the new Heartland's Economic Strategy (2003), competition among Northwest resorts will continue to remain strong. As a result, ski area operators will need to continue to make improvements in facilities to retain or grow market share. As in any business operation, there are numerous other variables that may also affect visitation including marketing, pricing, localized population and economic growth, competition for other recreational pursuits, available leisure time, weather, etc.

Comment #29: Industry standards: overall skier/rider market cite to sno.e 1998 (1103)

Table I-1 from the 2003 DEIS regarding the Industry standard for terrain does not match Table II-4 from the 2000 DEIS. Why don't these tables match? (D03-3224, page 69)

Response: Prior to the preparation of the 2003 DEIS, a great deal of data collection and mountain planning analysis was conducted in order to fully evaluate the Comfortable Carrying Capacity (CCC) under each alternative. In addition, the Forest Service and MAA obtained vastly improved base data, including new topographic and aerial photographic base mapping. These data were used to develop the analysis of ski terrain that is presented in Appendix L of the DEIS. By using GIS to carry out the analysis, SE Group was able to calculate the actual slope acreage (i.e., the acreage of the ski slope as measured on the ground) as opposed to an acreage calculation based on two-dimensional mapping. Overall, the improved base data, coupled with a detailed GIS analysis, resulted in slightly different terrain distribution numbers in the 2003 DEIS.

In the 2000 DEIS, the Overall Market (Industry Standard) numbers were based on information provided by Sno.engineering (now SE Group) in 1998. These numbers represent the percentage of all skiers at an "Industry Standard" resort in the western United States. This information was based on all ski areas in the western United States, including destination resorts such as those at Lake Tahoe, regional destination resorts such as Mount Bachelor, and day-use areas such as Mount Ashland. The 2000 DEIS showed the following breakdown for the market: Beginner – 2%, Novice – 13%, Low Intermediate – 20%, Intermediate – 35%, Advanced Intermediate – 20%, and Expert – 10%. That is to say, the market would demand enough expert terrain to support 10% of the total skier population at a ski area.

In the 2003 DEIS, SE Group updated the Industry Standard to reflect the pattern exhibited by a day use area, and to reflect the increase in snowboard use at ski areas (generally speaking, snowboarders prefer less expert terrain). This refinement of the market preference appears as a "skewing" of the preference away from the Expert category and toward the Low Intermediate category. As displayed in Appendix L of the 2003 DEIS, the following breakdown is provided: Beginner – 5%, Novice – 15%, Low Intermediate – 25%, Intermediate – 35%, Advanced Intermediate – 15%, and Expert – 5%. Again, these percentages indicate a proportion of the skier population at a given ski area.

Table II-4 in the DEIS displays the terrain breakdown provided in Appendix L, but in terms of acres, rather than percentage of skiers. For this analysis, it was assumed that Beginner terrain can comfortably accommodate 30 skiers per acre, Novice terrain can accommodate 18 skiers per acre, Low Intermediate – 14 skiers per acre, Intermediate – 10 skiers per acre, Advanced Intermediate – 7 skiers per acre, and Expert – 3 skiers per acre. Using these densities, and comparing the information in Table II-4 (acres) to the information in Appendix L (skiers), it can be stated that in the "perfect ski area":

- Beginners represent 5% of the skier population and require 2% of the terrain at a density of 30/acre
- Novice skiers represent 15% of the skier population and require 8% of the terrain at a density of 18/acre
- Low intermediates represent 25% of the skier population and require 18% of the terrain at a density of 14/acre
- Intermediates represent 35% of the skier population and require 35% of the terrain at a density of 10/acre
- Advanced Intermediates represent 15% of the skier population & require 21% of terrain at a density of 7/acre
- Experts represent 5% of the skier population and require 17% of the terrain at a density of 3/acre

Overall, the fact that the numbers in the 2000 DEIS appear to be similar to the numbers in the 2003 DEIS is purely coincidental. The 2003 DEIS mistakenly references Sno.engineering, 1998 as the source of the revised numbers. The FEIS will be updated to indicate that the Industry Standard provided in the current analysis is based on updated information presented in Appendix L.

Comment #30: Purpose and Need section does not address snow board terrain on viability (1104)

The purpose and need section of the DEIS fails to address the significance of snowboarder terrain on the economic viability of the ski area. (D03-3204, page 3)

Response: Purpose element #1, e, addresses “Diversity of Non-traditional Terrain at MASA, at DEIS page I-10. Purpose element #5 also includes viability and longevity with considerations of the skiing and snowboarding market place (DEIS page I-13).

Comment #31: Proposal not “ripe for decision” (phasing and 8 year implementation) (1300)

According to a NEPA course, it is required that a proposed action be “ripe for decision,” meaning ready for implementation is less than three years. This document stated that a proposed action is not ripe for decision when implementation is more than five years away. The FS cannot make a decision on those parts of the proposed expansion that are more than three years away. (D03-3224, page 28)

Response: There are no specific time requirements for “ripeness”. Actions that could occur now and for several years into the future are typically analyzed for an expansion proposal being analyzed with NEPA under an EIS. In this case, the proponent plans to begin implementation as soon as possible after a decision is made and expansion activities authorized. This would suggest that this decision is “ripe” at this time.

Issues

Comment #32: Concern for spring snow conditions on trails facing east and west, e.g., Rogers Way (1600)

Currently, the east-west facing trails have a slight problem during the time when corn snow prevails at the upper levels. What about the spring snow conditions on new trails? (D03-103, page 1)

Response: Spring snow conditions are expected to be similar on the new runs as they are on existing runs. Most new trails have north-facing slopes. A major exception is Run 1 in Alternative 4. It primarily faces east, so it would tend to have more slushy conditions than north-facing trails. It would “soften up” earlier than other trails which remain icy for a longer period in the morning. The lower portion of Run 12 is also east facing and is about 400 feet lower in elevation than Rodger’s Way. Since temperatures rise about three to five degrees for every 1,000-foot drop in elevation, the lower portion of Run 12 would tend to have a little more slush than Rodger’s Way during spring conditions.

Comment #33: Lubricating grease from ski lifts - petrochemical; water quality (1601)

An item that is not mentioned is the amount of lubricating grease that is used and falls underneath the ski lift pylons. (D03-715, page 1)

Response: Specifically, this potential consequence was not documented or identified as an Issue. It was generally analyzed under water quality with minimal effects being predicted.

Comment #34: Spiritual values include beautiful winter days and skiing on snow covered slopes (1602)

I would not argue that there are certain components of forest serenity that one could believe have spiritual value. However, I would argue that there is also spiritual value in enjoying a beautiful winter day skiing down a snow-covered slope. It is an exhilarating, breathtaking experience and is a piece of serenity of its own. The DEIS fails to speak to the spiritual value of the alpine skiing experience. (D03-2371, page 1)

Response: Specifically, this value was not documented as an Issue. It was generally analyzed under effects to lift served skiing and recreation. This value is associated with several elements of Purpose and Need.

Comment #35: Fire hazard and risk associated with expansion activities (1603)

Slash creation (from forest clearing) increases fire hazard. The EIS must account for implications to wildfire control efforts. (D03-3223, page 30)

Response: Specifically, this issue was not discussed in the DEIS. It was generally analyzed under clearing and slash treatment where minimal consequence was predicted. This issue will be added to the issue statements with specific and expanded consequence discussion in the FEIS.

Comment #36: No sensing of the environmental and social values of the community (1604)

The EIS cannot reasonably assess the impact of the proposed development without attempting to survey the community social values; the EIS fails to address the scope of this issue. (D03-3174)

Response: As stated in DEIS Appendix B (pages 1-3), public community sensing, voting, and other forms of public value seeking is not required under the NEPA process and are considered “Out of Scope”.

Permits

Comment #37: Requirements for Clean Water Act, 401, 404 permits, 1200C, etc. (1900)

The EIS is inadequate because it fails to disclose that Section 401 and 404 of the Clean Water Act applies to the Mt. Ashland Ski Expansion area. The MAA must apply and receive 401 and 404 certification. According to page I-42, the project will require a permit from the EPA, due to more than one acre of land being disturbed. Activities would require a 1200C Permit from ODEQ. (D03-3224, page 43)

Response: Both the 404/401 and 1200C permit processes are discussed in the DEIS; page I-42 states “The US Army Corps of Engineers (Corps) would provide the regulatory authority necessary to evaluate the Action Alternatives under Section 404 of the Clean Water Act. The Proposed Action and alternatives evaluated in the Draft EIS were developed with the objective of placing no dredged or fill material in jurisdictional wetlands or other Waters of the US.

As such, no Corps permit would be required, provided that the approved project can proceed with no placement of fill into jurisdictional streams or wetlands”. Because no dredged or fill material is proposed to be placed in jurisdictional areas, no 404 permit is anticipated to be required from the Corps. Similarly, because no fill is proposed, MAA would not be required to apply for a 404 permit or a 401 certification of the permit. Page I-42 of the DEIS further states “Components being considered in the Action Alternatives (e.g., ski runs) would require disturbance to one or more acres of ground, including clearing and grading. As a result, these activities would require a 1200C Permit from the ODEQ”.

Comment #38: March 9, 2000 Federal Register notice; new requirements for nationwide permits (1901)

The EIS does not discuss or analyze the impact of the new Department of the Army, Corps of Engineers Final Notice of Issuance and Modification of Nationwide permits. (D03-3224, page 43)

Response: The referenced Federal Register notice is a revision to the Nationwide Permit Program, which is a part of the permit process under Section 404 of the Clean Water Act. The applicability of the current Section 404 permit process was described on Page I-42 in the DEIS. Also see response to Comment #37, above.

Comment #39: Develop costs for reclamation (bond) upon ski area closure (1902)

The FEIS should address and quantify the reclamation costs for both the existing ski area and the selected alternative. Reclamation costs should include the unique attributes and restoration needs of the Middle Fork area should development occur there. It should account for emerging scientific principles in the discipline of ecological restoration (see Middleton 1999). (D03-2168, page 4; 3223, page 27 & 30)

Response: Funding for reclamation is already developed for the current ski area, as part of the Special Use Permit. If an action alternative is selected that allows expansion, a new reclamation bond would be developed, as part of implementation, depending on the selected alternative. The new reclamation bond would account for the reclamation of the ski area considering expanded facilities and full costs and “state of the art” techniques. This was discussed at DEIS page I-41.

Comment #40: Disclose legal and financial obligations - City of Ashland upon ski area closure (1903)

Please state clearly and completely in the FEIS the legal and financial obligations the citizens of Ashland have, if, over time, the ski area’s expansion cost and operating costs exceed its net revenue (and is forced to close). (D03-3204, page 3)

Response: According to the Ski Area Term Special Use Permit issued to the City of Ashland on July 2, 1992, upon termination or revocation of the special use permit by the Forest Service, “the holder shall remove within a reasonable time as established by the authorized office, the structures and improvements and shall restore the site to a condition satisfactory to the authorized office, unless otherwise waived in writing or in the authorization. If the holder fails to remove the structures or improvements within a reasonable period, as determined by the authorized officer, they shall become the property of the United States without compensation to the holder, but shall not relieve the holder’s liability for the removal and site restoration costs.” (7/2/92 Ski Area Term Special Use Permit Clause X.A)

According to the Mt. Ashland Ski Area Lease agreement between the City of Ashland and the Mt. Ashland Association of July 9, 1992, the “terms, covenants, provisions and conditions of the [Ski Area Term Special Use] Permit are incorporated into this Lease and Lessee assumes responsibility for payment and performance of all obligations of the City of Ashland under the Permit. Lessee agrees to hold harmless, defend and indemnify Lessor from and against all loss, claim or liability suffered by or asserted against Lessor as a result of the Lessee’s failure to fully pay and perform the obligations of the Permit.” (Mt. Ashland Ski Area Lease, 7/9/92 Clause 2.2)

According the Lease, the Mt. Ashland Association would be responsible for all legal and financial obligations of the Ski Area Term Special Use Permit and there would be no obligations on the part of the citizens or City of Ashland. The Mt. Ashland Ski Area Lease also includes extensive safeguards to protect the value of the facilities at a level significantly above the “minimum liquidation value” (Clause 2.1.6), which, in the case of a default or breach of the Lease, and a termination of the Lease by the Lessor (City of Ashland) (Clause 12), would provide sufficient funds for the restoration of the Permit Property required by the Ski Area Term Special Use Permit.

SUBSTANTIVE COMMENTS - ALTERNATIVES

General

Comment #41: Consider addition of groomed Nordic trail to Grouse Gap shelter (2000)

There are myriad improvements possible without the construction of any new facilities. Some are possible with the construction of minimal or no new facilities, only services, such as the addition of a groomed Nordic trail to Grouse Gap Shelter. (D03-923, page 2)

Response: This idea and other similar ideas were discussed in DEIS Appendix D (pages D-31). This is not in alignment with the stated Purpose and Need and was not considered in detail. Rationale for eliminating detailed consideration is contained in DEIS Appendix D.

Comment #42: New Community Alternative (Headwaters) based on Alternative 3 (include components not changed or mentioned from DEIS Alternative 3) (2001)

Note: The “Community Alternative” is described in detail in letter D03-3225. Individual components of expansion are described later in this Response to Comments Appendix. This comment deals with the request of “The Users Group, Headwaters, and the City of Ashland and others, to analyze a separate modified alternative, based on DEIS Alternative 3. (D03-3221, page 9), (D03-3225, page 3 & 4), (D03-3230, page 1)

The City of Ashland City Council determines that the Community Alternative merits analysis by the Forest Service as an additional alternative in the FEIS.

Response: Alternatives as received from the public were carefully reviewed by the IDT, MAA and contracted ski area planners for understanding and analysis of each component, as well as the feasibility of the submittal as an alternative package. Some ideas for component actions (e.g., suggestions for specific lift or run locations) were found to already be a component of an action alternative being analyzed in detail. Other component actions were found to be technically infeasible or in some cases, could not be analyzed because they lacked enough specificity.

In each case, when considering this public alternative as a package, it was found to be essentially similar or identical to those already being analyzed in detail. In cases where differences could be determined, the overall difference as an alternative package was not found to represent or fill a gap in the range of alternatives considered in detail. Based on these conclusions, this alternative was considered but eliminated from detailed consideration by the Responsible Official. This alternative will be fully discussed in FEIS Appendix D (Considered But Eliminated).

Comment #43: Propose a new RNA or Botanical Area for Englemann spruce grove (2002)

Set aside all of the remaining Englemann spruce, including the grove within designated expansion area, under some special designation such as a Research Natural Area or Botanical Area. (D03-2245, page 7)

Response: This idea was considered and responded to in DEIS Appendix B. It was determined to be “out of scope” to this analysis. DEIS Appendix B, page 4 states “Review and assignment of specific areas to a specific land management allocation are part of Forest-level planning. The current Forest Plan was enacted in 1990 and amended by the NWFP in 1994. Reconsideration of areas for designation as an RNA would occur during Forest Plan Revision and is out of scope to this analysis at this time.”

Comment #44: Consider a “restoration only” alternative (2003)

A restoration only alternative is not considered. It is misleading to contrast all action alternatives against No Action because it does not include the restoration projects. All action alternatives should be contrasted to a restoration only alternative in addition to the requisite No Action alternative. (D03-3196, page 1; (D03-3205, page 1)

Response: A “restoration only” alternative would not be in alignment with the stated purpose and need for this analysis. No-Action under NEPA, means no action. Therefore the current condition is the baseline for which to compare the “action” alternatives. The DEIS states that the restoration projects could be analyzed separately (DEIS page II-53). This could occur if no-action were selected for expansion under the current EIS process. Part of the reason for including them with expansion is the efficiency of implementation (concurrent with other development and mitigation measures that require equipment and/or a workforce), and for financing.

Comment #45: Consider alternatives that have entirely different runs (than those considered) (2004)

The DEIS seems to have only considered combinations and slight variations of the runs that were designed for Alternative 2, with no consideration at all of alternatives using entirely different runs. (D03-3204, page 4)

Response: The DEIS for ski area expansion is based on many years of planning and analysis by professional ski area planners and designers. It is tiered to the 1991 Master Plan ROD and FEIS. A number of additional runs were considered and eliminated from detailed analysis (see DEIS Appendix D). The Forest Service believes that virtually every location within the entire Special Use Permit has been analyzed for feasibility as a ski run or lift. There would be very limited opportunity for any runs in an “entirely different” location. Slight variations may exist and are continually being considered.

Comment #46: Consider alternatives with different combinations of features to lessen impacts and balance terrain (2005)

Feasible alternatives were not developed that would have lower environmental impacts and equal terrain balance improvements compared to the alternatives present in the DEIS. (D03-3204, page 4)

Response: As noted above, the DEIS for ski area expansion is based on many years of planning and analysis by ski area planners and designers. A number of additional runs were considered and eliminated from detailed analysis (see DEIS Appendix D). Many of these locations or variations were considered because they could potentially change or lessen the environmental effects. Slight variations may exist that could change (lessen) effects and are continually being considered.

Comment #47: Consideration for the “Peak Experience” alternative (2006)

This comment outlines an alternative that is not in the DEIS. The purpose of the peak Experience alternative is to provide additional novice and intermediate terrain and reduced environmental impacts. It also provides better terrain for snow boarders and a better configuration for advanced skiers than any of the DEIS alternatives. (D03-3204, page 4)

Note: The “Peak Experience Alternative” is described in detail in letter D03-3204.

Response: Alternatives as received from the public were carefully reviewed by the IDT, MAA and contracted ski area planners for understanding and analysis of each component, as well as the feasibility of the submittal as an alternative package. Some ideas for component actions (e.g., suggestions for specific lift or run locations) were found to already be a component of an action alternative being analyzed in detail. Other component actions were found to be technically infeasible or in some cases, could not be analyzed because they lacked enough specificity.

In each case, when considering this public alternative as a package, it was found to be essentially similar or identical to those already being analyzed in detail. In cases where differences could be determined, the overall difference as an alternative package was not found to represent or fill a gap in the range of alternatives considered in detail. Based on these conclusions, this alternative was considered but eliminated from detailed consideration by the Responsible Official. This alternative will be fully discussed in FEIS Appendix D (Considered But Eliminated).

Comment #48: Piece meal (cumulative) expansion proposals (widening, etc.) (2007)

I note that the plan proposes widening some existing ski trails. I believe trails have been widened numerous times in the past. While widening may not seem significant, taken together they are. This brings up a hidden threat in the proposed expansion. New trails seem to be relatively narrow. This could cause future requests to widen them for many different reasons. (D03-3244, page 1; (D03-3199, page 3)

Response: The proposal being analyzed at this time does not contain any provisions for future expansion, including run widening. While the proponent could request run widening in the future (or other type of improvements), they would have to be analyzed under NEPA and authorized by the Forest Service. Further, additional expansion on the heels of the current proposal seems unlikely, especially considering that the current expansion proposal (if authorized and depending on the selected alternative) could take 8-10 years to fully implement.

Forest Plan Amendments

Comment #49: Clarify basis of Plan Amendment: (2003 DEIS versus 2000) (2100)

The Forest Service has not performed a Plan Amendment to actually implement the extended ski area boundary. The 2000 DEIS disclosed that the 35 acres in the Special Use Permit allocated to restricted Watershed must be re-allocated to Developed Recreation. The 2003 DEIS does not disclose a LRMP amendment that would re-allocated MA 22 lands to MA 4, despite our scoping comments explicitly requesting disclosure. (D03-3223, page 31; D03-3224, page 67)

Response: The 1994 ROD for the Northwest Forest Plan enacted the Plan Amendment accounting for the 1991 Master Plan decision that expanded the Special Use Permit Area. This is seen in the allocation maps associated with the 1994 decision. The 2000 DEIS proposed to track the change from the 1991 to the current acreage within the SUP. Since 2000, the Forest was advised that the 1991 Master Plan decision was accounted for in the Plan Amendment resulting from the 1994 Northwest Forest Plan, resulting in the change in the 2003 DEIS. The basis of the Plan Amendment in the 2003 DEIS was to update the acreage contained within the Special Use Permit, using current technology.

Based on significance analysis, none of the adjustments, either individually or collectively, would constitute an adjustment that would be significant. Having to do with the location and area (acreage) included within land allocations, the application of consistent land allocations across two Forests, these actions were further determined to be an inventory change and are being processed as addendums or corrections to each respective Land and Resource Management Plan; a Plan Amendment was determined to not be necessary.

The Forest Service now intends to process "Addendums or Corrections" to the RRNF and KNF Forest Plans to account for these inventory changes (separately for each Forest). As Addendums and Corrections, these adjustments are not appealable and need not be processed under NEPA (and therefore are not tied to Ski Area Expansion NEPA). These adjustments will be completed separately from the EIS process for Ski Area Expansion (and between its 2003 Draft and 2004 Final EIS). This will be clarified in the FEIS.

Alternative Development

Comment #50: 1991 ROD did not include actions proposed in DEIS; cannot tier (2200)

The DEIS includes many significant features that were not a part of the analysis in 1991 and not a part of the 1991 ROD. Thus the 2003 DEIS is different than the 1991 ROD and tiering cannot occur. The additions void the 1991 ROD and mandate that this new proposal be analyzed as a separate project. (D03-3224, page 2)

Response: The 1991 decision is summarized in the DEIS on page I-6, 7. As stated in the ROD, page 5, this decision “.....does not approve the exact final locations of component projects nor does it indicate a specific time-frame for construction of those facilities. Additional detailed designs, plans, and environmental analysis will be required before on-the-ground construction of the Master Plan’s component projects. Each project included within the scope of the Master Plan will require an additional level of environmental analysis before construction is approved”.

Each component being considered in detail is discussed for its relationship to the plans analyzed in 1991, and to the current Purpose and Need. The Forest Service believes that each component being considered is within the scope of the Master Plan decision.

Comment #51: No alternative considered reducing size or dismantling current area (2201)

The DEIS fails to consider the environmental effects of reducing the present size of the ski area or dismantling it entirely. Dismantling the ski area provides the only baseline data for the actual environmental effects of the ski area. (D03-3199, page 2)

Response: This alternative is not being proposed and is not required under the NEPA process. Further, this site-specific expansion proposal is being tiered to the 1991 Master Plan decision that programmatically authorized expansion. A more appropriate time to have considered reducing or dismantling the ski area would have been during the 1991 analysis.

Actions and Alternatives Considered But Eliminated (DEIS Appendix D)

Comment #52: Moving LC-6 lift to avoid entering into McDonald Peak IRA and/or Middle Fork (2300)

Move the base of LC-6 lift onto the ridge up north so it does not enter the Middle Branch drainage or the McDonald Peak roadless area. (D03-894, page 1; D03-908, page 1; D03-915, page 2; D03-926, page 1)

Response: The bottom terminal of LC-6 cannot be moved “up” and “north” at the same time. The Forest Service believes that this comment meant to say move the base up and to the south in order avoid entering the McDonald Peak Inventoried Roadless Area. In response to scoping comments, the Forest Service developed Alternative 3 in order to lessen the effects associated with the Significant Issues (DEIS, page II-73). One of these issues is the effect(s) to Inventoried Roadless Area. If this lift is moved further south and up the ridge outside of the Inventoried Roadless Area, then the identified Purpose and Need is met to less degree with little change in the environmental consequences. These differences will be quantified in Actions and Alternatives Considered but Eliminated (Appendix D, in the FEIS). Also see response to comment #75.

Comment #53: Specific actions claimed as not having been analyzed (2301)

All of the following alternatives would meet the purpose and need of the DEIS but were not analyzed by the Forest Service: Community Alternative put forward by Headwaters and Skiers/Boarders; lodge renovation only; replace Ariel chair; replace Ariel chair and add unloading platform at top of lower Dream/Caliban; install Pumphouse lift only; build proposed run 16 and shuttle service from bottom of access road. (D03-3224, page 13 & 14)

Response: See responses to Comments #42 and #47 above, and Appendix D as documented in the FEIS.

Comment #54: Consideration of all regional ski areas for diversity of skiing terrain (2302)

The Forest Service must assess whether the ski areas in the region are able to meet the need for an increased amount of specific terrain. If MASA does not have “enough” of a certain type of terrain, analyze other regional ski areas to see if the demand for this particular type of terrain is met within the region. The DEIS is inadequate because it does not analyze whether other regional ski areas can meet the purpose and need of the project. (D03-3224, page 14)

Response: This concept was considered and was eliminated from detailed consideration (see DEIS Appendix D, page D-34). Under “Collaboration with Other Ski Areas for Diversity of Terrain”, page D-34 states: “MAA’s proposal addresses specific needs at this ski area and to progress toward the desired future condition as outlined in the 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 and Intermediate terrain at other ski areas would not help this area move toward the desired future condition and would not meet the purpose and need stated in this DEIS. The concept of nationwide or regional collaboration for specific types of terrain being emphasized at certain ski areas is beyond the scope of this project analysis. These ideas were considered but not analyzed in detail by the Responsible Official for these reasons.”

Comment #55: Consideration for development of the Knoll area for Nordic skiing and other uses (2303)

The Knoll area could be developed for paid touring cross country and snowshoe use. (D03-3230, page 5)

Response: This is conceptually true pending environmental analysis and other factors. Neither MAA or the permit holder (City of Ashland) has presented a formal proposal to the Forest Service. A Nordic center at the Knoll was considered but eliminated (DEIS, Appendix D, page D-31). At page D-31 it states: “A Nordic center at the Knoll would certainly be a consideration if the area were not developed for Alpine skiing. The 1991 ROD programmatically approved development of Alpine skiing at this location. Until a decision is made as to whether ski expansion (if approved) takes place in the Middle Fork, Current Facility, or the Knoll, it would be premature to consider a Nordic center at the Knoll. For this reason, the project was eliminated from further detailed study by the Responsible Official.”

Components Considered In Detail: Buildings

Comment #56: Making buildings accessible to the handicapped (existing lodge) (2500)

The parking lot provides handicap parking spaces and yet the lodges aren’t handicap accessible. Building should be made accessible to persons with disabilities. (D03-857, page 1)

Response: As stated in the DEIS at pages II-11 and 94, all new building construction would conform to the standards and guidelines of the Americans with Disabilities Act (ADA). This would include expansion and/or remodel of the existing Base Lodge.

Comment #57: Combine Moraine toilets and ski patrol hut in Alternative 3 (2501)

In Alternative 3, combine the Moraine Toilets and Ski Patrol Hut into one structure for utility and less intrusion upon the environment. (D03-920, page 1)

Response: Combining the two buildings would not necessarily mean that one structure would be “less intrusive” than two structures. Final design would incorporate measures to minimize effects to scenic quality (DEIS, pages II-111-112) and would be reviewed by a Forest Service Landscape Architect. The FEIS will analyze a total building footprint of approximately 850 square feet for the two buildings. These buildings could be combined at the time of implementation if the square footage does not exceed 850 feet.

Comment #58: Site moraine toilets near trees - visual blending Alternative 3 (2502)

In Alternative 3, site the Moraine Toilets and Ski Patrol Hut against the trees in order to blend into the background. (D03-920, page 1)

Response: As stated in the comment above, all building construction would be reviewed by a Forest Service Landscape Architect. Principles of aesthetic compatibility with the surrounding landscape would be consistently applied for all new building construction. The color, form, and texture of the facades of these structures would borrow, as much as possible, from valued attributes of the surrounding landscape. One method for doing this might be to situate the building(s) against or within tree stands in order to blend into the background. However, stand density in this area is relatively sparse and precise building location would need to avoid the two whitebark pine that are located here.

Comment #59: Put rental facilities in existing lodge (safety) (2503)

There are existing safety problems around both the rental facility and parking lot area because of high traffic in these areas. A solution might be to put the lodge where the rental facility is and put the rental facility out where the lodge is. This would keep beginner skiers near the bunny hill and give them a slower, clearer access down to the beginner run areas. (D03-912, page 1)

Response: The Forest Service, MAA, and many guests are aware of the current problems associated with guest services in the Base Area. A specific component of Purpose and Need is to update and balance guest services and to reduce crowding in the existing Base Area (DEIS, pages I-11-12). The Forest Service believes that a Rental Shop located closer to the Sonnet Chairlift would serve guests in a better fashion. All of the action alternatives provide for additional building space in the Base Area.

Specifically, the Arrival Services Building has been tentatively identified to house a rental shop. However, under NEPA the Forest Service cannot require MAA to put specific services in certain buildings. The environmental analysis process requires that the EIS describe the environmental consequences of each alternative relative to ground-disturbing activities, not to be prescriptive of what takes place in an operational sense. The Forest Service believes that MAA and their consultants are in the best position to determine where services are located. Exact locations and function of each building(s) would be determined at implementation.

Comment #60: Combine Arrival Services and Ticket Buildings into one structure (2504)

Combine the Arrival Services and Ticket Buildings into one structure for utility efficiency and less intrusion upon the environment. (D03-920, page 2)

Response: Under the action alternatives, exact locations and function of each building(s) would be determined at implementation. Utility efficiency, visual concerns, guest flow, and other factors would determine if these two buildings could be combined into one structure. Based on public comment, the FEIS will analyze increased and expanded building footprints between the Base Lodge and Rental Shop (including expansion of the Base Lodge) for the purpose of disclosing environmental consequences under NEPA.

Comment #61: Increase existing lodge remodel to 9,500 sq. ft. (Headwaters Alt) (2505)

It is unclear if the current proposal to enlarge the building footprint of the Lodge from 6,750 to 8,550 square feet is enough to accommodate the increase in skier visits that is expected to result from improvements contained in Alternative 3. We request that the Forest Service increase the potential footprint of the existing lodge to 9,500 square feet. (D03-3221, page 11; and D03-3225, page 8)

Response: The proposed further expansion of the existing Base Lodge was arrived at by squaring off and incorporating all of the exiting bays and decks that protrude from the structure. Further enlargement of the Lodge would intrude upon skier and pedestrian traffic as well as the beginner teaching area adjacent to the Lodge. The Forest Service believes that expected increases in skier visits and their need for more space can be handled by the total expanded footprint for all new buildings discussed in the preceding comment.

Comment #62: Consider fire protection features in design of guest service buildings (2506)

The location, design and type of construction for additional ski area guest services buildings should take into consideration the need for fire protection features within these buildings to prevent the potential for building fires spreading to adjacent wildland resources. (D03-2168, page 5)

Response: As stated in the DEIS at pages II-94-95, all new building construction would conform to the standards of the Uniform Building Code, National Plumbing Code, National Electric Code, and/or other recognized standards. Many of these standards are designed to prevent structure fires or to retard their growth if a fire does start. State and local permits would be required. This comment came from the City of Ashland, holder of the Special Use Permit, which leases the ski area operation to MAA. The Forest Service encourages the City to work with MAA in designing fire-safe structures to the greatest extent possible.

Components Considered In Detail: Parking

Comment #63: Free shuttle as part of the ski lift ticket (2600)

Provide a free shuttle bus as part of the ski ticket to lower car emissions. (D03-754, page 1)

Response: This could potentially help with lowering vehicle emissions and would be supported in principle by the Forest Service. This action however, is not within the decision space of the Forest Service and would not require NEPA. The Forest Service can endorse this action but cannot require it of the permittee.

Comment #64: Designate specific parking in lot for Nordic skiers (weekends) (2601)

As a backcountry skier, I ask for a plan that reserves parking for skiers using the trail. Weekends are a nightmare with dangerous walks up the road in heavy traffic. (D03-926, page 1)

Response: Reserving sites for backcountry skiers, Nordic skiers in general, and those involved with snowplay activities, would require that paying customers at MASA would need to park further away from the base area. Income received from these customers helps pay for maintenance and operation of the parking lot for both paying customers and other users like backcountry skiers. Although plowing of the lot is performed by the State of Oregon, all other parking lot costs are paid for by MAA. The “first come, first served” rule seems the fairest method for finding a parking spot close to the ski area or to the back lot near the winter trails—for both paying and non-paying winter recreationists.

The Forest Service cannot dictate to MAA that they reserve parking for Nordic skiers. See the Recreation section in the DEIS, “Effects to Recreation Excluding Lift-Served Skiing” for a discussion of how the various alternatives would affect parking for Nordic skiers (beginning on DEIS page IV-275).

Comment #65: Consider shuttle to base of access road during busy situations (instead of expanded parking) (2602)

Replace the expansion of the main parking lot with a shuttle that runs from the base of the Access Road (Callahan’s Restaurant or ODOT site) on busy weekends and holidays. MAA’s parking data indicates that parking is a problem on about 12 weekends and holidays throughout the season. Because these large crowds tend to happen when good skiing conditions coincide with weekends or holidays, MAA is able to accurately predict when parking in the main lot is going to be insufficient to handle the crowd. On those days only, shuttle buses can be available to transport people from the base of the Access Road to the main facility. (D03-3221, page 12; D03-3225, page 9; and D03-3230, page 3)

Response: As mentioned in the DEIS (especially see DEIS Appendix B and D), the Forest does not have the authority to require MAA to use the ODOT site, the Callanan’s site, or any other site located off of National Forest System lands. The Forest Service can only indirectly create the need for it’s use by not approving additional parking at MASA. Based on public comment, Alternative 3 will be modified in the FEIS to include no additional parking expansion within the Special Use Permit area (except for the Tubing Facility and Bottleneck Widening).

Comment #66: Require MAA to operate shuttle service (2603)

The Forest Service should consider directing MAA to develop a bus shuttle service that would operate from the junction of the Ski Area access road with Interstate 5 to minimize creation of new impervious surfaces for parking. (D03-3222, page 6)

Response: As noted above, the Forest Service cannot direct MAA to develop a shuttle service from the base of the Access Road, which is not located on National Forest System Lands. It can minimize creation of new impervious surfaces by authorizing a decision that would allow for reduced or no additional parking. This would then indirectly create the need by MAA to develop some other method of solving the current problems associated with parking lot congestion on busy days.

Comment #67: MAA should provide cost incentive for car pooling (2604)

It may be possible for MAA to consider a pricing scheme that encourages ski area users to car pool by charging fees (or higher fees) to autos with less than three persons for parking at the ski area. This could provide additional income for MAA and incentive for ski area users to car pool or use the shuttle service from the bottom of the Access Road. (D03-3222, page 6)

Response: The MASA parking lot is part of the Oregon State Snopark system. The parking lot serves both MASA customers and those using the dispersed facilities in the area such as the Bull Gap and Grouse Gap Nordic trail systems. Fees are already charged by the State on either a daily or annual basis from November 15 through April 30. These fees cover the cost of plowing the MASA parking lot and Snoparks throughout Oregon.

MAA cannot charge additional fees because users are already paying a fee to the State. It might be possible for MAA to offer ticket discounts to people who arrive in a car with three or more persons but that would provide less income, not more. There would also be other items to consider such as how would fees be reduced (or increased) for the thousands of season pass holders who are not buying a ticket on a daily basis. In any case, the Forest Service does not have the authority to require MAA to consider or implement a pricing scheme for parking.

Comment #68: New parking at Knoll location, for Alternatives 2, 3, 5, & 6 (2605)

If pricing schemes or a shuttle service from the bottom of the Access Road proves unworkable, we would recommend moving the new parking area to Alternative 4 location at the Knoll, where the risk of stream sedimentation and contamination may be less than at the proposed site for all of the other alternatives. (D03-3222, page 6; and D03-3230, page 3)

Response: The DEIS considered but eliminated Knoll parking in all alternatives except Alternative 4 (Appendix D, pages 16-17). However, based on public comment, the FEIS will analyze parking at the Knoll area under both Alternatives 4 and 6. This will be done to provide all combinations of expanded parking options within the action alternatives considered in detail in the FEIS.

Comment #69: Ask for input from users for transportation (shuttle) alternatives (2606)

Institute an upgraded shuttle service with a more flexible schedule and ask for input regarding transportation alternatives from everyone who buys a lift ticket including season pass holders. (D03-2151, page 2)

Response: As stated above in response to Comment #66 above, the Forest Service does not have the authority to direct MAA to institute or upgrade a shuttle service. The Forest Service can indirectly create the need for alternative access (shuttle) by not approving any additional parking. The Forest Service agrees that MAA should solicit input from users if they expand their current bus transportation and/or institute a shuttle service.

Comment #70: Consider parking development prior to development of ski runs (Nordic use) (2607)

We feel that a requirement of any expansion of MASA be that the proposed parking expansion be implemented prior to operating any additional ski runs. Parking demand in the Mt. Ashland area is currently greater than available facilities on almost all weekend/holiday “good weather” days. (D03-2241, page 1)

Response: This comment was received from the Southern Oregon Nordic Club, which has concerns about adequate parking for Nordic skiers. Parking expansion is scheduled for Phase One (years one through three) in all action alternatives except Alternative 3, where under the FEIS, no increase in parking will be analyzed. The timing and implementation of any additional parking will be clarified in the FEIS and ROD.

Comment #71: MAA take over or share plowing responsibility with ODOT (2608)

MAA should take up snow removal responsibility or share it with ODOT in order to get the lots plowed quickly. (D03-3230, page 2)

Response: During periods of intense storms and high snowfall rates, MAA employees use their snow groomers to assist ODOT in plowing the lot. However, these machines are not designed for traditional plowing of a parking lot and their use for this purpose is inefficient. The Forest Service cannot require that MAA take over snow removal at the ski area. If MAA did take this responsibility, it would require a great deal of capital investment for rotary and bladed snow plows, adding to MAA’s annual operation and maintenance costs.

Comment #72: New parking at Knoll location in addition to parking under Alternatives 2, 3, 5, & 6 (2609)

I'm concerned that in the next 40 years that the approximately 200 additional parking spaces in Alternatives 2 and 6 will not be enough. Alternative 4's parking spaces [Knoll area] will be needed at some point, especially if the snow-tubing park takes off. I think that some or all of the parking as described in Alternative 4 should be added to Alternative 6 in phases two or three of construction. (D03-3263, page 3)

Response: As described in the DEIS, none of the action alternatives (except Alternative 4) would be able to accommodate expected parking needs in the next 20 years unless alternative forms of transportation are utilized (pages IV-259, 263, 267, 270, and 273). The FEIS will analyze parking at the Knoll area in Alternative 6, but it will not be in addition to expanded parking at the current ski area (except for the Tubing Facility and Bottleneck).

Components Considered In Detail: Lifts

Comment #73: Eliminate Ariel Lift & replace with LC-6 to summit; add midway unloading platform (2700)

We recommend that LC-6 be taken to the summit where Ariel is located in Alternative 5 and add a midway drop point. We further recommend adding the LC-13 lift. By installing these two lifts in this configuration, it will be possible to eliminate the current Ariel lift. (D03-894, page 2 and D03-908, page 1)

Response: As stated in the DEIS, adding a midway unloading platform was considered but eliminated in the "Briggs Alternative" (Appendix D, page 10). In that case, the top terminal of LC-6 was in addition to the existing Ariel top terminal. In this comment, Ariel would be removed and LC-6 would be the only lift serving Mt. Ashland's summit. This proposal was considered but eliminated for the following reason: During periods of inclement weather, especially high wind, LC-6 would not be able to operate. The consequence of this would be that the wind-protected terrain in the Middle Fork area served by LC-6 would not be available to skiers because the lift would be shut down. By keeping the top terminal of LC-6 near the Moraine or Caliban/Dream junction (depending on alternative), shutdown due to inclement weather can be avoided at almost all times and the Middle Fork terrain would remain available to skiers and boarders. Also see response to Comments #42 and #47 above.

Comment #74: Support for LC-5 pod (North Ridge lift) in other alternatives (than Alt 5) (2701)

Modify Alternative 3 by installing the LC-5 "North Ridge Lift" and beginning terrain (R-21) near the existing Sonnet run as shown in Alternative 5. This would provide beginner terrain close to the Lodge. (D03-908, page 2; D03-926, page 1; D03 3221, page 11: and D03-3225, page 4)

Response: Alternative 3 already develops a portion of the terrain on the North Ridge with LC-14 (Poma Lift). Both lifts would provide access to lower level terrain near the current Base Lodge. One function of Alternative 5 is to maximize terrain improvements within the Current Facility area. Alternative 3 does not have this limitation as it expands into a portion of the Middle Fork area. The North Ridge Lift is not included in Alternative 3 in order to help provide contrast between alternatives for analysis purposes. In addition, the Responsible Official could add LC-5 to a modified Alternative 3 if selected. As a point of clarification, the North Ridge and Poma Chairlifts and their associated runs would provide Novice terrain, not Beginner terrain.

Comment #75: Move base location of LC-6 lift south and east (further away from wetlands) (2702)

We request that the Forest Service alter the location of the lift base for LC-6 by moving it further east and up on the ridge to the east of the Middle Fork of the East Fork of Ashland Creek. (D03-3221, page 11; D03-3225, page 4)

Response: Relative to Alternatives 2 and 6, the DEIS moved the bottom terminal of LC-6 up (south) and to the east in order to lessen the consequences associated with the Significant Issues (DEIS, page II-73). If this lift is moved further south and east up the ridge dividing the Middle Fork from Pumphouse Creek, then the identified Purpose and Need is met to less degree with little change to the environmental consequences. Modification of LC-6 (by moving the base upslope on the ridge dividing the Middle Fork from Pumphouse Creek) does not contribute to a reasonable range of alternatives relative to the Significant Issues. In addition, the lower third of Run 10 would require grading in order to maintain fall line skiing on its cross-slope approach to LC-6. Run 10 requires no grading in Alternatives 2, 3, and 6. Modification of LC-6 would result in shorter runs with very little change in effects relative to Alternative 3. Based on these conclusions, these alternatives were eliminated from detailed consideration by the Responsible Official. These differences will be quantified in Actions and Alternatives Considered but Eliminated (Appendix D, FEIS). Also see comment #52.

Comment #76: Include Windsor to Moraine Lift (LC-13) in Alternative 3 (2703)

We request that the Forest Service analyze installation of the LC-13 lift (Windsor to Moraine Chairlift) in a modified Alternative 3. (D03-3221, page 11; D03-3225, page 5)

Response: One primary objective of this lift is to provide access for lower level skiers to the easier terrain located on Lower Dream and Caliban as well as proposed runs in the Middle Fork. In Alternative 3, access to this terrain is via the Betwixt and Skiway (R-18) Runs to LC-6. The alternatives and their components were developed to provide reasonable and different ways to meet Purpose and Need within the context of the Significant Issues.

To include LC-13 would duplicate the objective of providing access to the west side of the Current Facility and/or the Middle Fork area that is already met by the Betwixt/Skiway route in Alternative 3. Since LC-13 is being analyzed in detail in Alternatives 5 and 6, the Responsible Official could add LC-13 to a modified Alternative 3 if selected.

Components Considered In Detail: Infrastructure

Comment #77: Include emergency egress EE-1 in Alternative 3 (2900)

By installing the LC-13 Chairlift in Alternative 3 it is possible to replace the Skiway (R-18) with the less-impactive emergency egress route (EE-1) analyzed in Alternative 6 (D03-3225, page 5)

Response: Please see the discussion above (Comment #76) relative to the inclusion of LC-13 in Alternative 3. The Emergency Egress route is considered in detail as part of Alternative 6. The Responsible Official could still include this configuration of LC-13 and the egress route in his decision through a blending of these component projects that have been analyzed in detail. It is not included in Alternative 3 because that Alternative looks at a different or lower cost method of providing access to the Middle Fork area. While it is true that the egress route is less impactive than the Skiway, those impacts would be at least partially offset by the construction of LC-13.

Comment #78: Bridge on Run 12; where does rock for supports come from and how transported? (2901)

The abutment for the bridge on Run 12 plans on using rock supports for the logs to span the creek. Where will this rock come from? The DEIS does not address the question of how the rock will be hauled in and how it will be transported across the wetland without adversely impacting the wetland. (D03-3226, page 12)

Response: DEIS at pages II-33 and 94, describes what mitigation measures would be designed specific to implementing the wetlands crossing to reduce potential impacts of sediment delivery. For each project, an implementation Plan will be prepared with a list of site-specific mitigation measures. Crushed rock sources include gravel pits and commercial vendors. These sources would need to be inspected and approved before transport to prevent the spread of invasive non-native plants. Crushed rock may also be available or manufactured at the ski area in association with other project activities such as parking lot or building excavation. Transport to the site could be by helicopter or by ground-based equipment via the Skiway/Emergency Egress route (IE-1).

Comment #79: Add night lighting to Dream, Caliban & Pistol runs in Alternative 6 (2902)

I would like to see Mt. Ashland develop night skiing options so that they rival the Mt. Shasta Ski Park night skiing experience, which is superior to Mt. Ashland due in part to longer runs. This could be accomplished by utilizing the LC-13 lift in Alternative 6 and by lighting the current Dream, Caliban, and Pistol runs. (D03-2375, page 1)

Response: Night lighting on these runs are analyzed in detail in Alternative 5 in order to provide maximum possible use within the Current Facility and to help meet Purpose and Need in this alternative which develops less terrain. They are not included in Alternative 6 because that alternative has as its function, reduced effects relative to Alternative 2 (the proposal received from MAA). Adding night lighting in Alternative 6 would not follow that function.

Comment #80: Proposal to use removable light weight portable spans for wetland crossing (2903)

I would endorse a method that provides a temporary crossing of the Middle Fork with a series of light-weight portable spans that can be removed and stored nearby each spring. This method would not require scarification or excavation. (D03-3200, page 4)

Response: The team of Forest Service specialists and the consultants hired by MAA reviewed a number of potential alternative crossing types and locations for access across the Middle Fork. The permanent bridge alternative was developed by the team as the method that best addressed environmental concerns. Key environmental elements considered included: preservation of the integrity of the ecosystem and wetlands characteristics, minimizing impacts to ground cover vegetation by equipment or foot traffic, minimizing short and long-term erosion and sedimentation, minimal disturbance to the natural structure of the stream bank, providing for unimpeded passage of infrequent high water events that could carry woody or sediment-rich flows, and construction methods.

A temporary bridge of this size carrying heavy loads must be placed upon a prepared foundation to ensure performance and safety. This method anticipates that the temporary (or seasonal) bridge components would be constructed off-site and then airlifted by helicopter onto a prepared foundation. The approximately 3,000 square foot bridge deck must be capable of supporting heavy snow and equipment loads that require heavy steel or wood girders to span the crossing. Biannual installation and removal of the bridge superstructure would require a heavy-lift helicopter or ground disturbance by heavy equipment capable of lifting this structure. Additionally, there are no known locations where the bridge deck and spans could be stored on-site without causing repeated disturbances to sensitive ground and vegetative cover. This suggestion will be discussed in FEIS Appendix D (Considered But Eliminated).

Comment #81: Discussion of outsloping of roads and specific sites for runoff (2904)

Outsloping increases the risk of uncontrolled runoff from roads. In granitic soil terrain, in my experience, it is essential to construct specific locations where runoff will occur. (D03-3191, page 1)

Response: Insloped roads are designed to carry surface runoff in a ditch. The ditch receiving this runoff becomes concentrated flow with higher erosive power than that associated with diffuse flow from outsloped roads. Frequent ditch relief culverts are required to discharge the ditch flow beyond the toe of the fill slope. Research by Ketcheson and Megahan (1996) and Burroughs and King (1989) in granitic terrain, has shown that sediment transport from concentrated flow associated with culvert outlet discharge is much greater than that from diffuse flows from outsloped roads. Insloped roads with ditches and culverts require frequent maintenance and inspection to ensure the culverts do not become ineffective from blockage by sediment or debris. Local Forest Service experience with recent flood events has shown that plugged culverts on insloped roads in granitic terrain have produced sites with severe erosion and sedimentation. To provide room for a ditch, insloped roads require additional excavation and increased area of soil exposed to erosion.

The alternative to insloped road drainage with a ditch is the use of outsloped road design. Outsloped roads are designed to shed water off the roadbed in a short distance and over the fill slope as diffuse, low-volume flow. It is important to provide soil cover on the fill slopes to prevent sheet, rill or gully erosion of the soil. On standard outsloped roads that have traffic during wet weather, vehicle tires can cause ruts to develop. Ruts are capable of conveying concentrated runoff down the roadway, rather than quickly dispersing the flow as intended.

There is a low likelihood of rut formation of proposed new ski area roads and trails as they are not intended to have vehicle use during wet weather. Nonetheless, outsloped roads and trails would be designed with frequent drainage structures to prevent water from being carried further down the roadbed than anticipated. These structures commonly include rolling dips in the road profile or constructed water bars/diverters that prevent any concentrated flow that may be trapped in rill or ruts from traveling further down the grade.

Site-specific design is required to properly determine the optimum spacing and locations for proposed water diversion structures. The bottoms of the rolling dips or water bars/diverters are proposed to be constructed with durable rock where they transmit runoff over the roadbed. The fill slopes below the drain outlets would be armored with rock underlain by geotextile to prevent rill or gully erosion of the fill slopes. Filters at the base of the fill would minimize the amount of sediment moving off the roadway or fill slope.

Comment #82: Add helipad to alternatives with Skiway (2905)

The addition of a helipad near the bottom of LC-6 should have been in the original plan. While not usable in all conditions, it is an important option in partnership with the Skiway in Alternative 2. (D03-3219, page 2)

Response: A helipad was not included in Alternative 2 because this alternative reflects the proposal as received by MAA. MAA's proposal did not include a helipad or "helispot," the term used in the DEIS. All other action alternatives in the DEIS that included a Skiway or an emergency egress route included a helispot.

Comment #83: Include emergency egress route from LC-6 to bottom of Windsor (2906)

Provide an emergency egress route from the base of LC-6 to the bottom of the Windsor Chairlift to evacuate injured skiers. (D03-3221, page 12)

Response: A suggestion to provide a Skiway between Windsor and LC-6 was considered but eliminated (DEIS, Appendix D, page D-28). Alternative 6 in the DEIS provides for an emergency egress route that is shorter and less impactful (less ground disturbance and tree removal) than the longer route from Windsor.

Comment #84: Use of new tech (Dark-Sky) lights in areas proposed for lighting (2907) and as replacement for existing lighting (2908)

Abundant information is available on lighting equipment that provides illumination where it is needed and eliminates illumination of the sky. Appropriate illumination is glare free, saves electricity (and \$), and is safer. Please require use of dark sky lighting throughout the ski area. For existing lights, a plan for replacement can and should be developed. (D03-3230, page 5)

Response: The term Dark Sky lighting basically refers to lighting that is directed downward, uses low wattage bulbs and/or shields to direct light where it is needed, and makes use of energy efficient lamps such as low pressure sodium. As stated in the DEIS, the latest available technology would be used to reduce the visual effects of night lighting (DEIS II-110 and IV-217). Existing night lights are gradually being replaced with lights that produce less light pollution. This will be clarified in the FEIS.

Comment #85: Manual grooming with multiple crossing points instead of bridge (2909)

I think the actual stream crossing is narrow enough that it makes more sense to require the ski area to manually groom the crossing until snow depth accumulates to the point that it is stable enough to support a groomer. I think the least impact is to glade the crossing, leaving tree islands in place, so skiers can cross in a few spots as opposed to one on a bridge. (D03-3263, page 6)

Response: Manual snow grooming refers to packing the snow by foot or side stepping down the slope on skis. This was a common practice for grooming slopes prior to modern snow-grooming techniques. It is still used at certain times to prepare race courses as “boot packing” compresses the snow surface more than a groomer. As stated in the DEIS (pages IV-59-60), there is no perceptible increase in stress at the ground surface from recreation or grooming activities once two feet of snow is present. While ski or boot packing could be an option, there would be no need to require it.

The concept of glading or leaving tree islands within the Run 12 wetland crossing was considered but eliminated from further detailed study in the DEIS at page D-26. Run width (60 feet) at the crossing is at the absolute minimum to be considered safe. Expert skiers may find other places to cross the Middle Fork above the bridge, but the designated crossing point needs a bridge as the creek is usually open—meaning that snow is not covering the creek on a consistent basis throughout the winter.

Components Considered In Detail: Snowplay

Comment #86: Drop tubing facility - conflicts with parking (3000)

Parking is and always will be a problem at Mt. Ashland. I don't think the ski area can afford to give up the parking spaces that would go to people using the Tubing Facility. Why introduce another variable? (D03-772, page 2)

Response: This comment implies that skiers should have greater preference for parking than non-skiers that use the tubing facility. Both would be paying guests and both would have equal rights to use the parking provided by MAA (as are non-paying guests such as Nordic skiers, sightseers, and others). As stated in the DEIS at page I-11, a specific purpose of expansion is to provide non-skiing recreational opportunities at MASA to meet the current demands of the non-skiing public.

Even with the proposed parking expansion, MAA would need to provide some type of alternative transportation options within the next 10-20 years based on projected increases in visits (DEIS, Table IV-55). The Forest Service believes that a Tubing Facility is an appropriate use of the Special Use Permit area and that this “variable” would contribute to a quality recreation experience for the non-skiing public.

Comment #87: Tubing facility elsewhere than permit area (3001)

I support Alternative 2, minus the tubing area. If there is a need for another tubing area in Jackson County, have your planners put on their thinking caps and develop one somewhere else. (D03-772, page 2)

Response: There are no other lift-served tubing facilities in Jackson County. The closest lift-served facility is at Diamond Lake in Douglas County. The Forest Service is not in the business of developing lift-served tubing facilities, but would consider such a facility if proposed by a private or non-profit entity. The Forest Service has received no such proposal. MAA already has much of the infrastructure in place and the expertise to develop a facility within the Special Use Permit, which is allocated to Developed Recreation under the Rogue River NF Land and Resource Management Plan. Based on experience at other ski areas in the West, there is certainly a demand for tubing areas (DEIS, pages III-201-202) and the Forest Service believes that Mt. Ashland is an appropriate location. This will be clarified in the FEIS.

Comment #88: Consider leaving large trees between tubing lanes (two lanes instead of three) (3002)

We are advocating that the tubing facility be designed to take advantage of natural tree lanes in this area. This physical characteristic has created “natural lanes” where tubing run(s) could be created with very little cutting of old growth. (D03-3221, page 11; and D03-3225, page 6)

Response: The upper half of the proposed Tubing Facility is sparsely forested while the lower half is more densely forested on a relative basis. Trees cannot be left between lanes due to liability and safety concerns. Once a snow tuber starts down a lane, the user has very little control over the tube. A person could conceivably leave a lane and strike a tree. Also, leaving trees between the lanes would make it more difficult and costly for MAA to properly groom the lanes. A few trees may possibly be left near the top of each lane if groomers can work around the trees. That decision would be made in the Implementation Plan for the Tubing Facility. Finally, for analysis purposes, the DEIS assumed that all trees would be cut within the Tubing Facility boundary. In all likelihood, a number of trees would be left between the Access Road and the actual snow tubing lanes. This suggestion will be discussed in FEIS Appendix D (Considered But Eliminated).

Components Considered In Detail: Runs

Comment #89: Consider adding glading to Alternative 6 (3100)

I would like to see glading added to Alternative 6 as shown in Alternative 3. This provides advanced skiers with a variety of terrain and frees up open runs for beginners and intermediates, with very little impact on the land. (D03-134, page 1)

Response: Glading was added to Alternative 3 because less acreage was developed as cleared runs relative to Alternatives 2, 4, and 6. Under Alternative 6, approximately 65 acres would be cleared for runs while in Alternative 3 would clear 42 acres. Since ski run density would be less in Alternative 6, glading was not added to this alternative. It is expected that more advanced skiers would make use of the natural glades in the Middle Fork area and that this would “free up” the cleared runs to some degree.

Comment #90: Consider lengthening Dream and Caliban run to base of modified LC-6 (3101)

We request that the Forest Service extend the Dream and Caliban runs to the base of LC-6. (D03-3221, page 11; and D03-3225, page 6)

Response: This comment should not be confused with the “Extend Caliban and Dream Ski Runs” comment that was considered but eliminated in Appendix D, page D-24 of the DEIS. In that case, the Forest Service was responding to specific locations for these two runs as displayed in the Headwaters Alternative map shown on page D-9. That comment came during the scoping phase while the more recent comment was more general in nature and was received in response to the 2003 DEIS.

The Caliban Run has been extended in all alternatives (2, 3, and 6) that develop LC-6. This extension is equivalent to proposed Run 9 that continues down the ridge dividing the Middle Fork from Pumphouse Creek. The Dream Run was not extended to the Skiway (Alts 2 and 3) or to the Emergency Egress route (Alternative 6) because of cross traffic concerns on Upper Rodger’s Way. The latter run is the primary route to Ariel and to the Base facilities (via Comer Chairlift). This cross traffic would pose somewhat of a safety hazard as well as interrupt skier flow during high use times (most weekends and holidays during the peak season from Thanksgiving through Presidents’ Day). More advanced skiers and boarders would probably use the area below Dream, but that use would be substantially less than if the area was cleared as a Dream extension. Finally, slope angles approach 50 percent, so a Dream extension would most likely be rated as Upper Intermediate and would not provide terrain for lower ability levels skiers that would be using Caliban and Lower Dream.

Comment #91: Grade Rodger’s Way near Ariel and Windsor to provide better slope angle (3102)

I have used the Rodger’s Way trail as an inexperienced skier and with younger children. The way it is presently designed requires hiking (on skis or snowboard) just east of Ariel and then again around Windsor on the return trip to Comer and the lodge. Experienced skiers can carry enough speed to not be an issue. A small amount of grading in these areas or adjustment of the trail would make the return to the lodge much easier for inexperienced or younger skiers. (D03-1888, page 2)

Response: These two relatively flat areas are a short distance by skier standards (approximately 100-150 feet). Although it is an inconvenience to some, a small amount of grading would not improve the situation. A large amount of grading would need to take place at the Ariel location (between Ariel’s bottom terminal and Lower Tempest) for a small improvement in slope angle.

If Ariel is replaced at some point in the future (as described in Alternative 5, DEIS, page II-18), the bottom terminal would be moved upslope, thereby allowing for improved skier traffic and better slope angle since the current motor room would be removed. The Windsor/Comer area already receives a large amount of skier traffic. Increasing the slope angle here for those entering from the west would increase speed for all skiers, which from a design and safety standpoint, is not something to be encouraged in a congested area..

Comment #92: Consider eliminating Run 15 (not Beginner terrain; P & N; Nordic conflicts (3103)

MASA currently has an excess of “Expert” terrain compared to industry standards and Run 15 is contrary to reducing the percentage of “Expert” terrain. (D03-2241, page 1)

Response: As stated in the DEIS, page II-44, this run is proposed in recognition of extensive existing use of the West Ridge. The development of this run would help reduce skier densities in the upper traverse portion of Run 12, thereby contributing to a high quality recreation experience. It would also contribute to Purpose # 1, e, “Diversity of Non-traditional Terrain at MASA,” by increasing the total amount of available terrain (DEIS, page I-10). The percentage of Expert terrain is reduced in all action alternatives including 2 and 6 where this run is proposed.

Comment #93: Consider creation of a wind barrier (plant trees) in Sonnet area (3104)

Create a wind barrier in the Sonnet area by planting trees. (D03-3166, page 1)

Response: MAA employees or volunteers could plant trees in this area at any time as part of their authorized Summer Operating Plan. Due to the slow growth rate at this site, trees would probably not grow to sufficient height to offer wind protection for at least 50 years. Nevertheless, the Forest Service agrees with this concept and would encourage MAA to plant trees as part of a long-term project to limit wind exposure on Sonnet.

Comment #94: Consider clearing proposed 18G (Alt 3) (3105)

A possible run not included in any alternative is the area shown as gladed Run 18G in Alternative 3 that could be a cleared intermediate run. It is not steeper than Lower Dream according to the contour maps. (D03-3204, page 4)

Response: This area was not included as a cleared run for two reasons. First, based on a close look at the contour intervals and on-site measurements taken with a clinometer (slope measuring device), a cleared run in this area would be rated as Upper Intermediate due to slopes that are 50% in some cases. Second, and more importantly, a cleared run would encourage increased skier traffic on the Skiway (Run 18). In order to reduce environmental effects, the Skiway was designed to the minimum width possible to serve as Novice access to LC-6. A cleared run where gladed Run 18G is located would increase overall skier densities on the Skiway for the last half of its length, thereby diminishing the Novice experience on this proposed run.

Comment #95: Consider run widening under Alt 5 for Alts 2 & 6 (3106)

If Alternative 2 or 6 is chosen, I feel that from a safety standpoint some of the existing runs in Alternative 5 will be necessary in the next forty years. MAA should have the option to implement Alternative 5's run widening in phase two or three to help reduce congestion in the future. (D03-3263, pages 3-4)

Response: All action alternatives include run widening at locations deemed by the Forest Service to present current or anticipated safety hazards due to congestion or other factors (Lower Juliet, Lower Winter, and All's Well). In addition, Alternatives 2 and 6 include run widening at other locations. The Forest Service believes that the widening proposed under Alternative 5 is not needed in either Alternative 2 or 6. The latter alternatives increase total available acreage far more than does Alternative 5, which attempts to maximize to the greatest extent possible, the terrain available within the boundaries of the Current Facility.

Components Considered In Detail: Watershed Restoration

Comment #96: Collapsing wall associated with wastewater treatment facility (3300)

The Wastewater Treatment Facility has a collapsing major wall and needs to be dealt with immediately. (D03-886, page 3)

Response: All structural containment and load-bearing walls are in excellent condition and none have collapsed or show any problems. The comment is referring to an external insulation gabion-type structure attached to the building (gabion is a term used to describe a type of structure that retains materials such as earth and stone and held in place with basket-shaped wire). The purpose of the insulation is to help moderate temperatures within the wastewater treatment building.

In the spring of 2003, the gabion structure partially pulled away from one wall of the building, most likely due to snow creep. Mitigation measures relative to soil movement at this site have performed exactly as intended, e.g., no soil movement off site. The insulation structure was repaired in the summer of 2003 with different insulation materials (rigid insulation as opposed to native soil) and attached in a different manner than the initial construction in 1999.

Comment #97: Clarification of priority for watershed restoration projects (3301)

The DEIS states that it is possible that some projects would be moved to later phases or not implemented at all until further analysis or experience. This is unacceptable in regards to the watershed restoration projects. (D03-908, page 2)

Response: As stated in the DEIS page II-53, “If the Responsible Officials chooses an action alternative, all restoration projects would be completed prior to or concurrent with the first development phase in the first year.” The flexibility statements referenced are contained in the Phasing discussion at DEIS II-115. Any forthcoming decision made by the Forest Service will stipulate that all restoration projects will be enacted first or concurrent with the first developmental phase.

Comment #98: More detail on size, location, operation & maintenance of sediment ponds (3302)

The EIS should include a more detailed description of the size, location, and plans for operation and maintenance of sediment ponds. (D03-3222, page 6)

Response: The restoration projects described in the DEIS include upgrading existing sediment traps and constructing additional structural sediment controls. These projects are proposed as methods to improve the current condition and sediment controls at MASA. As with other facilities proposed for development at MASA, the final designs for these facilities have not been developed, and it is anticipated that final engineering would take place prior to project initiation. It is also anticipated that NPDES Stormwater Permits will be required (for disturbance to more than one acre of ground), possibly necessitating stormwater controls over and above those projects described in the DEIS. For this reason, The Forest Service has not required MAA to invest in detailed designs for these facilities, and will require this effort prior to approval of project implementation. Operation and Maintenance would be addressed in the detailed plans and carried over into the annual Operating Plan.

Comment #99: More discussion on restoration as a separate NEPA decision (3303)

Watershed restoration needs to be completed regardless of expansion and should be completed in full through a separate NEPA analysis before any expansion is authorized. (D03-3227, page 1)

Response: As discussed in response to Comment #44, a “restoration only” alternative would not be in alignment with the stated purpose and need for this analysis. The DEIS states that the restoration projects could be analyzed separately (DEIS page II-53). This could be done if no-action was selected under the current EIS. Part of the reason for including them with expansion is the efficiency of implementation (see Response to Comment #299).

Some restoration projects require that material (such as large logs/woody material) be brought in and/or placed, which would require equipment (such as helicopters). This equipment would be more readily available with concurrent construction or development activities. Further, some material for restoration (e.g., large woody material) would come from clearing activities associated with lifts or runs in proximity. The Forest Service believes that restoration activities can be accomplished most efficiently from a labor and materials standpoint, as well as environmental effects, if done concurrently with new construction while still contributing to watershed recovery.

Components Considered In Detail: Tree Cutting, Timber, Slash

Comment #100: Discussion of selling trees; values, profit (3400)

How much will MAA potentially profit from reselling timber? What is the value of allowing a public subsidy to the MAA? (D03-3224, page 68)

Response: The disposition of timber removed for expansion clearing is discussed at DEIS page II-59 through 62. In that discussion, the Forest Service identifies its preferred method to sell resultant timber via a Timber Settlement Agreement to the MAA. The rationale for a Timber Settlement Agreement is based on the needed flexibility to utilize generated material for erosion control, woody material, etc., as a priority over selling as a commercial product. This methodology also allows flexibility to coordinate other developmental activities such as utilizing helicopters to move in lift towers and materials. This method also increases the chance of operations being coordinated (i.e., timber yarding, decking and hauling), and that all timber related operations could be accomplished in one season. Forest Service analysis further shows that this methodology is likely to generate a comparable value to that which would be experienced in this type of timber utilizing a competitive bid process, and is likely to maximize the return to the Federal treasury for the value of the timber.

It is assumed by the Forest Service that the MAA would strive to sell material not needed for mitigation as a commercial product for profit. This is similar to any Forest Service sale of forest products. Since the government (and the public) would receive full and fair value for the raw material, there is no tracking or special concern with profits after the material is sold by the government.

Comment #101: Quantity resultant slash loading: tons per acre and Fuel Models (3401)

Clearing presently forested sites would convert them from a Fuel Model 10 to a Fuel Model 13. The DEIS fails to quantify the amount of slash that would remain on the ground after clearcutting. The DEIS fails to account for post logging slash cleanup operations. (D03-3223, pages 14 and 30)

Response: Slash generated from clearing and post-clearing fuel treatments was discussed at DEIS page II-62. Clearing and resultant slash treatment would not result in Fuel Model 13 (which is a model representing untreated slash after clear cutting). With proposed slash treatments, the result would be compacted, scattered and discontinuous slash that provides soil erosion protection with fuel loadings that meets protection and resource objectives. The amounts of slash remaining after clearing and slash treatments will be estimated in tons per acre and documented in the FEIS.

In December of 2003, the Forest Service released an assessment of fire risk and hazard conditions in its *2003 Upper Bear Assessment*. According to this assessment, the MASA is within Plant Association group described as Moist or Cool Mountain Hemlock and is in Fire Regime IVb or IVc, where stand replacement events occur at interval of 100-200 years. The Fire Condition Class is 1, which is within the natural fire return interval. The fire occurrence is low, with no fire greater than 1 acre being recorded in or around the Special Use Permit area since 1960. See further discussion on fire risk and hazard in response to Comment #162.

Comment #102: Discussion of slash disposal S&Gs at LRMP 4-61 (3402)

The LRMP requires activity fuels be treated to a level which meets protection standards and resource objectives in a cost efficient manner. (D03-3223, page 30)

Response: As discussed at DEIS page II-62, and as discussed in response to Comment #101 and #162 above, all activity fuels are being treated in an efficient way that meets resource needs, per Forest Plan direction. This will be clarified in the FEIS.

Function and Description of Alternatives

Comment #103: Snowcat skiing in Middle Fork area (3500)

Limited and selective pruning could be done across the bottom of the expansion area for pathways for snowcats to transport skiers out of the area. (D03-899, page 2)

Response: The IDT considered a proposal to offer snowcat skiing in the Middle Fork area instead of lift-served skiing. MAA did not propose snowcat skiing and the IDT could not determine an overriding need for MAA to provide such a service. There are numerous areas along the Siskiyou Crest and the Ashland Watershed where this service could be offered pending environmental analysis. No such proposal has been received by the Forest Service. In most ski conditions, only advanced and expert skiers/boarders would take advantage of snowcat skiing. A prime element of purpose and need is to provide additional terrain to lower level skiers, especially those rated as Novice and Low Intermediate. Snowcat skiing would contribute to terrain diversity and may be desirable at some point in the future at the Knoll (within the Special Use Permit) or at some other location along the Siskiyou Crest.

Comment #104: Specification of objectives rather than specific types or uses of equipment (3502)

Specific construction techniques should not be specified, but rather the result required or expected should be specified allowing the lessee to choose how to meet the standard (Ref to 0021 and 0022 for examples). (D03-3220, page 5)

Response: The Forest Service made reference to specific types of equipment to represent a type of equipment that would reduce impacts from run clearing and other excavation work. This was not meant to imply a restriction or requirement for a specific type of equipment and the disturbance or compaction standards are the focus. This will be clarified in the FEIS.

Mitigation Measures

Comment #105: Effectiveness of logs as erosion control (3600)

Placing logs across the slopes does not prevent erosion, it only slows it down. As the soil piles up behind the logs, the logs are buried and the soil moves on down slope unimpeded. The logs dry rot and eventually no longer act as blocks to the soil movement. Cross logs are not a long term mitigation for erosion. (D03-236, page 10)

Response: Placing logs across slopes has proven to be an effective erosion control measure at MASA. After a review of the 1993 Run Widening project at MASA, the Forest Geologist (Dan Sitton) stated “the erosion control work [log and slash placement] exceeded my expectations and I feel it will work very well to slow down the amount of erosion that occurs.” Subsequent reviews have shown that logs placed in 1993 are still fully functional in 2003 on Pistol, Caliban, Winter, and Lower Tempest runs.

The picture below is of a small area on Upper Caliban with logs and limbs that show decomposition rates are slow, even for smaller diameter material such as limbs. Visits to the Comer lift line (constructed in 1987) where it spans the East Fork of the East Fork of Ashland Creek, show similar results: logs are intact, none are overtopped or buried, and soils are not moving downslope unimpeded.



Eventually, as the comment suggests, the logs will rot and no longer act as a barrier to slow or stop erosion. However, by that time slopes should be stabilized through natural or human-induced revegetation of the site. As stated in response to Comment #220, log and slash placement is but one means to help slow or stop erosion. In some cases, logs may become overtopped with soil. Depending on location and circumstances (distance to water and other erosion control structures (natural or human-made), soil may need to be removed from the uphill side of the log in order for it to fully function as an erosion control device.

Comment #106: Use of chemical fertilizer not allowed in Ashland Watershed (3601)

Vegetation establishment is very slow and density of revegetation is sparse without adding fertilizers and irrigation throughout the growing season. The use of chemical fertilizers is not allowed in the Ashland Municipal Watershed. (D03-3226, page 3)

Response: While the use of fertilizers is not extensively proposed, there is no prohibition in the Forest Plan on the use of fertilizers in the Developed Recreation Management Area (the Special Use Permit), nor in the downstream Municipal Watershed (MA 22). Under the Forest Plan, there are prohibitions on the use of pesticides.

Comment #107: Reference DEIS II-98: use hand operated equipment...who determines feasibility? (3602)

DEIS recommends that operators “Use hand operated equipment when feasible.” Who will determine feasibility and what will their qualifications be for determining adverse impacts? (D03-3226, page 9)

Response: The Forest Service has overall responsibility for approval of equipment and methodology for construction and development. The Forest Service is staffed with resource professionals and geotechnical engineers. Many of these professionals were part of the interdisciplinary team that designed mitigation measures as part of the analysis under this EIS process. The reference to “hand operated equipment when feasible” refers to the capability of hand operated equipment to accomplish the task, as opposed to heavy mechanical equipment, necessary for moving in heavy items such as towers, footings or transporting logs.

Comment #108: Clarify experience with Comer Lift - success of mitigation (II-102) (3604)

Per the DEIS, “Experience with the installation of the lower terminal for Comer Chairlift....” this statement seems to indicate that there was little sedimentation from installation of this chairlift; no data is provided to back this statement up. (D03-3243, page 19)

Response: There were no formal studies to confirm or measure the success or failure of the installation of Comer Chairlift, only observation by experienced resource professionals. These observations by the Permit Administrator and the Forest Geologist did not indicate any sedimentation from the construction site. Subsequent monitoring and observations of the site in future years by a number of Forest Service personnel including geologists and hydrologists have not observed any soil movement from the site. As a mitigation measure, MASA personnel utilized a geotextile fabric with riprap to armor the outside edges of the lower terminal area. These mitigation measures were successful.

Comment #109: Stormwater Pollution Control Plan not included in DEIS (3605)

Reference to DEIS page I-42; a Stormwater Pollution Control Plan is also required but not included in the DEIS. The DEIS also refers to a Stormwater Management Plan saying that all alternatives have a plan (chapter IV). Yet none is disclosed or discussed in the DEIS. (D03-3224, page 43 & 66)

Response: The ski area expansion proposal does not yet have a Stormwater Pollution Control Plan developed. The DEIS has identified elements that would be included throughout. If an expansion alternative is selected, a Stormwater Pollution Control Plan would be developed, in association with the authorization of expansion and in conjunction with the Oregon Dept of Environmental Quality (ODEQ). The exact and specific elements and locations would be variable to the alternative selected.

DEIS page I-42 says “Components being considered in the Action Alternatives (e.g., ski runs) would require disturbance to one or more acres of ground, including clearing and grading. As a result, these activities would require a 1200C Permit from ODEQ. In conjunction with the issuance of the permit, a Stormwater Pollution Control Plan (SWPCP) would also be developed for each proposed development item (see Mitigation Measures, Chapter II).”

Comment #110: Consider use of vehicle diapers and petroleum containment control (3606)

To eliminate the potential for petroleum leaks from construction equipment, evaluate the use of vehicle diapers or other petroleum containment practices. (D03-2168, page 4)

Response: The use of mitigation such as absorbing mats for contaminant control from equipment is part of the BMPs discussed under mitigation in the DEIS Chapter II. Consideration would be given to further specific requirements for this type of mitigation (and documented in the FEIS), especially when heavy equipment is operating near stream courses.

Comment #111: Discuss use of Sporax near streams (MSDS) (3607)

Please review the Material Safety Data Sheet on Sporax. The producer of this chemical says that it should not be used in areas of running water (as does the Forest Service itself). (D03-2709, page 3; (D03-2714 & 2715)

Response: Sporax® (sodium tetraborate decahydrate) is a contact preventative fungicide used to limit the spread of *Heterobasidion annosum*, the cause of annosus root disease by prohibiting germination and infection by spores. Sporax application would be done according to label directions and would not take place in areas of running water. Sporax would be applied by hand to newly-created cut stump surfaces of true fir, spruce, and hemlock located on the edge of the wetlands and on upland sites. The objective is to avoid application or spillage into open water. The full text of the Material Safety Data Sheet is available on the Internet at <http://infoventures.com/e-hlth/pesticide/borax.html>. This will be clarified in the FEIS.

Comment #112: Discussion of mitigation (e.g., roads) during precipitation events (III-24) (3608)

The analysis ignores the potential for precipitation events during road construction to cause significantly more erosion than accounted for in Megahan (1974). “The proposed construction of roads and buildings... call for mitigation measures to be installed after the structures have been built” (D03-3223, page 14)

Response: The literature referenced (Erosion over Time on Severely Disturbed Granitic Soils: A Model by W.F. Megahan 1974) was considered and discussed in the Roads and Parking Lots section at DEIS page III-24. That section discusses the large increase of sediment yield from newly constructed road over the natural erosion rates during the first year following construction. The paper discusses the effects of four different road construction projects in the Idaho Batholith on sediment yield. The cited paper discusses the large increases in sediment yield during the initial year of construction and the subsequent reduction over time.

DEIS page III-24 should not have stated or implied that mitigation measures would be employed “after” the structures have been built. The intent is to employ mitigation measures “before, during, and after” activities as necessary. This will be clarified in the FEIS. In the FEIS, potential sediment yields will be estimated from the Disturbed WEPP erosion model utilizing average annual values. Higher sediment yield rates are predicted to occur in years when higher than normal rainfall occurs.

Comment #113: Use of rock fills (instead of granitic material/soil) in excavated areas (3609)

The DEIS indicates fills in the expansion area and elsewhere will be constructed of the granular granitic material/soil (with rock blanketing and/or rock fills at specific high risk sites). It is my experience that rock fills are the only fully safe construction material (based on 1974 and 1997 flood events) and that all fills should be fully constructed as rock fills to insure their stability and permanence. (D03-3191, page 2)

Response: Fills constructed entirely of rock help ensure stability and permanence where common construction methods for the site conditions are known to be ineffective. Rock fills are typically reserved for selected sites for construction across areas with near-surface groundwater or marshlands or sites that would be subjected to flooding or severe ocean or lakeshore wave attack. Rock fills may also be appropriate where the native soils have exceptionally poor engineering properties, such as clays or silts.

Site surveys by specialists at the locations of proposed fills found that the native coarse-grained soils present are suitable for the construction of stable, enduring fills. All fills would be designed to minimize surface erosion through a variety of effective short and long-term mitigation measures that are discussed in the DEIS.

A coarse-rock cover, or blanket, is proposed for selected fills that are intended to provide long-term resistance to surface erosion and to minimize off-site sedimentation. Site surveys by specialists would select the locations of proposed fills that are not subject to flood scour or overtopping events. No soil fills or rock-covered fills containing inner cores of soil would be placed where they could be impacted by flood flows from surface drainages.

The only proposed fill to be fully constructed of rock is at the Skiway crossing of Pumphouse Creek. Here, a low-height, coarse-rock fill constructed of durable, angular rock is proposed as a ford for the ski trail. The fill would be constructed with a rolling grade (sag curve) into and out of the drainage. Rock fill slopes both up and down stream of the crossing would be constructed with gentle slopes. This would allow unimpeded creek flow through and over the top of the fill to protect both the fill and the creek banks from scour forces.

Comment #114: Consider use of biodiesel (B100) fuel during construction and operation (3610)

The DEIS does not consider minimizing air and water quality impacts during construction by using biodiesel fuel (B100) in diesel-powered equipment. Use of biodiesel during regular operations at MASA (snowcats, heavy equipment) should also be considered. (D03-3205, page 2)

Response: Biodiesel is the name of a clean burning alternative fuel, produced from domestic, renewable resources. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend. It can be used in compression-ignition (diesel) engines with no major modifications. B20 (a blend of 20 percent by volume biodiesel with 80 percent by volume petroleum diesel) has demonstrated significant environmental benefits with some increase in cost for fleet operations and other consumers (National Biodiesel Board 2004). Initial indications are that biodiesel is available locally, and a B20 mix adds about 20 to 25% to the cost of fuel.

Implementation of an action alternative would require compliance with standards and methods specified by the Forest Service. These include standards to protect air and water quality. Specific methods to meet the standards may include the use of biodiesel fuel during construction and operation. Information provided by MAA indicates that research is being performed on the use of a biodiesel/petroleum diesel mix in equipment used in operations and for construction projects. Factors such as local availability, cost and suitability for use in the engines currently in use and construction vehicles are being considered. MAA indicates that use of a biodiesel mix would be strongly considered for their operations. Construction operation plans would be evaluated prior to approval and the use of biodiesel fuels would be considered.

Comment #115: Summer mitigation for lupine/horkelia; gate at 300 Road (3611)

A gate installed at either the bottom of the summit road (300 Road) or at the first switchback above the Rabbit Ears rock formation would dramatically reduce the impact to the area in the summer months. Access to this sensitive area (where lupine/horkelia are located) should be reduced to summer maintenance crews and hikers. This would also have the advantage of reducing the vandalism to sensitive electronic facilities, ski lifts, and the environment that takes place each year.

Response: This idea is designed to control vehicle access and mitigate impacts to rare plants, and was discussed in Appendix D, page D-35 of the DEIS. The road that accesses the Mt. Ashland summit (FS 2000300) was constructed decades ago. A late spring/early summer road closure via the installation of a gate on this road for lupine and horkelia protection from vehicles is included as part of the 2002 Conservation Agreement between the U.S. Fish and Wildlife Service and the Forest Service (USDA FS and USFWS 2002). That agreement identifies the goal of studying the feasibility and desirability of a seasonal (gated) closure, during the period when vehicles can get part way, but not all the way to the summit (which creates the situation of vehicles leaving the roadway and affected rare plants or habitat).

The Responsible Official found that this action is not related to authorization for ski area expansion, and is not being proposed as part of ski area expansion or current ski area operation, is largely not within the Special Use Permit area boundary, and is not being analyzed in detail at this time. It could be proposed in the future, independent of and with independent utility from ski area expansion. Also see response to Comment #254.

Monitoring

Comment #116: Monitoring should be a requirement of all alternatives (3800)

As a result of funding and personnel limitations, the Forest Service has not adequately implemented the monitoring identified as needed for operation of the current ski area. We suspect that problem would plague any additional monitoring necessitated by expansion. We recommend that the Forest Service consider monitoring as an inherent component of all alternatives. (D03-921, page 2)

Response: The first part of this comment appears speculative and does not cite what consequence has occurred due to lack of monitoring of the current ski area. As stated on DEIS page II-114, “Monitoring of all construction and development activities is a required element of all Action Alternatives and will be carried out according to the *Monitoring Plan Framework for Mt. Ashland Ski Area Expansion* (Appendix M).”

Comment #117: Costs (and responsibility) of monitoring; expectations for funding (3801)

The agency should embark upon this new project only if it determines it has the resources to support long-term implementation of the entire projects - including implementation and effectiveness monitoring. (D03-921, page 2) The DEIS does not identify the party responsible for monitoring and maintaining these projects. (D03-3226, page 11)

Response: As stated in DEIS Appendix M, “Monitoring would be the responsibility of the Mt. Ashland Association and coordinated with Forest Service resource specialists. A Forest Service Representative would inspect the operation as needed during operations. Inspections would be unannounced and randomly timed. A Forest Service Representative would visit the site during the first storms of the season to verify that erosion control methods are effective. Water quality monitoring is a requirement of the Oregon Department of Environmental Quality (ODEQ).” The Forest Service has the workforce and staff to coordinate and oversee the required monitoring.

Comment #118: Utilize an independent third party QA/QC implementation monitoring team (3802)

The Forest Service should require MAA to hire an independent third party Quality Assurance/Quality Control (QA/QC) team of minimum 3 (or more) people highly specialized in soils and hydrology. (D03-2168, page 3)

QA/QC team should be paid by MAA and responsible to City and Forest Service (3803). The QA/QC team should be paid for by MAA and should report directly to the City and the Forest Service and give direction to MAA and its contractor. (D03-2168, page 3)

Response: The Forest Service does not have the authority to require a QA/QC process, nor the authority to force MAA or its contractors to abide by its recommendations. This is considered to be out of scope to the Forest Service process (this will be discussed in FEIS Appendix B). The MASA is operated by MAA under a lease agreement with the City of Ashland, holder of the Special Use Permit. Given this relationship, the City of Ashland could require a QA/QC process, require its authority and/or specify the composition as suggested in these comments.

Comment #119: Monitor effects (sediment loading & flow) on East Fork at the 2060 Road (3804)

The Forest Service and the MAA should be required to monitor creek impacts (erosion and sediment loading) at the 2060 road crossing of the Middle Fork of the East Fork of Ashland Creek. (D03-2168, page 4)

Response: The Middle Fork of the East Fork of Ashland Creek merges with the East Fork approximately ¼ mile above the intersection with the 2060 Road, at an elevation of 4,800. The Monitoring Plan will be fully developed in the Record of Decision and could include monitoring at the 2060 Road.

Comment #120: Use information and knowledge gained from implementation to refine plans (adaptive management) (3805)

Use the information and knowledge gained from mitigation and monitoring efforts....to refine installation plans.....including locations of runs and crossing, installation methods, mitigation measures to employ, and other recommendations of the QA/QC team. (D03-3221, page 2)

Response: The Forest Service supports the “adaptive management” concept and would encourage its use during implementation. This will be further discussed in the FEIS and forthcoming Record of Decision. See response to Comment #118 above regarding QA/QC.

Comment #121: Monitor conditions year round from weather events (3806)

Monitoring should study effects from year-round events, not just winter and spring runoff. (D03-3221, page 7)

Response: The Forest Service agrees that monitoring should occur year round. As stated at DEIS pages III-2 and 69 and IV-34, 36, and 43, summer thunderstorms are common and have potential for erosion and sediment runoff. The Monitoring Plan will be fully developed in the Record of Decision and will include monitoring at all times of the year.

Comment #122: Discussion of actual current condition monitoring results; Middle Fork of East Fork (3807)

The Forest Service should immediately begin monitoring and assessment of actual conditions in the Middle Fork area, and work cooperatively with the City of Ashland to identify and consult with specialists who can frame a monitoring and assessment plan that will discuss Middle Fork hydrology and ecosystem function. (D03-3192, page 2)

Response: The Forest Service supports this concept and has, in cooperation with MAA, begun additional baseline monitoring. Specific items that appear to be important include flow, pH, temperature, and turbidity at sites below MASA and on an adjacent fork of Ashland Creek. By collecting this data, a comparison of the two areas could be developed based on the data. Upon construction, similar monitoring at the Site Scale could be conducted (to verify that water quality standards are not being exceeded below construction sites). This site-specific data, coupled with the downstream data (and volume counts from the stormwater controls), could be used to determine whether the construction is having an effect on the Middle Fork. This will be further discussed in the FEIS and forthcoming Record of Decision. Also see response to Comment #118 above regarding QA/QC.

Comment #123: Accomplish watershed restoration prior to development (3900)

Watershed restoration projects should be completed before any expansion activities occur in order to maintain and improve the conditions in the four affected watersheds. (D03-894, page 2 and D03-3221, page 12 and D03-3225, page 10)

Response: As stated at DEIS page II-53, all watershed restoration projects would be completed prior to or concurrent with the first development phase in the first year. Some restoration projects require that material (such as large logs/woody material) be brought in moved and/or placed, which would require equipment. This equipment would be more available if present because of concurrent construction or development activities. Further, some material for restoration (e.g., large woody material) would come from clearing activities associated with lifts or runs in proximity. Also see response to Comment #97.

Comment #124: Accomplish existing lodge improvements prior to/concurrent with other development. (3901)

Improve the existing lodge and other skier services before developing new terrain and services. (D03-910, page 1 and D03-915, page 1 and D03-926, page 1)

Response: As stated at DEIS Appendix D, page D-13, improvements to an existing structure do not require authorization under the NEPA process, unless the building footprint is enlarged. The Forest Service cannot direct MAA to remodel the lodge (e.g., reconstruction to make more efficient use of space). As stated at DEIS page II-115, the actual implementation progression, timing of the individual projects (including a Lodge with an expanded footprint), interim project ‘steps’, and determination of necessity for individual projects within the alternatives would be dependent upon an ongoing analysis of the priority for each project or group of associated authorized projects (by MAA) and the availability of construction capital.

Comment #125: Develop east side of Middle Fork prior to developing west side (3902)

Install Chair LC-6 and limit initial run development to the east of the chair in Phase 1. Delay construction of runs and the bridge crossing to the west of the chair (Phase 2) until mitigation and monitoring efforts have been completed for Phase 1. (D03-3221, page 7)

Response: See DEIS Chapter I, Section D, 1, a, b., and c, (Purpose of and Need for Action), which discuss the need for additional Novice to Beginner level terrain at Mount Ashland. Map II-3 indicates that the Novice level ski trail (R-12) would be located to the west of LC-6 in this alignment. While the Skiway (R-18), located east of the chairlift, would provide Novice level terrain, the major function of the Skiway would be as an access trail. The trail would be comprised of a cat track, which would provide a limited quality of skiing for Novices. The Skiway would also provide access to the bottom of C-6 for all users, and could result in a mixture of skiers of varying ability levels. As such, the Skiway alone would not meet the need for suitable Novice terrain in the C-6 pod. Without Run 12, the C-6 pod would not meet the Purpose of and Need for Action, as described in Chapter 1.

In addition, Alternative 3 of the FEIS analyzes development that would restrict the LC-6 pod to the east side of the Middle Fork drainage. Constructing the eastern portion of the pod separate from the western portion would not likely result in discernable environmental benefits, in that the greatest potential for impacts would be from the construction of the bridge crossing. Also see response to Comments #126, below.

Comment #126: Discussion of flexibility during implementation (3903)

MAA must have common sense flexibility in the approval to construct components of the improvements as the needs, capital resources, and opportunities dictate. The Forest Service should not require any specific order of implementation. (D03-3220, page 6)

Phase 2 installation (see comment 3903 above) could begin four to five years into expansion. The QA/QC and multi-disciplinary teams are in the best position to determine the timeline. Make upgrades to customer service (lodge, ticket buildings, etc.) add beginner terrain near the lodge, and widen Lower Juliet in Phase 1. (D03-3221, pages 7 & 12)

Response: The Forest Service believes that MAA and their professional consultants are in best position to determine the order of implementation. If there is a compelling resource or safety reason (e.g., parking) for one project to precede another, then the Forest Service might require MAA to complete one project prior to another. As previously noted within this Appendix, the environmental analysis process requires that the EIS describe the environmental consequences of each alternative relative to ground-disturbing activities, not to be prescriptive of what takes place in an operational sense.

Comment #127: Develop Poma lift and runs in Phase 1 (desirable intermediate terrain) (3904)

The Poma lift and runs should be included in Phase 1 due to the minimal amount of work required to open the runs. This would provide desirable intermediate terrain in the vicinity of the base lodge immediately. (D03-3205, page 2)

Response: As stated in the comment above, the Forest Service believes that MAA and their professional consultants are in best position to determine the order of implementation. If there is a compelling resource or safety reason for one project to precede another, then the Forest Service will require MAA to complete one project prior to another. Developing the relatively small Poma lift area prior to other projects that provide more terrain would not necessarily make sense from a ski area planning viewpoint. Although run and terrain development at the Knoll and Middle Fork areas would require more work, the result would be a much larger area available for skiers and boarders, a stated element of Purpose and Need.

SUBSTANTIVE COMMENTS – AFFECTED ENVIRONMENT

General

Comment #128: There is no watershed analysis for Cottonwood Creek (4000)

The Cottonwood Creek Watershed has no watershed analysis. Especially considering that this watershed is in a degraded condition, this project should not go forward until such time that a watershed analysis has been done. (D03-3224, page 38)

Response: As stated in the DEIS page III-71, “No Federal watershed analysis has been conducted for this watershed, and therefore, information regarding the existing condition of this watershed is limited. However, site-specific analysis of conditions associated with the MASA Special Use Permit was conducted as part of the analysis for this Draft EIS and in support of restoration needs and projects being proposed. This analysis is documented herein and contained within DEIS Appendix E, and is incorporated by reference.” Site-specific documentation for Cottonwood Creek will be contained in FEIS Appendix F.

Comment #129: Recommendations from 1991 Stream Surveys, 1995 Bear Watershed Analysis and 1997 East Fork Stream Surveys not followed. (4001)

The Forest Service continually goes against recommendation regarding protection of the East Fork Watershed as stated in the Bear Creek Watershed Analysis and East Fork of Ashland Creek Stream Survey. (D03-3224, page 38) It is not apparent from the DEIS that stream surveys were consulted. Proposed Alternatives 2, 3 and 6 are clear violations of the recommendations made by the Forest Service in their 1997 East Fork Ashland Creek Level II Stream Survey. (D03-236, page 2)

Response: As with any recommendation, those contained within Watershed Analysis, Stream Surveys or any other analysis/assessment document, are not decisions and do not reflect requirements. Recommendations are made at the time of analysis, for future consideration based on the most current information. Documentation exists throughout the DEIS that updates current conditions and predicts consequences of action alternatives, based on the most recent and accurate information available. Recommendations were reviewed and the listed documents were cited in the DEIS.

Comment #130: Lack of systematic monitoring of summer thunderstorms and ski area (LRMP 4-58) (4002)

The 1987 study only monitored winter and spring runoff. It did not account for summer thunderstorms, which can create huge impacts very quickly (Badura 2000). No one has ever systematically monitored summer thunderstorm runoff at the ski area, contrary to the explicit direction at LRMP 4-58. (D03-3223, page 11)

Response: While no specific data is documented regarding spring and summer thunderstorm conditions, Forest Service and MAA personnel are familiar with conditions when this occurs. This knowledge has been incorporated into the monitoring plan and design elements and mitigation. There is no specific requirement for monitoring of summer thunderstorms at LRMP 4-58. The proposal and alternatives include all elements of applicable Standards and Guidelines that are cited on this page. Also see response to Comment #121.

Physical Environment - Climate

Comment #131: Use of NOAA/University of Washington global warming model www.ngdc.noaa.gov/paleo/globalwarming/end.html and other web sites and sources (4100)

There is information that relates to global warming in the Pacific Northwest. The Climate Impacts Group at the University of Washington has published a study entitled *Impacts of Climate Variability and Change in the Pacific Northwest* (Mote, et al. 1999, 2003). This study predicts that we will have an increase of 1,100 in the snow line within the next 20-25 years (as of November 1999). The same study also predicts wetter winters. Such a change in the snow line would have considerable impact on the ski runs related to the LC-6 Chairlift and to the current operation of the ski area. What are the expected effects on snowfall given the 3-9 F temperature increase (IPCC 2001) that is expected in this century?

Further, many ecologists believe that mountain ecosystems may be particularly vulnerable to climate change because they possess steep elevation gradients (Beniston 1994; Markham et al. 1993). (D03-2243, page 1; 2256, page 1; 3216, page 1; 3223, page 3; 3224, page 25; 3225 pages 1-2, 3226 pages 14-15; and 3249, pages 1-2)

Response: In response to comments received on the 2003 DEIS, the Forest Service contracted the services of Dr. Gregory V. Jones, Associate Professor, Southern Oregon University, Ashland OR. His expertise includes Physical Geography, Weather and Climate, Climatology, Research Methods, Quantitative Methods for Geographers, Global Change Issues, etc. His research interests include climatology, hydrology, and agriculture; phenology of plant systems; biosphere and atmosphere interactions; climate change; and quantitative methods in spatial and temporal analysis. He has published numerous articles in the areas of climate variability and change in *Climate Research*, *Journal of Coastal Research*, *Journal of Climate*, *Climatic Change*, and *The International Journal of Climatology*. He has also presented research at over fifty regional, national, and international conferences on climate-related issues.

Dr. Jones was asked to research the references mentioned in this comment and provide the Forest Service with an overview and assessment of the validity and relevancy of the sources and the comment content. His findings are documented in a paper *Understanding Climate Variability and Change in the Pacific Northwest*, which will be incorporated by reference to the FEIS. While this 17-page paper in essence addresses this comment, it will not be reiterated in this Response to Comments document, the following (from the abstract of the paper) summarizes the findings:

From 1920-2002 six climate stations in the intermountain valleys of southern Oregon and northern California exhibit an average observed warming of 1.83°F and 2.41°F for annual and wintertime periods, respectively. Annual precipitation has increased roughly 15% for these same stations, while winter precipitation has not changed significantly. Snow depths for the Mt. Ashland area have not significantly changed from the late 1960s to the present. Longer-term data from the Big Red Mountain site (located WSW of Mt. Ashland) finds that there have been no significant trends in snow water equivalent for the 1st and 15th of the month (December, January, February, March, and April) snow surveys from the mid-1930s through 2002.

Future climate change projections for the region are found to not adequately represent the varying nature of the landscape of the southern Oregon region, let alone predict complex changes in snow characteristics. The best regional climate model projections show a winter period that is 1.5°C (2.7°F) too warm and 20% too wet and a summer that is roughly 50% too dry and 1.1°C (2.0°F) too warm compared to observations. While climate modeling is a useful tool to better understand the complex Earth/Atmosphere system, it does not at this point provide the tools needed to make prudent policy-oriented decisions at an appropriate scale.

Climate is a very complex, highly variable, and pervasive factor in our natural Earth and human-based systems. The discussions regarding climate change (and global warming) will be revised in the FEIS.

Comment #132: Lack of data on snowfall early in the season (4101)

We question why the DEIS omits historic snowfall trends *early in the season*. All of the historic snowfall data is limited to measurements taken between January and April each year since 1970 (pp. III-3 and 4). (D03-3223, page 2)

Response: This comment refers to three Natural Resource Conservation Service (NRCS) snow courses within one mile of MASA (Ski Bowl Road, Mt. Ashland Switchback, and Caliban II). The system evolved from NRCS's Congressional mandate in the mid-1930s to measure snowpack in the mountains of the West and forecast the water supply. (Manual snow courses have been supplemented with automated SNOTEL sites since the late 1980s.)

The major reason for the snow survey program, with its extensive data collection network throughout the West, has always been the forecasts of annual streamflow volume at specific points along a river system. These forecasts are a vital input to water management. Irrigation, reservoir operation, domestic water use, power generation, fisheries management, and flood control are typical of the activities dependent on streamflow. The high-elevation watershed locations and the broad coverage of the network provide important data collection opportunities to researchers, water managers, and emergency managers for natural disasters such as floods.

Early season measurements are not useful in predicting streamflow because the snowpack has only begun to develop, typically reaching its maximum water content in March at the three Mt. Ashland sites. The DEIS made use of available data that was generated for a different purpose than to measure early season snowpack. This data was supplemented in the DEIS with early season data that was available from MAA records (DEIS III-4 and 5). Since the winter of 2000-2001, the Big Red Mountain Snotel site has produced early season snow depth data. However, the newly-installed snow depth sensor did not function reliably until the winter of 2001-2002. The Big Red Mountain site, located about eight miles west of Mt. Ashland at 6,250 feet in elevation, may prove useful in the future to correlate early season measurements at MASA.

Physical Environment - Geology

Comment #133: LHZ: inaccurate extrapolation of current ski area with Middle Fork area (4300)

The analysis appears to be based on mapping, computer modeling, and inference from the existing ski area. Experience from the existing ski area is an imperfect model because of the differences in geomorphology, almost completely different soil landtypes, and the relative portion of the Zone 2 areas that are cleared. The existing ski area overlaps almost no acres rated LHZ 1 or 2, whereas the Middle Fork expansion area is loaded with unstable ground. (D03-3211, page 1; D03-3223, page 4)

Response: The analysis was not based on mapping and computer modeling from the existing ski area. The landslide features for the Middle Fork of the East Fork of Ashland Creek were mapped separately from the existing ski area. Field mapping was completed with site-specific detail and hazards were assigned for that area based on the particular soils, geology, and geomorphology that exist for the Middle Fork basin. Computer modeling was conducted and completed for the Middle Fork area and was not inferred from the existing ski area.

When slope stability mapping for the proposed Mt. Ashland Ski Expansion Area was conducted and Landslide Hazard Zones were developed, they were completed for a given basin, based on the particular slope gradients, aspects, landslide features, geology, soils, and geomorphology for that area. The only inference intended in the DEIS from the existing ski area is that some of the slope gradients, geology, and effects from glaciation are similar to the Middle Fork basin.

Physical Environment - Soil Processes

Comment #134: More information on groundwater storage capacity/substrate in Middle Fork (4400)

Members of the Ashland community have reported observations of substantial surface flow in the Middle Fork and well hydrated vegetation in the immediate vicinity of the creek in August 2003 in contrast to much lower flows & vegetation conditions outside the riparian area. (D03-3222, page 4)

Response: The wetlands along the Middle Fork of East Fork are readily seen. The ground is saturated and water can be seen flowing across an impervious surface in places where surface soil has been removed. While this is easily observed, quantification of the volume of water contributed by these areas is not easily calculated by observation alone.

This comment, along with several others, mention a flow of around 10 cfs being observed in the Middle Fork East Fork in mid-August 2003. A check of the U.S. Geological Survey gaging station records for the East Fork of Ashland Creek just above Reeder Reservoir shows that the total flow downstream this location at that time was about 3.9 cfs (8/19/03). Therefore the observed flow in (upstream) Middle Fork could not have been 10 cfs as reported and the contribution of the Middle Fork East Fork area is overstated.

On October 24, 2003, the Forest Service Permit Administrator and Forest Hydrologist made measurements of the flow in the Middle Fork East Fork Ashland Creek. At that time the flow in this stream was measured at approximately 0.3 cfs. Flow on the East Fork Ashland Creek at the USGS gaging station on this date was 3.5 cfs. Therefore, the approximate contribution of the Middle Fork East Fork to the total flow in East Fork was 8.6%. Using this percentage as a base, with a flow of 3.9 cfs in East Fork Ashland Creek in mid-August, the contribution of Middle Fork East Fork would have been approximately 0.34 cfs. The drainage area for Middle Fork East Fork at its confluence with East Fork is about 515 acres, which is just slightly less than 10% of the 5,210-acre total drainage area for East Fork Ashland Creek at the gaging station. Given the errors in measurements of both flow and drainage area, it appears that the flow in Middle Fork East Fork Ashland Creek is not inconsistent with its drainage area and that it contributes neither more nor less than would be expected from a drainage of its size. This will be clarified in the FEIS. References: U.S. Geological Survey Provisional records for discharge in East Fork Ashland Creek near Ashland, OR (Station #14353500). U.S. Forest Service Memo to Ashland Ranger District files documenting discharge in Middle Fork East Fork on October 24, 2003 (dated November 14, 2003 with addendum on January 28, 2004).

Comment #135: Reference to 1970 Frank MacGraw sedimentation studies (4401)

In the early 1970's Professor Frank MacGraw, SOU Geography Department, conducted a series of field studies with his Geography students and concluded that the sedimentation load from the ski area is miniscule. (D03-2345, page 1)

Response: Dr. MacGraw retired from SOU a number of years ago and now resides in California. The Forest Service contacted Mr. MacGraw and he stated that a graduate student spent part of one summer conducting field observations of sediment movement off the ski area. The study was initiated after the 1973 flood because "people were interested in where all the sediment came from that ended up in Reeder Reservoir." According to MacGraw, the study concluded that sedimentation from the ski area was extremely minor relative to the amounts deposited in Reeder Reservoir. There is no documentation available of this study for the administrative record.

Comment #136: Reference to scientist also familiar with Idaho Batholith (4402)

It has been some time since Dr. Megahan visited the site. Perhaps visitation by another scientist familiar with the Idaho Batholith (GA Meyer, Department of Earth and Planetary Sciences, University of New Mexico) would be in order. (D03-2245, page 6)

Response: The published work of the referenced scientist appears to deal primarily with glacial scarps, climate change, fluvial chronologies, and fire-related effects throughout the Holocene period (last 10,000 years). Much of his work is associated with the Yellowstone Park area. One of his published works—*Fire, Storms, and Erosional Events in the Idaho Batholith* (Meyer, 2001)—discussed sediment transport after stand-replacing fires and cited Dr. Megahan. This is the only work by Meyer specifically associated with the Idaho Batholith.

The Forest Service believes that the work of Walter Megahan offers the most relevant and pertinent source of background science. Dr. Megahan was further consulted regarding the analysis of the granitic terrain, sediment modeling and consequences associated with ski area expansion at MASA, based on public comments on the DEIS. The results of this consultation will be documented in the FEIS.

Comment #137: Soil types: inaccurate extrapolation of East Fork conditions to Middle Fork (4403)

The FS soil surveys are flawed in the DEIS because they do not factor in the many soil types on the mountain, and falsely extrapolate the East Fork conditions onto the very different soil of the Middle Fork. (D03-2708, page 1; D03-3223, pages 4 and 11)

Response: The Soil Resource Inventory (SRI) for the Rogue River National Forest was updated for this analysis and it showed that there were differences in soils between the two drainages (DEIS page III-16). The updated landtype map shown on DEIS page III-17 shows the new mapping units. The map was developed from field surveys and aerial photo interpretation. In the West Fork, there are seven different landtypes compared to four different landtypes in the East Fork. Each landtype usually has a different soil which are described in the Rogue River National Forest SRI (Badura and Jahn 1977) and was summarized at DEIS page III-16.

Comment #138: Scientific debate over 1978 – 1983 sediment study (4404)

The NEPA document must disclose scientific controversy and uncertainty associated with the information it presents to the public. It must balance the DEIS' selective quotation of the former RRNF Hydrologist (instead of the former RRNF Soil Scientist). (D03-3223, page 10)

Response: This debate is not considered “scientific controversy” in terms of NEPA and case law defining controversy. It is a matter of opinions of a few individuals who may or may not have been familiar with the study that occurred some twenty years plus ago. Part of the debate is among current and former Forest Service employees.

The current position of the Forest Service, based on the opinion of the current Forest Hydrologist is stated in the DEIS at III-20, “...watershed personnel on the RRNF installed two sediment basins on the East Fork Ashland Creek just below the ski area. From 1978 through 1983, sediment was collected behind these structures during periods of runoff. Forest Service watershed personnel measured the sediment volume and on an annual basis and removed it in late fall. There has been some debate about the value of the data collected from this monitoring effort since there were leaks and storage capacity problems on several years of data collection. Nevertheless, the Forest Hydrologist for the RRNF summarized the findings from five years of data as follows – “even if we only trapped half of what left the ski area, then total yield would only be slightly more than 60 cubic yards over a period of four years” or 15 cubic yards per year from the two sediment basins.”

Comment #139: No discussion of “pulse” of erosion from original construction (erosion study) (4405)

The erosion study does not account for the largest pulse of erosion from the ski area prior to the application of erosion control measures, meaning that the DEIS erosion projections for expansion activities are not site-specifically validated. (D03-3223, page 10)

Response: Analysis for the DEIS used an assumption of high initial sediment yield for the first two years after construction, then used a lower average rate for years 3 through 10. The 10-year rates were summed and presented as an average annual sediment delivery rate. Analysis to be documented in the Final EIS will take a more detailed approach and model each disturbance near watercourses through the *Water Erosion Prediction Project* (WEPP) program.

The average annual sediment yield values from *WEPP: Road* are increased 10 fold for the first year after construction and 2 fold for the second year after construction to account for the large pulse of sediment that occurs from disturbances associated with the initial construction. See pages A-21 to A-22 in the WEPP – Appendix A. Technical Documentation (www.dnr.wa.gov/forestpractices/adaptivemanagement).

Comment #140: Controversy over effectiveness of undisturbed forest in sediment filtering (4406)

The DEIS states that the presence of undisturbed forest between disturbed soils and surface waters greatly reduces the risk of sediment delivery. This ignores considerable scientific controversy and uncertainty regarding site-specific effectiveness of buffer zones for sediment filtering. (D03-3223, page 22)

Response: This comment does not indicate what published scientific literature refutes these research findings. A more comprehensive compilation of studies by a variety of researchers supporting the function of buffers in capturing sediments is presented in the *Washington Road Surface Erosion Model* (WARSEM) – Appendix A – page A-18 to A-21. Based on a “considerable body of literature”, the authors of WARSEM assume that “roads farther than 200 feet from a stream are assumed not to deliver sediment to streams unless a gully exists between the road and the stream channel”. These assumptions fit well with the observations made after several thunderstorms in the summer of 2003 of runoff from the MASA parking lot and access roads into undisturbed forested buffers (letters on file at Ashland RD).

Physical Environment - Restoration Practices

Comment #141: Further discussion: cooperative restoration efforts (RRNF, KNF, MAA, DEIS page IV-67) (4600)

According to the DEIS, “Cooperative restoration efforts with MAA, the KNF and the RRNF have reduced road related sediment over the years.” Where is the data to prove that this is true? (D03-3224, page 19)

Response: In addition to the discussion at DEIS III-34 through 41, the special report (10 Years Later) in Appendix E discusses the history, success, failure and ongoing needs of cooperative restoration efforts.

Physical Environment - Watershed Resources

Comment #142: More discussion on threat of floods and risk of fire in Watershed (4700)

The issues of fire and floods in the Mt. Ashland watershed are not addressed in this DEIS. On the upper slopes, without a protective tree cover, rain on snow is devastating, especially with thin, granitic soils. (D03-2248, page 1)

Response: Current conditions were not highlighted in the DEIS because the inherent hazard and risk of the Special Use Permit and surrounding area is very low; see the assessment of fire risk and hazard conditions in its *2003 Upper Bear Assessment*, as further discussed in response to Comment #162. Regarding floods and rain on snow events, the Special Use Permit is typically covered in snow. Seven of the last eight largest peak flow storms since 1909 have occurred in December, January, or February. These large storms produce rains in the **transient snow zone**, at elevations ranging from 3,500 to 5,000 feet above sea level, in this area (DEIS page III-2). Warm rains can melt large volumes of snow during these events causing flooding. The lowest elevation of proposed clearing for ski runs and lifts is approximately 5,800 feet.

This makes the expansion areas above the transient snow zone and would typically be covered by a thick blanket of snow. During the time when rain on snow events occur, snow, not rain would fall at these elevations and would not contribute to increased runoff associated with major flood events. When rain does fall above 5,000 feet elevation, the snowpack acts as a sponge and absorbs most precipitation. Historical evidence does indicate that the terrain of the Special Use Permit is susceptible to surface erosion when exposed soils are subject to severe thunderstorms during the late summer. This is not the time when historical flooding has occurred in this area. This will be clarified in the FEIS.

Comment #143: Stream characteristic differences; East Fork of the East Fork, Middle Fork of the East Fork (4725)

East Branch of the East Fork has a long run-out basin that collects any (coarse) debris flow material or erosional products from the existing ski area; the Middle Branch of the East Fork has less of these characteristics. No discussion regarding the implications of this situation was discussed in the DEIS. (D03-3191, page 1)

Response: The Forest Service Hydrologist is familiar with only one such “run-out basin”, that being on East Fork Ashland Creek above the 2060 Road, although there may be others. The break in terrain at this location allows sediment from higher in the drainage to settle out. Any coarse sediment from the ski area would have a chance to deposit there. The implication of this comment is that storage sites, such as the “run-out basin”, delay sediment movement downstream. In actuality, the temporary storage in these sites moderates the delivery of pulses of sediment that occur during specific events.

In addition to the terrain breaks where sediment can deposit, there are many other sediment storage locations in the stream channels. These occur behind rocks and logs primarily. They occur throughout the channel system all the way down to Reeder Reservoir. While there is no sediment routing study completed for the Ashland Creek watershed, years of observation of the channels by Forest Service resource professionals leads them to believe because of these sediment storage mechanism, it would take many years for any sediment to be transported from the top of the watershed to Reeder Reservoir. This will be clarified in the FEIS.

Comment #144: No detailed specific mapping of wetlands (4750 & 4751)

In particular there is no specific detailed mapping of wetlands and riparian wetlands or detailed mapping of delineated wetlands in the body of the DEIS or in the appendices. This is a failure to inform the reader and the decision maker in a clear and concise manner. (D03-236, page 1, 2 & 7)

There is no documentation that delineation of the wetlands was performed in September 2001 and June 2002 nor was there any discussion of wetland delineation protocol. (D03-236, page 6, 7, and 8)

Response: As discussed in the DEIS page III-56 and 57, additional and site-specific wetland mapping was conducted for the site scale analysis area (an area slightly larger than the Special Use Permit area). In order to satisfy conditions of EO 11990, the wetlands in the Site Scale Analysis Area were identified consistently with the methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987). The methodology found in the *1987 Manual* was implemented with the benefit of current regulations and Regulatory Guidance Letters (RGL) and memoranda (USACE, RGL 82-2 and 86-9) (USACE, Memorandum 3-92).

Comment #145: Incorrect mapping of isolated wetlands (DEIS 3.1.3) and DSL and Army Corp regulations regarding permits (4752)

There are no isolated wetlands as defined in Appendix E of the DEIS. All of the wetlands in the proposed expansion area are connected by either surface or subsurface flow to the Middle Branch and are therefore subject to Division of State Lands and hence Corps regulations. It does not appear that the Forest Service or Mt. Ashland Association are aware of this requirement. (D03-236, page 8)

Response: The Stream and Wetland Report contained in DEIS Appendix E was completed by ecologists from SE Group with over 15 years of experience in wetland delineation, assessment and permitting. In addition, fieldwork was conducted and overseen by Bill Granger of SE Group. Mr. Granger received the U.S. Army Corps of Engineers provisional wetland delineation certification and is a Professional Wetland Scientist (PWS) recognized by the Society of Wetland Scientists.

The seven slope wetlands identified in the report total 1.5 acres. These wetlands possessed no identifiable surface or subsurface connection during the field investigations in 2001 and 2002. Nonetheless, the report cites the findings in the Solid Waste Agency of Northern Cook County (SWANCC) decision and indicates that “Even though these wetlands MAY [emphasis added] not be subject to jurisdiction by the ACOE, state and county agencies may administer laws and ordinances that protect these systems.” (Section 3.1.3 – Isolated Wetlands). Thus, the DEIS acknowledges that the wetlands may indeed be subject to the jurisdiction of other agencies. In addition, the report states that “it is SE Group’s recommendation that a field verification be scheduled with the ACOE to determine the extent of jurisdictional streams and wetlands within the MASA Study Area and permitting requirements...”(Section 4.0 – Conclusion). In this regard, the DEIS indicates that the final determination must be made by the ACOE.

Table 1 in the Stream and Wetland Report in the DEIS contains an error, in that the Column labeled “ACOE Jurisdiction” exhibits entries that are the opposite of the intended entries. In order to further clarify that any final determination of jurisdiction lies with the ACOE, this column will be removed from this table in the FEIS.

Comment #146: Discrepancy between Bear WA and current DEIS: wetland mapping (4754)

The Bear Watershed Analysis (1995) clearly shows multiple wetlands in the lower and upper expansion areas. According to the WA, these areas have been surveyed by the US Fish and Wildlife Service. Though at least a dozen wetlands appear on this map, only a few are delineated in the DEIS. Please explain this discrepancy. (D03-3224, page 44-45)

Response: As discussed in the DEIS page III-56 and 57, additional and site-specific wetland mapping was conducted for the site scale analysis area (an area slightly larger than the SUP area). This inventory is more site-specific than the US FWS mapping portrayed in the 1995 Bear WA. In order to satisfy conditions of EO 11990, the wetlands in the Site Scale Analysis Area were identified consistently with the methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987).

The methodology found in the *1987 Manual* was implemented with the benefit of current regulations and Regulatory Guidance Letters (RGL) and memoranda (USACE, RGL 82-2 and 86-9) (USACE, Memorandum 3-92). According to the *1987 Manual*, a three-parameter approach is used when making wetland determinations, wherein positive indicators of wetland hydrology, hydric soils, and hydrophytic vegetation all must be present in order to determine that an area is a jurisdictional wetland (USACE 1987).

The wetlands that were identified in the Site Scale Analysis Area were recorded using standard field mapping techniques that utilized aerial photo interpretation, physical measurements (with compass, clinometer, and field tape), and interpretation of topographic maps. Additionally, Northwest Biological Consulting published the results of a wetland delineation of the area near the bottom terminal of the proposed LC-6 Chairlift on March 3, 1999. The wetland and stream boundaries were surveyed by Polaris Survey and the resulting digital map was converted from an AutoCAD format to a GIS format, and incorporated into the Site Scale wetland and stream mapping (see Map III-6).

It is possible that there is less area resulting from this site-specific mapping than the more coarse US FWS mapping. That fact does not make it less credible or less accurate; the Forest Service believes it is using the best available site-specific data.

Comment #147: Discussion of problems identified in 1998 (NBC) soils report (4755)

The Ski Ashland Wetlands Evaluation – Soils Report, dated October 25, 1998 reports some major potential problems with the ski area expansion into the wetlands, none of which have been adequately addressed in the DEIS. (D03-3224, page 45)

Response: The Soils Report dated October 25, 1998 was prepared by George Badura under contract with Northwest Biological Consulting (NBC). It was included as an appendix to NBC's *Wetland Delineation for Area 1 Mt. Ashland Ski Area Expansion Wetland Crossing Project* (March 3, 1999). The appendix listed three "management problems" that needed to be addressed and they are quoted verbatim below:

1. *Crushing of piping/rodent runs which may bring water to the surface because of internal flow restriction and redirection of surface flow.*
2. *Hydric soils with muck surfaces have low bearing strength and are saturated throughout most of the year. Downcutting of channels will drain these soils which may lose the wetland capability or classification.*
3. *Grassy meadow areas fit Category 2 [soils with numerous piping/rodent runs and groundwater near the surface]. These areas show indications of spring saturation for significant lengths of time, however, they do not show hydric conditions. They show severe erosion and deposition occurring on them in the form of small rills, gullies downcut and deltas built up behind down logs, etc. This active erosion and deposition may be hiding hydric conditions and color indicators by the continual soil mixing or turnover.*

The Badura report was acknowledged as one source of information in the DEIS at page III-59, especially as it relates to piping. Wetland function, capability, and classification in the Site Scale analysis Area are discussed in the DEIS at pages III-56-60. Specific watershed effects to wetlands and streams are found at the DEIS at pages IV-74-89. Discussion specific to piping is found on DEIS pages IV-55, 75, & 77.

The Soils Report also included additions that are dated October 27, 1998 and November 2, 1998. These additions updated the October 25th report and included results of further test holes used for soil and wetland evaluations. In addition, they included a comparison of different wetland crossing locations for proposed Run 12 and conclude that the "northern route," now proposed by MAA, had the least impact to soils. Concerns raised by these additions included impacts to piping and soil compaction. A recommendation was to perform only hand work in the wetland. Mechanized equipment could be used in the area with a snow cover of "about 24 inches."

Comment #148: Does MASA have or need a water right? (4775)

The DEIS states that an underground spring provides the source of the ski area's drinking water and that the various alternatives indicate that additional water storage capacity is needed. A water right may be necessary for the spring. (D03-17, page 1)

Response: A search of the Oregon Water Resources Department (OWRD) Internet site did not indicate that the ski area has a water right. The comment letter from OWRD includes the rules on when a development of a spring requires a water right and when it can be developed without one. In early July 2004, MASA water source was field inspected by Larry Mentee, Jackson County Watermaster, and Ivan Gall, hydrogeologist. The purpose of the field visit was to determine if the MASA water source was groundwater or surface water.

The current water collection system is located near the base of the Aerial chairlift. Water is collected in perforated pipes buried in trenches approximately 6 feet below ground, wrapped with geotextile fabric. The perforated pipes are located in an area of groundwater discharge (spring flow) approximately 20 feet from a small seasonal stream. The perforated pipes are connected to solid pipe, which gravity flows down to a buried cistern. Two submersible, metered pumps are installed in the cistern, which pump the water up to a buried 15,000 gallon storage tank located approximately 200 feet higher than the MASA base area facilities. Water from the 15,000-gallon tank gravity flows down to the facilities.

Because the water entering the perforated pipe is groundwater (below the land surface), the OWRD finds that MASA is entitled to the various exempt groundwater amounts. Oregon Revised Statutes (ORS) 537.545 (1) exempts several uses of groundwater from registration or permitting requirements. These uses include stockwatering, irrigation of any lawn or noncommercial garden not exceeding one-half acre in area, single or group domestic not exceeding 15,000 gallons a day, down-hole heat exchange purposes, and any single industrial or commercial purpose in an amount not exceeding 5,000 gallons a day, and land application.

Because the ski area is a commercial operation, MASA is entitled to the 5,000 gallon per day limit. If staff were to live onsite (year-round or seasonally), MASA would also be allowed to use additional groundwater for domestic purposes for those staff living onsite. The stock watering, down-hole heat exchange, and land application exemptions do not currently apply to MASA's existing water uses. Irrigation is limited to one-half acre; the amount of water used for irrigation is in addition to the 5,000 gallon per day commercial exemption. This will be clarified in the FEIS.

Comment #149: Flow in relation to wetlands and percent of watershed – late summer, early fall (4776)

What percentage of the water supply received by the City of Ashland from the watershed does the wetlands in the Middle Fork of the East Fork represent? Surface acreage calculations may not be sufficient since there is an unquantifiable subsurface storage in that area. While the wetlands are small in total acreage, they may be significant in terms of the amount of water supplied during late summer/early fall. (D03-3192, page 1; D03-3226, page 20; D03-3249, page 5)

Response: See the response to Comment #134 above for a discussion of the flow from this area relative to the East Fork Ashland Creek at Reeder Reservoir.

Comment #150: More detail of flow data and modeling (Middle Fork) (4777)

The EIS needs to present more information on current surface flows in the Middle Fork. The exact CFS flows for the stream channel has not been disclosed in this document. The EIS should describe the use and application of the stream flow model and support the results with additional explanation. (D03-3222, page 4; D03-3227, page 1)

Response: See the response to Comment #134 above for a discussion of the flow from this area relative to the East Fork Ashland Creek. The description of the assumptions utilized to estimate stream flow are described at DEIS pages III-61 through III-64. The information on stream flow and assumptions will be clarified in the FEIS.

Comment #151: More detail on flow regime (4778)

The analysis of flow regime references a series of references for changes in water regime from activities on forest lands. This section goes on to indicate a model was run for this DEIS yet no information is provided about the model. (D03-3220, page 6)

Response: The stream flow model is described at DEIS page IV-71. References are listed in DEIS and FEIS Chapter V. For the FEIS, stream flow assumptions and consequences will be clarified.

Comment #152: Riparian Reserves per Ecological Protection Width Needs (4800)

The Standards and Guidelines for Riparian Reserves state that intermittent streams, if in unconsolidated material or granite, should include buffers ranging from 75 to over 200 feet depending on the slope class (see graph on NWFP page p. B-15). The EIS should state whether these guidelines were used to establish final riparian area boundaries. (D03-3222, page 8)

Response: The Forest Service checked with the Regional Ecosystem group in Portland regarding Figure B-1, on page B-15 of the NWFP. They advised that this table was used to illustrate that the standards on page C-30 (NWFP) are consistent with estimates from a group of agency scientists (who developed the NWFP). The standards on page C-31 are controlling unless modified by a plan amendment based on watershed analysis (height of one site potential tree or 100 feet, whichever is greater). There is no inherent conflict with the Forest's use of 150 feet slope distance, in accordance with these standards.

Comment #153: Attainment of ACS and effects at site scales (4801)

In violation of the ACS, the DEIS tries to downplay impacts by using watershed scale only, by stating that only a few acres will be impacted, that significant impacts will not occur, by mitigation and that the FS is minimizing impacts. None of these comments show compliance with ACS. In fact, they show non-compliance. ACS requires more than this. The preferred alternative cannot be implemented unless there are no new effects short and long term. (D03-3224, pages 35 and 38)

Response: The Aquatic Conservation Strategy (ACS) is an integral part of the Northwest Forest Plan and was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems on public lands. The ACS consists of a system of riparian reserves, a system of key watersheds, requirements and procedures for conducting watershed analysis, and a program of watershed restoration.

Northwest Forest Plan timber harvest and restoration projects have been delayed or stopped due to recent court interpretations of certain passages in the ACS, and as suggested in this comment. The ACS has been interpreted to mean that every project must achieve all ACS objectives at all spatial and temporal scales (site or project, watershed, province, region). This interpretation suggests land managers must demonstrate that a project will maintain existing conditions (or lead to improved conditions) at every spatial and temporal scale. Any project that may result in site-level disturbance to aquatic or riparian habitat, no matter how localized or short-term, could be precluded under this interpretation.

The Secretaries of Agriculture and the Interior proposed limited changes to language about how to implement the ACS. These changes would amend Forest Service and Bureau of Land Management plans throughout the Northwest Forest Plan area. USDA Forest Service and USDI Bureau of Land Management jointly prepared a Final Supplemental Environmental Impact Statement for Clarification of Language in the 1994 Record of Decision for the Northwest Forest Plan "Proposal To Amend Wording About The Aquatic Conservation Strategy."

This FSEIS was completed in October 2003. A Record of Decision was signed by Mark Rey, Under Secretary for Natural Resources and the Environment, USDA; and Rebecca Watson, Assistant Secretary for Land and Minerals Management, USDI, on March 22, 2004.

The limited changes reflected in this decision clarify that the proper scale for federal land managers to evaluate progress toward achievement of the ACS objectives is the fifth-field watershed and broader scales. The changes also clarify documentation requirements for land managers to demonstrate that projects follow the ACS. It removes the expectation that all projects must achieve all ACS objectives, but would reinforce the role of watershed analysis in providing context for project planning. The decision clarifies that the nine ACS objectives are to be attained at the fifth-field watershed scale and not at the project or site level. All site level projects would continue to meet the protective measures in the Standards and Guidelines such as Riparian Reseve widths. This decision, which occurred between the Draft and Final EIS for the Mt. Ashland Ski Area Expansion project, will require revised text throughout the FEIS, within several chapters and resource area documentation.

Comment #154: Discussions of indicators for current trends (ACS) (4802)

It is confusing that a discussion about the current state of the area is not presented. The analysis simply indicates that the conditions will be maintained at the watershed scale, while a great deal of the existing conditions refers to current positive and negative effects of the ski area. Should there not be an indicator of whether the current “trend” is good or bad? (D03-3220, page 6)

Response: The current conditions and trends regarding ACS factors are documented in DEIS Chapter III. Also see response to above comment regarding the ACS and the recent decision regarding clarification of attainment of ACS objectives and analysis scales.

Comment #155: LHZ 2 not considered as unstable terrain classified as Riparian Reserve (4803)

The DEIS underestimates direct effects of expansion on riparian reserves because it unreasonably excludes sub-active landslides rated LHZ 2 from designation. Reserves must include “potentially unstable” lands (Northwest Forest Plan page B-13). The DEIS only counts active LHZ 1 terrain as reserves. (D03-3223, page 25)

Response: A technique referred to as Landslide Zonation And Risk Evaluation (LAZARE) was used to map landslide hazard zones within the Project Area. This process is described in detail in the article *Landslide Mapping on the Rogue River National Forest, The Application of Zonation Methods for Risk Evaluation*, published in a 1998 volume of *Environmental Groundwater and Engineering Geology: Applications from Oregon*.

Active or potentially active (activity level 1) landslides are classified as Hazard Zone 1. This zone often includes slopes greater than 75 percent and severely eroded areas. Hazard Zone 1 terrain is the highest risk zone and is generally avoided during land management activities. Active landslides are usually, but not always, associated with streams, wetlands, and springs.

Activity level 2 and some level 3 landslides are classified and included as Hazard Zone 2. Hazard Zone 2 is somewhat less sensitive than Hazard Zone 1, although it usually occurs immediately adjacent to or within the groundwater influence zone of Hazard Zone 1. It is the position of the Rogue River National Forest that lands identified as landslide Hazard Zone 2, using the process identified, are not equivalent to, nor classified as Riparian Reserve under the Northwest Forest Plan.

Comment #156: Discussion of non-compliance nitrate levels in wastewater system (4804)

It has been noted that MAA had received a notice of non-compliance for nitrate levels in the ski area’s effluent. This needs to be analyzed for economics and environmental risk in the FEIS (D03-3235, page 2)

Response: A Water Pollution Control Facilities (WPCF) permit was issued by the Oregon Department of Environmental Quality (ODEQ) on April 5, 1999. The permit authorized the Mt. Ashland Association to construct and operate the wastewater treatment facility at MASA and specified waste disposal limitations, among other conditions.

The maximum daily flow was specified at 15,750 gallons per day and the effluent to the disposal field was limited to a concentration of 10 mg/l. The 10 mg/l standard is equivalent to the drinking water standard. The 10 mg/l standard has not been met, though substantial and steady improvements have been made toward meeting the limitation. The amount of total nitrogen which would be delivered to the drain fields with the plant operating at full capacity, at 10 mg/L, calculates to be 480 pounds. For the 2003-2004 operating season the calculated amount actually delivered to the drain fields was 103 pounds.

The ODEQ is presently in the process of issuing a new WPCF permit for the plant operation and the draft permit does not include a nitrogen limitation. It also includes a provision to continue groundwater monitoring downhill from the drain fields. These monitoring and operating costs are considered a normal part of MAA's overall maintenance and equipment budget. As such, they are included in the financial feasibility analysis.

The Ski Area Term Special Use Permit requires that MAA "comply with all present and future...state...laws, ordinances and regulations which are applicable to the area or operations covered by this permit..." The permittee is responsible for meeting Oregon State regulations regarding the operation of the wastewater treatment plant. MAA has submitted a plan and corrective implementation schedule on steps to lower the Total Nitrogen concentration limitations to achieve compliance with the permitted discharge concentration limits if required in the new WPCF permit. The Forest Service will monitor this and assure that the requirements of the Ski Area Term Special Use Permit are met.

Comment #157: Discussion of bio-digestion need for wastewater system and risk (4805)

The ski area needs to truck waste from the plant in Ashland in order to achieve the proper bio-digestion at the plant on the mountain. This needs to be analyzed for economics and environmental risk in the FEIS. (D03-3235, page 2)

Response: The ski area does not need to truck waste from the plant in Ashland to achieve proper bio-digestion. In the four years of operating the wastewater treatment plant, activated sludge from the City of Ashland Wastewater Plant has been utilized only once. This was to "seed" the ski area wastewater treatment plant with beneficial bacteria at the beginning of the operating season. It was subsequently determined that this "seeding" was neither necessary nor cost effective. MAA has developed, with the assistance of professional wastewater engineers, alternative methods of improving early season plant performance without the use of this method. Seeding has a cost of approximately \$1,600 for delivery of activated sludge from the City of Ashland wastewater treatment plant.

The environmental risk is minimal, and is limited to the possibility of the delivery truck being in an accident and spilling its contents. If a spill occurred, the appropriate State and County agencies would be notified and clean-up (if needed) would be in accordance with established regulations. The truck would be hauling relatively benign activated sludge. In contrast, most such trucks haul raw sewage and septic sludge, which are greater strength wastes with greater pathogenic potential. Thousands of such trips are made every year in southwest Oregon, including many that service nearby Forest Service campgrounds and day use areas (such as the Mt. Ashland Campground and Grouse Gap Shelter).

Biological Environment - Landscape Ecology

Comment #158: Discussion of applicability Noss-Strittholdt Report (5000)

A few years ago, the Noss-Strittholdt report took an in depth look at conservation biology in the Klamath Siskiyou bioregion. It discussed the importance of diversity of wildlife, connectivity corridors, the importance of public lands in the region and how these areas should be protected. This report must be presented, discussed and fully analyzed in the FEIS. (D03-3235, page 2)

Response: The Forest Service is familiar with this report and the discussion in section C of Chapter III are in alignment with the viewpoints taken in this report. Citations on DEIS page III-98, do not exclude this report; “Whittaker (1960), Detling (1961), and Atzet (1979, 1982, 1984, and 1996), the *Mt. Ashland Late-Successional Reserve Assessment* (1996), *and others* have recognized the Klamath Province as uniquely diverse and a key link in Northwest migration and evolution.”

The specific report referenced has as its goal, development of a “plan” for conservation of the its defined area. For National Forest System lands, existing legal management direction and policy prevail. There is no legal obligation to follow recommendations or viewpoints in this (or any) particular report. This report will be referenced in Chapter V of the FEIS.

Comment #159: Discussion of FS and private projects that would create fragmentation (5001)

The Rogue River NF is currently proposing many projects which would occur on the Siskiyou Crest and Crest area. For example, the Silver Fork, Beaver Newt, Cougar Ridge, Sturgis, Upper Glade and Steve Fork Timber Sales will all further fragment habitat on the Crest by cutting timber and building roads. Previous projects include the Lower Summit and Carberry Timber Sales. The Siskiyou National Forest has also been responsible for many timber sales and other projects on the Crest. The DEIS (also) does not analyze landscape ecology and connectivity properly. It states that the Quartz Fire did not add to adverse effects on connectivity for the Siskiyou crest. (D03-3224, page 57)

Response: In consultation with wildlife biologists, the point of this comment regarding fragmentation is unclear. Fragmentation effects vary by the types of species being considered; small mammals can be affected on a site or micro-site scale. Larger mammals who have large distances as part of their territorial range would be minimally affected by these same changes. The 1994 NWFP took landscape scale fragmentation into account in its network Late-Successional Reserve (LSR) allocations. At that scale, since the MASA Special Use Permit area is not LSR, there are minimal fragmentation effects anticipated from expanded ski run terrain.

The Forest Service considered the effects on habitat connectivity along the Siskiyou Crest, which is considered to be the ridgeline that runs approximately east-west, from the Cascade Mountains to the Coast. While there may be some reasonably foreseeable effects to vegetation from some of the identified projects, most of these are not considered foreseeable (because they have been dropped, not funded, etc., based on known out-year planning and scheduling).

Additionally, many foreseeable projects are not considered to affect connectivity along the crest, because they are not near enough to or part of the crest. The Quartz Fire likewise did not adversely add to loss of connectivity, because of its severity and position, as discussed under landscape ecology, DEIS page IV-150. Connectivity for most late-successional habitat dependent species is typically based on core habitat areas, with links of habitat between these core areas. Existing models that assess fragmentation (e.g., FRAGSTATS) don’t address connectivity very well; they do assess the effects of fragmentation to core habitat areas. This comment suggests that connectivity was not properly analyzed but does not identify what methodology would provide better analysis.

The main concern with MASA is the effect to connective corridors (i.e., the links) along the Siskiyou crest. Most of the Special Use Permit area is not currently a core area, but may provide some linkage to core areas such as the McDonald Peak IRA. This discussion will be included in the FEIS. It must also be remembered that the Special Use Permit is allocated to Developed Recreation; any wildlife habitat it provides is auxiliary to the primary goal, which is human developed recreation.

Comment #160: Discussion of acres of 10% threshold and migratory landscape (IV-149) (5002)

The estimation done on page IV-49 is incorrect as a landscape analysis assessment. The MASA Special Use Permit is 960 acres according to this section. However, the expansion area is 300 or so acres. 71 acres of the 300 acres will be clearcut, or 25%. This is over the 10% threshold. (D03-3224, page 57)

Response: This perspective of consequence was provided by Dr. Tom Atzet, Forest Service Ecologist who participated in the development of the Northwest Forest Plan. An analogy was made for 10% being a threshold of change; as stated on DEIS page IV-149, “The Riparian Reserve Technical Team used a threshold of 10 percent change as a conservative estimate where watershed-scale ecological effects were unlikely (FEMAT 1993).”

Dr. Atzet used the reference to 71 acres of disturbance, over the 960 acre Special Use Permit area, or approximately 7% as a worst-case scenario. In actuality under Alternative 2, approximately 68 acres would incur tree removal, in areas that are currently forested. Further, a more appropriate comparison would be to compare 68 acres over the approximate 40,000 acres to obtain a watershed scale effect (which is less than 0.1%). It would not be logical to utilize a selected portion of the Special Use Permit area (i.e., 300 acres) to estimate this landscape effect at the watershed scale. This will be clarified in the FEIS.

Biological Environment - Vegetation Conditions

Comment #161: Use of Edge Effects in Old Growth Forests of the Klamath Mountains, Evan Frost, Humbolt State (5100)

An extensive study, *Edge Effects in Old Growth Forests of the Klamath Mountains: Evidence From the Understory Flora* conducted by Evan J. Frost (Department of Biology, Humbolt State University) concludes that a number of microclimatic factors are dramatically altered as a result of edge creation. (D03-236, page 5)

Response: The Forest Service was not familiar with this 1992 Masters Thesis at the time of the DEIS. The discussion in Section C of Chapter III and IV does not appear in conflict with the viewpoints taken in this report. This report will be referenced in Chapter V of the FEIS.

Comment #162: Discussion of current fire hazard and risk: Fuel Models (5101)

Current fire hazard and risk were not discussed in the DEIS. (D03-3223, page 15)

Response: Current fire hazard and risk were not highlighted in the DEIS because the inherent hazard and risk of the Special Use Permit and surrounding area is very low. In December of 2003, the Forest Service released an assessment of fire risk and hazard conditions in its *2003 Upper Bear Assessment*. According to this assessment, the MASA is within Plant Association Group described as Moist or Cool Mountain Hemlock and is in Fire Regime IVb or IVc, where stand replament events occur at interval of 100-200 years. The Fire Condition Class is 1, which is within the natural fire return interval. The fire occurence is very low, with no fire greater than 1 acre being recorded in or around the Special Use Permit since 1960.

The Fire Risk is identified as “Low”, and the current Fuel Models are 1, 2, 5, 8, 10 and 11. While the overall Fire Hazard is predicted as Moderate-High, it is low relative to and in comparison to the lower elevations of the Ashland Watershed and Upper Bear Analysis Area. This information will be discussed in more detail in the FEIS. Also see response to Comment #101.

Biological Environment - Sensitive Plants

Comment #163: Discussion of lupine management guide (Zika 1987) (5200)

The DEIS does not study or analyze the Management Plan for Mt. Ashland lupine and Henderson’s horkelia produced in 1987 by Zika, et al. The report states that “...further expansion to the west could be devastating....The ski facility at the summit cannot be expanded to the south or west without destroying a significant portion of the lupine habitat....No more ski trails or lifts [should] be installed on the ridgeline.” The report also stated “the most critical management needs are to prevent any man-caused disturbance of the population and habitat.” The Forest Service has ignored this data. (D03-3224, pages 49-50)

Response: ONHP’s 1987 Draft Species Management Guide was an excellent compilation of known information and survey work done by Forest Service and ONHP botanists up to that time. Their management recommendations and opinions were considered in development of the 2002 Conservation Agreement (CA) with USFWS and the 2003 Decision Memo authorizing habitat improvements for these species on Mt. Ashland. Some of their management recommendations are now part of the conservation strategy in the CA and some are being implemented under the Decision Memo. In the 15 years since ONHP’s draft was produced, intensive monitoring of the lupine population has occurred (as recommended in that draft), the boundaries of the population have been refined, population numbers are better known and threats are better understood.

Ideas for where and how ski area expansion might occur were substantially different in 1987 than they are now. Summer recreation use has emerged as a more serious management concern than it was then. Because no specific language in the DEIS came directly from ONHP’s 1987 draft, it is not referenced in the DEIS. But ONHP’s efforts at that time had considerable influence on the actions taken on behalf of these species in the years since.

Biological Environment - Biodiversity/Outstanding Plant Communities

Comment #164: Only known large patch of Engelmann old-growth in Oregon (5400)

Why would the Forest Service allow MAA to disturb or destroy the only known large patch of Engelmann Spruce in Oregon. (D03-19, page 1)

Response: Engelmann spruce is widespread throughout Western North America from Canada to Arizona (McDougall) and is common in Oregon in the Cascades as far south as the Dead Indian Plateau on Ashland Ranger District. The Engelmann spruce trees found along a six-mile stretch of stream reach are important to local biodiversity. Most of the riparian forest along these stream reaches is “old growth” forest with an overstory dominated by other conifers.

For the entire East Fork population, the potentially affected ski area stand has a high number of large trees (though the very largest specimens are located within one drainage to the west). The ski area stand has Engelmann spruce well represented in all age classes, indicating that spruce would be dominant or co-dominant on this site in perpetuity in the absence of disturbance or climate change. This condition is not unique throughout the East Fork population and is certainly common in other parts of Oregon.

Under Alternative 2, the most impactful alternative on the Engelmann spruce, 10% of the ski area stand (the northern and northwestern edge) would be removed. The DEIS discusses Engelmann spruce at pages III-99, III-113, and IV-150-155.

Comment #165: Use of Sully plant list – wetlands (5401)

There is no mention of a plant list prepared by John Sully (of Ashland) for the Mt. Ashland area. In fact, there is no mention of any other plant list. (D03-236, page 8)

Response: The Forest Service is familiar with this list and the discussion in Section C of DEIS Chapter III are not in conflict with the viewpoints taken in this list. There is no obligation to cite this unpublished list, however reference will be made in the FEIS in Chapter V to the utilization of this list as a reference source.

Comment #166: New information: whitebark pine around bottom of the Bowl (5402)

Since publication of the DEIS, two whitebark pines have been located between the bottom of the Bowl and Caliban runs by Dr. Frank A. Lang and Dr. James T. Duncan, Emeritus Professors of Biology at Southern Oregon University and San Francisco State University, respectively. This is the only known location of whitebark pine in the Siskiyou Mountains. (D03-2085, page 3; 2245, page 3; and 3225, page 2)

Response: New information relative to the discovery (or possible re-discovery of whitebark pine will be fully discussed in the FEIS. Contrary to one report, no saplings were identified on Mt. Ashland.

Comment #167: Extent of whitebark pine needs to be surveyed (5403)

The full extent of the whitebark pine population on Mt. Ashland needs to be determined in order to assess the environmental impacts of the proposed expansion. (D03-2085, page 3 and 2095, page 3)

Response: Surveys and genetic testing of sample trees were conducted in the fall of 2003. Results will be discussed in the FEIS.

Comment #168: Candidate Botanical Area: mapping at F-22 LRMP FEIS & description at F-9 (5404)

It appears that the map on page F-22 of the Appendices of the RRNF LRMP is incorrect. The description of the Mt. Ashland Candidate Botanical Area states that it is located “...on the summit of Mt. Ashland...” and goes on to state that “Currently, the proposed area encompasses the total global population of *Lupinus aridus* ssp. [Mt. Ashland lupine] and the largest known population of Henderson’s horkelia.” Clearly the proposed boundary is incorrect and should be redrawn to include the area from the summit of Mt. Ashland to the radio transmitters and beyond as necessary to include the entire population of these two rare plants. (D03-3224, page 52)

Response: Upon further review, the Forest Botanist finds the map to be correct for the Rogue River NF portion of this candidate Botanical Area. The description states that two-thirds of the candidate botanical area is on Klamath National Forest and the landscape features described include those on Klamath NF. There is no compelling reason to re-consider this map.

Comment #169: Conflicts with Botanical Area and ski expansion (5405)

The map showing the Botanical Area must be corrected and the DEIS must be revised to show that the project is within the Botanical Area. The proposed expansion of the ski area through the Botanical Area conflicts with the purposes for which the Botanical Area was created. (D03-3224, page 52)

Response: As noted above, the land allocation mapping associated with the Rogue River and Klamath LRMPs is not found to be inaccurate in regard to the Botanical Area. The candidate and assigned Botanical Areas are not in conflict with the Special Use Permit area boundary.

Comment #170: Challenge to Engelmann being “ at the extreme end of its range” (5406)

Engelmann spruce is far from an endangered species. Textbooks such as McDougall’s *Seed Plants of Northern Arizona* and McGraw-Hill’s *Textbook of Dendrology* acknowledge that *Picea engelmannii* is found throughout its range from Alberta and British Columbia, south to California, Arizona, and New Mexico. While perhaps the 1,736 Engelmann spruce trees found on 86 acres of the East Fork of Ashland Creek in the Siskiyou Mountains represents a unique component of biodiversity, this specie is certainly not at the end of its range. (D03-2371, page 1 and 3219, page 1)

Response: The DEIS stated that Engelmann spruce are found throughout the Rocky Mountains and wetland habitats in the Cascades (DEIS, page III-113). The estimate of 1,736 trees had a plus or minus factor of 50%. The Forest Service cannot substantiate the 86-acre figure and has not used this figure in analysis or documentation of Englemann spruce. The 1997 survey was primarily conducted to determine the extent of Engelmann spruce in the Ashland Watershed, not the exact number of trees, or exact amount of stand acres.

Comment #171: Potential new species: cascade parsley fern (5407)

In and among the talus debris on the inside of the bowl is a parsley fern or rockbreak, the *Cryptogramma acrostichoides* or perhaps Cascade parsley fern or rockbreak, *C. cascadiensis*. When I first discovered the fern some years ago, I decided it was *C. cascadiensis*, its identification needs to be confirmed and a voucher taken. The nearest locality for *C. cascadiensis* is Mount McLoughlin, a pattern similar to that of whitebark pine. Unless something truly awful happens, the fern is not at risk from ski area expansion plans. It is an additional species that demonstrates a Cascade disjunct distribution. (D03-2245, page 5)

Response: This is new information about a species which is not currently known to be present in the Siskiyou Mountains (although it has been searched for in this area). The FEIS will address this species in the Botanical sections as new information.

Comment #172: Change in identification of Siskiyou huckleberry (5408)

There has been a recent change in the taxonomic status of the Siskiyou huckleberry, *Vaccinium coccineum*. Vander Kloet and Dickinson (*Brittonia* 51:231-254, 1999) submerged *V. coccineum* into *V. membranaceum*, not *V. deliciosum* as reported by Chambers (Oregon Flora Newsletter No. 3, 1999).

Loren Gehrung’s unpublished master’s project (California State University, Chico) involved a study of *V. coccineum* based on DNA analysis along with standard taxonomic techniques. She concluded that *V.coccineum* is not a good species or variety. It varies from *V. membranaceum* only in berry color. Neither genetic work nor standard taxonomic means uncovered any other way to separate them. Berry color is inconsistent in the genus *Vaccinium* in general (Gehrung email, 10.09.03). This makes the Engelmann spruce ecosystem a little less unique by the taxonomic loss of a Siskiyou Mountains endemic. (D03-2245, page 5)

Response: The DEIS utilized the common name “Steve’s Peak huckleberry” for this species in recognition that there is a slight variant in the Klamath Mountains, and will continue to do so in the FEIS. The scientific name will be dropped in the FEIS. The Forest Service did not intend to imply any rarity or special status of this huckleberry with the use of the scientific name.

Comment #173: Snowdown/blowdown of four large Englemann spruce within proposed runs (5409)

As nature would have it, a snowdown/ blowdown this past winter (2002-2003) took down four large spruce trees that would have been logged to make way for the bridge stream crossing. (D03-2245, page 6)

Response: The Forest Service is aware of the spruce trees that fell within proposed Run 12 due to heavy snow loading in late December 2002. The number of Englemann spruce that would be removed in Alternatives 2 and 6 will be revised in the FEIS. A series of storms with relatively high snow levels (5,000-5,500 feet in elevation) took down a very high number of trees within the spruce grove, the Special Use Permit area, and the Siskiyou Crest area as a whole. Many long time locals could not remember a similar event due to snow loading.

Comment #174: Disclosure of extent (acres) of Englemann spruce in East Fork (5410)

I didn't see the total acres of Englemann spruce within the East Fork of Ashland Creek disclosed in the DEIS. Could this be identified in the FEIS? (D03-3212)

Response: The estimate of 6.1 miles of stream reaches where Englemann spruce occurs in the watershed is reasonably accurate. There is no reliable way to turn this estimate into acreage figures. See DEIS pages IV-150 and the cumulative effects discussion on page IV-153, and Map III-8.

Comment #175: Conditions associated with whitebark pine (blister rust) (5411)

Whitebark pines are susceptible to white pine blister rust. This disease is devastating whitebark pine throughout much of its range, particularly at Crater Lake National Park. (D03-2245, page 4)

Response: The whitebark pine species were not known or discussed in the DEIS (see response to Comment #166 and #167). The FEIS will address whitebark pine on Mt. Ashland and will disclose that white pine blister rust is a factor that could affect the whitebark pines on Mt. Ashland. Developing an expanded ski area would not influence white pine blister rust in the whitebark pine. Development could result in killing/removing pines but will not increase activity of the disease. This will be clarified in the FEIS.

Biological Environment - Terrestrial Wildlife and Habitat

Comment #176: Quantification of conditions surrounding LSRs (5600)

The DEIS needs to quantify the condition of the surrounding LSR, as it seems to assume that it is all in good functioning condition. This is not the case. (D03-3224, page 23)

Response: The conditions of the Mt. Ashland LSR and the Soda Mountain LSR, expressed as suitable spotted owl habitat were displayed in the DEIS at Table III-123. "Fragmentation of the historical habitat has occurred; yet large blocks of contiguous owl habitat and good dispersal capabilities exist throughout the Mt. Ashland LSR; approximately 90% of the LSR is capable of serving as owl habitat and 56% is now fully suitable habitat (Table III-33). The Soda Mountain LSR (Cascade-Siskiyou National Monument) is managed entirely by the BLM and approximately 55% of this LSR is capable of producing spotted owl habitat. Approximately half of those lands capable of producing suitable habitat within the LSR are now suitable spotted owl habitat. This LSR is situated in a highly fragmented landscape, due to the "checkerboard" pattern of Federally managed public and privately held lands in this area, and there has been a concern for dispersal within the LSR." Conditions for four LSRs on the Klamath National Forest were likewise discussed in the DEIS at Page III-124.

Comment #177: Lack of Biological Evaluation (5601)

There is no Biological Evaluation included with or referenced in the DEIS. (D03-3224, page 23)

Response: Reference to the Forest Service Biological Evaluation process was made at DEIS page IV-157 (plants), page IV-175 (terrestrial wildlife), and page IV-200 (listed fish). All elements of the Biological Evaluation (BE) process were disclosed in the EIS itself, rather than in a separate document. There are no requirements for a “stand alone” BE document. The Forest has documented the BE process in this manner for several EIS documents in the interest of clarity, to reduce confusion or inconsistency, and to reduce the volume of NEPA documentation.

Comment #178: Discussion of Joel Pagel’s report regarding wildlife program (5602)

In January of 2003, Forest Service Biologist (Joel Pagel) submitted a written report lambasting the wildlife/biology program. The DEIS did not disclose nor discuss Mr. Pagel’s report, the inadequacy of the biological information described and how this inadequacy impacts the proposed project. (D03-3224, page 32)

Response: The written report submitted by Joel Pagel was wide ranging and discussed a number of different issues and projects on the Siskiyou Zone (Ashland and Applegate Ranger Districts). Relative to MASA, Pagel stated that in his opinion, approximately 80% of the wildlife work was valid or correct. He had a special concern relative to survey protocols being followed for Survey and Manage species. Wildlife biologists from a neighboring forest and from the US Fish and Wildlife Service reviewed all data relative to Survey and Manage species that were surveyed in association with the proposed expansion. Species reviewed included red tree vole, great gray owl, and mollusks.

This review indicated that surveys were completed to protocol for the first two species. However, there were problems associated with some of the mollusk surveys. The focus of these problems lie in poorly documented survey times, not enough survey effort for some of the proposed projects, and not enough search plots per acre. In response to this finding, mollusk surveys were reinitiated in the spring of 2003. All mollusk surveys are now complete and have been done to protocol.

Comment #179: USFWS Consultation and habitat analysis for lynx (5603)

Suitable habitat exists for Canada lynx in the expansion area, contrary to the statement on page IV-175. Lynx is threatened under the ESA. Therefore, the Forest Service must consult with the USFWS on the impacts of the proposed expansion on the lynx and its habitat. (D03-3223, page 29); (D03-3224, page 52)

Response: Information regarding the Canadian lynx and its habitat was discussed in the DEIS at pages III-124 through 126. Among other species, Fish and Wildlife Service’s Biological Opinion (BO) of June 3, 1999 (1-7-F-98-414) addressed lynx habitat. At the time this BO was written, based on available information, it was thought that the RRNF contained suitable habitat for lynx. By 2000, new information had become available that signified the RRNF is not subject to consultation/conferencing for this species under the Endangered Species Act of 1973. This is because the RRNF and Medford District BLM were not included in the January 2000 *Lynx Conservation Assessment and Strategy* (LCAS), Appendix A, Administrative Units involved in conferencing - consultation for lynx. The LCAS was developed by an interagency team of biologists representing the Forest Service, USFWS, BLM, and National Park Service. Vegetation, as defined in the LCAS for this geographic area, is not present in adequate abundance or distribution to support lynx populations on the RRNF. This position regarding ski area expansion at MASA was confirmed by the Forest Service in conversations with the USFWS, between the Draft and Final EIS, in response to this comment.

Biological Environment - Macroinvertebrates and Fish Populations

Comment #180: Reference to fish occurrence above Road 2060 (1997 surveys) (5900)

Fish have been sighted in the Middle Branch of the East Fork by citizens of Ashland. John Sully wrote a letter to the Ashland RD in 1998 documenting that he observed fish in the Middle Branch area. (D03-3224, page 34)

Response: As stated at DEIS page III-151, “Fish surveys within East Fork Ashland Creek were completed during September 1969, July 1997, August and September 1998, and September 2001 by Forest Service personnel and during May 1999 by Oregon Department of Fish and Wildlife. A variety of survey methods were used above and below Road 2060 and throughout the Special Use Permit area to ensure a thorough and complete survey. These survey methods consisted of electro-fishing, snorkeling, and creel (fly-fishing). Fish presence was observed below Forest Road 2060 (approximately 2 miles downstream of the Special Use Permit area). No fish were observed above Forest Service Road 2060 crossing on East Fork of Ashland Creek including the Special Use Permit area. A probable fish barrier exists due to the design of the culvert at the Forest Road 2060. This level of survey and re-survey has led to the conclusion that no fish are present in the Special Use Permit area or downstream to Forest Service Road 2060.”

Comment #181: Reference to fish occurrence mapping in 1995 Watershed Analysis (5901)

The 1995 Bear Watershed Analysis, produced by the Ashland Ranger District, clearly shows fish distribution into the proposed expansion area on east Fork of Ashland Creek. (D03-3224, page 34)

Response: As stated at DEIS page III-151, “The 1995 Bear Watershed Analysis fish distribution map noted fish presence into the proposed expansion area on the East Fork of Ashland Creek. The map developed for this report was developed by screen digitizing, and inaccurately depicted fish above Forest Road 2060. The current (DEIS) map, depicting fish presence up to Forest Road 2060 has been recorded in GIS and is accurately displayed.”

Human Environment - McDonald Peak Inventoried Roadless Area

Comment #182: 1991 Forest Service decision discounted roadless and potential wilderness (6300)

Despite the fact that most of the land added to the Special Use Permit was within an inventoried roadless area, and thus eligible to be considered for wilderness status, the Forest Service chose to discount the potential wilderness value of the McDonald Peak Inventoried Roadless Area and designated the land for other uses. There were citizens who objected strongly to extending the boundary of the Ski Area into potential wilderness land, but their complaints fell on deaf ears. (D03-2085, page 2)

Response: As noted in the DEIS, the 1991 Master Plan programmatic expansion EIS did not discuss inventoried roadless (or wilderness) as an issue because it was not raised during scoping. There were no agency requirements for discussion of roadless area impacts at that time. The records for that process do not identify any objection to the decision to reconfigure the Special Use Permit area because of its value as roadless or potential wilderness and there were no appeals of that 1991 decision.

Comment #183: Discussion of occurrence of high elevation meadows, rare species, glacial features, etc. (6301)

Is the expansion area (within the roadless area) considered poor habitat, or is it unique due to the lupine, horkelia, Englemann Spruce and carex nervina? How many other high elevation meadows are found in the rest of the McDonald Peak IRA? How many other parts of the IRA have glacial features? (D03-3224, page 57)

Response: The characteristics of the McDonald Peak Inventoried Roadless Area (IRA) were discussed at DEIS page III-179 and DEIS Appendix H, which is an excerpt from Appendix C of the 1990 FEIS for the RRNF LRMP.

Except for a few isolated individuals, Mt. Ashland lupine and Henderson's horkelia are not found in the IRA. Englemann spruce is found primarily within the East Fork of Ashland Creek, within the IRA. Carex nervina is found in many locations within the IRA within the Ashland and Little Applegate watershed, as well a several sites within the Silver Fork watershed on the Applegate RD (See DEIS page III-111). There are several meadow complexes present within the IRA.

Comment #184: Discussion of thinning work (MASA related) within IRA (6302)

The DEIS asserts that (within the IRA) there have been no management actions except for annual maintenance of the Wagner Butte Trail. I have noted a great deal of thinning work that has occurred over what appears to be the last 20 years. I cannot locate in the DEIS where the Forest Service discloses this pre-decisional thinning work that has occurred and is still occurring outside of the ski area boundary. (D03-3235, page 2)

Response: The map of the McDonald Peak IRA (DEIS page III-178) shows that it is not in proximity to the existing ski area in the north and northwest portions. The existing ski area boundary is not congruent with the IRA boundary. There are many acres of substantially unaltered forest that are not within the ski area boundary, nor in the IRA (see DEIS page IV-222).

The Forest Service has authorized minimal clearing under the terms of the annual Summer Operating Plan with categorical exclusions under NEPA. This work was not within the area inventoried as roadless. It may appear to have some roadless character.

Human Environment - Transportation

Comment #185: Discuss current parking capacity (days exceeding capacity) (6400)

How many days per year does the parking lot exceed capacity? (D03-3224, page 21)

Response: As stated in the DEIS at page III-180, current maximum parking lot capacity is about 550, depending on how tightly the cars are parked, plowing conditions (fully plowed or not), and the parking surface (a higher traction surface allows cars to park more closely together). The capacity can vary between approximately 380 to 550 cars (a bus takes the space of about 6 cars). The number of days in which capacity is exceeded each year is highly dependent on weather and snow conditions. Sunny days with excellent snow conditions generally attract more visitors. In general, capacity is exceeded on most weekends and holidays between Thanksgiving (if open) and President's Weekend (DEIS, page III-180). Data from the last two operating seasons ('02-'03 and '03-'04) indicates that the parking lot capacity is exceeded approximately 25 times per season. That is approximately 21% of the operating days, and 54% of weekend and holiday days (source: MAA Parking Counts, 2004). This will be clarified in the FEIS.

Comment #186: Discussion of capacity of road, number of accidents, etc. (6401)

In regards to the Mt. Ashland Access Road, there is no discussion on number of cars during peak hours, capacity of the road under snow conditions, or the number of accidents each winter season. (D03-3224, page 21)

Response: As stated in the DEIS at page III-179, a conservative analysis showed that 400 vehicles per hour could arrive at the ski area under packed snow conditions with a 300-foot separation between vehicles at 25 miles an hour. A more realistic assumption is 150 feet (four seconds between each vehicle) at 25 miles an hour. This would allow for a peak arrival rate of 900 vehicles per hour under icy or packed snow conditions. Current peak hour arrival rates are estimated to be about 400 vehicles per hour during the “morning rush” between 8:15 and 9:15 AM on the busiest days.

The DEIS stated that two to three injury accidents typically occur each season. Since that time, Jackson County has provided the Forest Service with data on Mt. Ashland Access Road vehicle accidents from December 1999 to April 2003. During this four-year period, there were 29 accidents, 11 of which resulted in an injury with the remainder resulting in vehicle damage only. Approximately one half of the total accidents took place on snow or ice-covered roads. This will be clarified in the FEIS.

Human Environment - Skiing Demand

Comment #187: Use of Pacific Northwest Skier’s Assn. Studies Relative to MASA (6500)

Mt. Ashland is the steepest, most crowded ski area in the state, and that’s born out by all the studies that have been put forth by the Pacific Northwest Ski Association. (D03-919, page 1)

Response: In comparison with Industry Standards, MASA has a much higher percentage of Advanced Intermediate to Expert terrain. At MASA, 78% of the runs are Advanced Intermediate to Expert vs. 38% for the Industry Standard (DEIS I-9). A comparison with other Oregon ski areas was not performed as part of the analysis. Further research with the Pacific Northwest Ski Areas Association (PNSAA) indicates that Advanced Intermediate to Expert runs at ski areas in Oregon more commonly comprise approximately 38 percent of the skiable acreage (Source: 2003-2004 Oregon Snowsports Guide).

A comparison done as part of the preparation for the DEIS (Malcolm, 7/99) compares the utilization rate (average skier visits/seasonal capacity) of Mt. Ashland with that of four Oregon Ski Areas; Willamette Pass, Mt. Bachelor, Hoodoo, and Warner Canyon. Mt. Ashland’s utilization rate of 36% was the highest, with Willamette Pass at 20%, Mt. Bachelor at 27%, Hoodoo at 18% and Warner Canyon at 6%. Though this does not compare Mt. Ashland with all Oregon ski areas, it does indicate that Mt. Ashland is more crowded when compared with these areas. Further research with PNSAA indicates the following utilization rates as measured prior to the start of the 2003-2004 season: Mt. Ashland 41%, Mt. Bachelor 33%, Willamette Pass 20%, Hoodoo 17%, and Warner Canyon 7% (PNSAA, per. com., Scott Kaden 3/29/04).

Comment #188: Tubing facility demand and financial profitability (6501)

No scenario makes the Tubing Facility a necessity. Where are the people clamoring for this facility? Have we seen the financial reports proving that this kind of facility is profitable? (D03-920, page 2)

Response: DEIS Chapter I., Section D, 1, f (Recreational Opportunities for Non-Skiers) articulates the Purpose and Need relative to a tubing facility at Mt. Ashland. As described in Section III, D, 10, a (Snow Tubing Facilities) snow tubing is one of the fastest growing winter activities, as evidenced by ongoing and recent expansions at tubing facilities in the Northwest (Summit at Snoqualmie and Willamette Pass) and supported by four references: Gatlin 1993, Heck 1997, Schultz 1997 and Kreitman 2001).

As the provider of the Special Use Permit to provide winter recreation opportunities at MASA, the Forest Service has a responsibility to insure that the public demand for recreation is met. Currently, MASA provides no winter offering to the non-skiing public. As the lessee and business enterprise, MAA would be expected to construct facilities that satisfy the objectives of the both Forest Service and the business, in terms of recreation and economic viability. A tubing area would fulfill this purpose. The FEIS will be updated to include available visitation data for tubing areas at Willamette Pass, Mount Bachelor, and The Summit at Snoqualmie.

**Comment #189: EIS should analyze current use capacity in terms of CCC (over 1,000). (6502)
Discuss current use capacity in regard to night skiing (6503)**

Mt. Ashland is not crowded or in need of expansion. The ski area only exceeds 1,000 visitors per day a few days each season. For instance, according to figures obtained from MAA, there were two days in 1999/2000, 11 days in 1998/99, and six days in 1997/98 when total visitors exceeded 1,000. This compares to a comfortable carrying capacity of 1,658 visitors. It is important to also note that these numbers are probably high, as they take into account night skiers. For example, if there were 1,200 day skiers and 400 night skiers, total use would show 1,600 skiers. In reality, the ski area would only be at ¾ capacity. (D03-3224, page 5)

Response: Though exact visitor counts are not made, reasonable estimates are routinely made by counting vehicles in the parking lots and multiplying that by an observed average capacity per vehicle. The data from the last two operating seasons ('02-'03 and '03-'04) indicates that there are approximately 30 days per year with a PAOT over 1,000 and 4 days over 1,658. This data reflects car and bus counts taken between 1:00 and 2:00 PM each day, and therefore does not reflect night skiing visitors. The PAOT capacity of 1,658 assumes a perfect balance of use throughout the area (certain number of people on the hill, on the chairlifts, in buildings, and otherwise circulating through the area). Capacity was described in detail in DEIS Appendix L.

Under the “perfect scenario”, MASA would be able to comfortably accommodate a peak capacity of 1,658 people. However, visitation in the 1,000-1,500 PAOT range regularly results in overcrowding in some, if not all, areas of the facility as a result of some of the shortcomings described in Section, D (Purpose of and Need for Action). For instance, although MASA exhibits a surplus of Beginner and Novice Terrain (DEIS Appendix L, page 12), the Sonnet Run is actually rated as “Beginner” because it is the easiest run on the mountain, even though its slope gradients exceed what is commonly referred to as Beginner terrain. In this case, Sonnet does not provide a “perfect balance” and the operating efficiency decreases as Novice skiers are forced to negotiate terrain that is generally too steep for their ability.

In addition, as described in Purpose #2, guest circulation and access at MASA is impeded by the current lift alignments, the base area location on the extreme eastern end of the resort, windy conditions, and skier density imbalances. Again, these shortcomings reduce the operating efficiency of the area and detract from the skiing experience at MASA (longer lift lines, high skier densities and lack of access to facilities). On this basis, when the area receives visitation approaching the peak capacity, the skier experience is not as pleasant under the current ski area layout. In short, crowded conditions are only part of the problem. The Action Alternatives evaluated in the EIS address these deficiencies and attempt to increase the operating efficiency of the area.

Comment #190: No data to support travel patterns in relation to 9/11 event (6504)

No data supports assertion that travel patterns related to the September 11, 2001 terrorist attacks is increasing visitation at Mt. Ashland Ski Area (MASA). This is pure, unsubstantiated speculation and, as such, should be removed from the analysis. (D03-3205, page 1)

Response: The statement in the DEIS regarding travel patterns changing following the 9/11 event originated from personal communication with Ted Beeler, president of SE GROUP (2002). The statement is located under the heading “Regional Skier Market” and refers specifically to skier behavior within the Oregon/Washington and California market. The statement was in no way intended to suggest that September 11, 2001 would directly result in increased visitation at MASA, or to justify any expansion proposal by MAA. The Purpose of and Need (Section, D) displays the need and includes no mention of September 11.

At that time (2002/03 season), skier visitation in the United States hit an all time record of 57.6 million (National Ski Areas Association), while airline travel continued to be lower following the events of 9/11. As a result, it was evident that travel patterns had changed, whereby skiers (and other recreationists) were staying closer to home and traveling by car. Accordingly, many local ski areas witnessed increases in visitation as people generally stayed closer to home. Since that time, airline travel has rebounded and travel has largely resumed to pre 9/11 patterns.

The statement in the DEIS was focused on a current trend which is not as relevant in 2004, and it was not intended to be a central focus of the market analysis. It is an example of how many market and other variables can affect visitation patterns, both in short as well as the long-term.

Comment #191: 2001-2003 new data on skier visits (PNSAA) (6505)

In July 2003, the National Ski Areas Association announced all-time single season record of 57.6 million visits for the 2002-2003 winter. Nationwide, this is the second, record-setting season in the span of three winters. In 2001-2002, Oregon ski area operators realized an all-time, single season attendance record of 1.66 million skier visits. (D03-3229, page 3)

Response: The Forest Service is familiar with this (more recent) information and it will be incorporated into the existing market conditions (Skiing Demand) sections of the FEIS.

Comment #192: Use of BBC report on skiing industry trends (6506)

The BBC article, *The American Ski Industry—Alive, Well and Even Growing*, indicates the industry is healthy, the demand for snow sports continues to grow, and Region 6’s operators must size and invest in their facilities accordingly. MASA’s business strategy is in step with the findings of this article. (D03-3229, page 3)

Response: The Forest Service is familiar with this (more recent) information and it will be incorporated into the existing market conditions (Skiing Demand) sections of the FEIS. Other industry analysts report that continued demand and expected future growth in the winter sports industry. For example, as noted in the comment, a recent (2003) BBC article, *The American Ski Industry—Alive, Well and Even Growing* indicates the ski industry is healthy and the demand for snow sports continues to grow.

Human Environment - Recreation at MASA and Vicinity

Comment #193: Path and visual orientation of snowboarders differs from skiers (6700)

The typical path and visual orientation of snowboarders differ greatly from skiers. Boarders are often not positioned to see skiers above or below them. This is a serious safety issue. The only solution is to provide more terrain. (D03-45, page 1)

Response: The visual orientation of snowboarders is different from skiers, however that does not prevent boarders from following the generally accepted “Responsibility Code” for skiing and snowboarding. This code, used nation-wide, strongly encourages skier and boarder safety with a set of guidelines. Some of these guidelines include staying in control, yielding the right of way to people below, stopping where one can be seen from above, and when starting downhill or merging—look uphill and yield to other skiers and boarders. More terrain would lower densities on ski runs, thereby making it safer for all skiers and boarders.

Comment #194: Add more discussion of ski area improvements (prior to 1991) (6701)

We are always saying that there haven’t been any changes in forty years, when, in fact, there was some major change in 1988 when two new chairlifts were installed. (D03-895, page 1)

Response: The DEIS focused on changes that have occurred since the 1991 ROD was signed (pages III-195-197). The following changes were made prior to 1991:

Parking Lot Paving (1988)—The original native surface parking lot was paved.

Comer and Sonnet Chairlifts Installation (1987)—These lifts replaced the “Little T-Bar” and the rope tow that had been constructed in 1963.

Vehicle Shop Construction (1983)—This building provided three new bays for performing maintenance on snowcats and other vehicles.

Night Lighting (1983)—Lights were installed to provide for night skiing.

Windsor Chairlift Installation (1977)—This lift replaced the “Big T-Bar” which was destroyed by snow creep in 1974.

Other changes have been relatively minor and include such items as kitchen and restroom remodeling, expansion of the lift shacks at the top of Ariel and Windsor, replacement and enlargement of the race building at the bottom of Winter ski run, and expanded storage facilities. All of these changes have helped contribute to a more user-friendly experience for both guests and employees. The ski area still lacks modern and efficient guest facilities, and the ski terrain is essentially unchanged since the 1960s.

Comment #195: Discussion of past history of ski area - change in management (6702)

We note that annual variation of precipitation patterns caused the ski area to fail financially three times since its construction in 1963, most recently in 1991 after two years of poor snowfall. The DEIS omits this fact from its analysis. (D03-3216, page 1; 3223, page 2; and 3227, page 2)

Response: According to Mt. Ashland Ski Area records and newspaper accounts, there has been one bankruptcy of the ski area since its inception. The Mt. Ashland Corporation went into bankruptcy in the summer of 1974 due to an inability to meet annual debt payments on the original ski area construction loans. At that time college administrators at Southern Oregon State College formed a not-for-profit corporation, the Southern Oregon Ski Association (SOSA), to operate the ski area and develop a long term solution for its successful operation. After three years of ski area operation without finding another operator or buyer, SOSA dissolved and the bondholders negotiated a sale to Richard Hicks. The ski area operated profitably during Hick’s ownership and it was sold to Harbor Properties, of Seattle, Washington in February of 1983.

Harbor Properties made improvements to the ski area, including night lighting, two new chairlifts, improved maintenance facilities, and developed plans for an expanded ski area (this planning process resulted in the 1991 Master Plan). Harbor Properties operated the ski area with an average annual operating profit of \$140,000 (Mail Tribune 1992) until 1992 when they put the area up for sale. The ski area did not fail financially. A successful fund raising campaign led to the present ownership and operation status. MAA has operated the ski area with an average annual operating profit of approximately \$280,000 according to their records.

The DEIS economic analysis takes into account past performance over time by using revenues, expenses and net revenues during the past five years to establish a base year (2003) forecast. This base year forecast is used in conjunction with projected skier visitation rates to estimate future costs and revenues, including the cost of proposed improvements. A sensitivity analysis was performed by evaluating three visitation scenarios – low, medium and high. The low visitation scenario represents adverse snow or economic conditions that could result in lower visitation. In addition, the analysis is considered to be a conservative one for the following reasons:

- The analysis assumes the ski area would borrow money to finance Phase I improvements. The cost of borrowing is included in the analysis. However, the Ski Area has stated that it plans to fund improvements in all phases through fundraising or retained earnings, rather than through a loan. This would substantially reduce the cost of improvements and increase overall net revenues.
- The analysis incorporates a relatively high discount rate (20%) to account for a variety of factors associated with financial risks and costs, including the borrowing rate for debt incurred in Phase I, and the risks associated with undertaking improvements, the potential for poor snow years, changing economic conditions and other factors. Use of a lower discount rate also would make the analysis more financially favorable.
- The analysis assumes a gradual growth in skier visits, rather than an early spike associated with completion of improvements, which is probably more likely to occur. Use of the discount rate reduces the value of longer-term growth in comparison to shorter term growth, making this assumption about gradual growth conservative.

Human Environment - Social and Economic Conditions

Comment #196: 1992 survey by SOU showing 1/3 of students are there because of ski area (6900)

In 1992, a survey conducted by SOU during the public purchase of MASA showed that over one third of the University's students would not be attending SOU if the Mt. Ashland Ski Area were not available. (D03-108, page 1)

Response: James B. Watson of Media Intelligence, Inc. conducted this study according to people involved with the community purchase of MASA in 1992 (MAA 2004, per. com Ty Hisatomi). Mr. Watson is no longer in the area and Media Intelligence no longer exists. Despite an extensive search, this study could not be located.

In 2003, SOU senior geography students Brian Gardner and Keith Spernak studied the Mt. Ashland area (not just the ski area) for their senior capstone field course. As a part of their project they chose to survey their fellow students regarding their perceptions of the Mt. Ashland Ski Area. Their principal question was to determine "if Mt. Ashland was an influencing factor in their decision-making process to enroll" at SOU. They administered a probability sample that was obtained through chance processes. The sample size was 100 out of a student population of approximately 5,000 people. Thirty-three students said that Mt. Ashland was an influencing factor in their decision to enroll at SOU. Sixty-six of the respondents said that they used Mt. Ashland and 22 of them stated they had season passes (Hisatomi, 2003).

These results tend to confirm that the existence of the ski area is a contributing factor to student enrollment at SOU. *Outside* magazine (September, 2003), in an article on the top 40 schools in the country for outdoor activities, rated SOU at number 20. Reasons given in the article included skiing at MASA, whitewater rafting, and hiking. This article also supports the findings of the geography students at SOU.

SUBSTANTIVE COMMENTS - ENVIRONMENTAL CONSEQUENCES

General

Comment #197: Discussion of future expansion within Special Use Permit (cumulative effects) (7000)

How the current expansion might facilitate future expansion proposals needs to be addressed as a cumulative impact so that we can have a realistic view of the implications of future expansion. Future plans must be disclosed and discussed now for the public to have an appreciation of the full impacts. (D03-2095, page 2)

Response: The Forest Service has received no proposals for expansion other than that contained in Alternative 2, being analyzed at this time. Any proposal for developmental activities would be reviewed and authorized by the Forest Service based on an appropriate NEPA analysis. Since there are no foreseeable future expansion proposals, it would be speculative to assume there are cumulative effects of future expansion.

Physical - Effects of Snowfall/Climatic Change

Comment #198: Global warming effect on other resources; . . . (7100)

Global warming should be incorporated in the FEIS and should be included in the following analysis: Economic Viability and Longevity, Effects on Soils, Effects on Watershed Resources, Effects on Water Quality, Effects to Engelmann Spruce, Effects to Mt. Ashland Lupine and Henderson's Horkelia, Effects Associated with Human Social Values, and Effects Associated with Economics. The FEIS should also address increases in temperatures that will result in shifting plant communities, likely resulting in changing proportions of certain plant communities and loss of some species. (D03-2256, page 1; 3226, page 14; and 3249, page 1)

Response: In response to comments received on the 2003 DEIS and discussed in response to Comment #131, the Forest Service contracted the services of Dr. Gregory V. Jones, Associate Professor, Southern Oregon University, Ashland, OR. Dr. Jones was asked to research the references mentioned in this comment and provide the Forest Service with an assessment of the validity and relevancy of the sources and the content comment. His findings are documented in a paper *Understanding Climate Variability and Change in the Pacific Northwest*, which will be incorporated by reference to the FEIS.

In consultation with Dr. Jones, the Forest Service continues to believe that most of the effects of climatic change on the resource factors mentioned in this comment are out of scope to the analysis and decision regarding expansion of the Mt. Ashland Ski Area. This is because while climatic change may or may not actually be occurring, these effects are related to global issues, and not related to the MASA ski area. The Forest Service acknowledges that the effects of climatic change may have a relationship to the snowfall available to the terrain being considered for ski area expansion, and therefore to economic viability. This relationship may however be beneficial as well as adverse (see Dr. Jones' paper). Also see response to below comment.

Comment #199: Global warming effects on viability of ski area (climatologist data) (7101)

Global warming is not an out-of-scope issue and should be qualitatively considered in all expansion alternatives, especially those which would place runs at lower elevations than the current MASA (Alts. 2, 3, & 6). Predictive data is not needed in order to consider the generally-accepted warming and precipitation trends as presented in peer-reviewed scientific literature and in government studies. Rapid retreat of glaciers and upward movement of snowline in higher mountains of the West suggests that this problem needs addressing now by a climatologist using data on changing snow pack and rain vs. snow precipitation in the West. (D03-2095, page 2; 3205, page 3; and 3216, page 1)

Response: As noted above (Comment #198) and in response to Comment #131, the Forest Service acknowledges that climatic change may be a factor in precipitation (snowfall) predictions, and therefore on long-term economic viability of an expanded ski area. This issue will be addressed accordingly and in more detail in the FEIS. It should also be noted that climatologists describe this issue as “climatic change” and not “global warming”. This is because while it is acknowledged that climate is changing, it is not changing everywhere (globally) and it is not necessarily or exclusively “warming”.

Comment #200: Resource effects during low snow from grooming, etc. (7102)

The DEIS has not analyzed the impact of grooming runs, especially during low snow conditions. How will machinery, operating with a low or nonexistent snowpack impact rare plants, soils, and other resources (IV-162). (D03-3224, page 25)

Response: Snow grooming machinery would not operate with a nonexistent snowpack and generally operates with two or more feet of snow. The DEIS at pages IV-59-60 discussed effects associated with snow grooming equipment.

Physical - Effects on Slope Stability

Comment #201: Interception with ground water from excavation affecting stability, etc. (7300)

Excavation at the bridge site risks interception of ground water, which could trigger entirely new patterns of overland water flow and soil erosion until the site reaches a new equilibrium. The DEIS overlooks the potential for excavation to intercept ground water and re-route it to the surface. (D03-3223, pages 4, 5 and 18)

Response: The proposed bridge footing construction under Alternative 2 is discussed on DEIS pages IV-53 & 54; the discussion includes area and volume of estimated excavation for proposed footings. The description indicates that groundwater could be encountered in the excavation. It also anticipates that shoring of the trench walls may be required to keep the excavation open during construction. Any groundwater encountered would need to be pumped and allowed to settle. The excavations are not located in area of surface water, as identified by Northwest Biological Consulting, 1999. Short-term erosion associated with the proposed installation is discussed. The footing would be oriented roughly parallel to the stream banks and the groundwater flow path. There is no rationale presented in the comment to suggest how groundwater would be re-routed to the surface, rather than continuing along the existing groundwater flow paths.

As discussed for IM-3 (Bridge Crossing), under Alternative 6 DEIS pages IV-54 & 55), there is no deep excavation proposed for the bridge foundation. As such, the likelihood of impacting either surface or ground water is yet further reduced. However, clearing and leveling of the foundation pad would be required. This would include the removal of tree stumps or large boulders at the surface to create an even platform to accommodate the proposed bridge sills. While site disturbance of the ground surface and vegetation is anticipated, there are no indications that groundwater would be brought to the surface by such activities.

Comment #202: Lack of characterization of “short-term” impacts on unstable land (7301)

The characterization of adverse impacts to unstable land as “short-term” is unqualified and fails to ensure professional and scientific integrity. (D03-3223, page 5)

Response: Under definition of effects, DEIS page IV-1, the analysis is based on a definition of “short-term effect” as “an effect that occurs during the implementation of the project and/or for up to two years (or seasons) thereafter.”

Comment #203: No discussion of effects from LC-6 lift towers on LHZ 2 (7302)

The DEIS completely fails to disclose the effects of excavating lift towers for LC-6 and LC-15 (actually LS-15) in areas rated LHZ 2, although it states that excavation would occur. (D03-3223, page 5)

Response: As stated at DEIS page IV-8, “The acres of LHZ 1 and 2 occurring within each alternative is used as an indicator for determining the relative risk of effects to slope stability.” The effects in regard to LC-6 LS-15, including effects associated with lift towers, are discussed at DEIS page IV-10. This will be clarified in the FEIS.

Comment #204: Rationale for no effects on LHZs 450-1100 feet from Skiway (7303)

The Forest Service does not explain why it believes that the Skiway road potentially could affect the landslide 320 feet away, but not the one 450 feet away. (D03-3223, pages 5, 6)

Response: The Skiway is a skiing route, not a road; see also next comment (below). The closer the proposed Skiway vegetation removal and/or ground modification is to an active slope failure, the more likely the created clearing may potentially affect the landslide below it. An area within 450 feet upslope of an active landslide is usually considered to be within the groundwater influence zone. This groundwater influence zone is the area that is most sensitive to disturbance such as the Skiway, ski run or lift clearing. By removing trees and brush species on slopes less than 450 feet above an active slope failure, it tends to increase groundwater that is available and may accelerate movement of the landslide. However, if the clearing is 450 feet or more from the landslide, the risk to directly affect slope failures is largely diminished, since it is outside of the high-risk zone above the landslide. The natural forest that remains between the clearing and the active landslide acts as a stabilizing force both with root strength/cohesion and by the trees utilizing much of the groundwater before it reaches the unstable area.

Another important factor in landslide acceleration from upslope development is whether the hazard of the slope failure is low, moderate, or high (see DEIS Table III-6 on page III-13). If the landslide is inactive or ancient and is classified as a Hazard Zone 3 or 4, it may not be affected by vegetation clearing that is within 450 feet. Often when slopes are less steep and/or the risk to accelerate any new mass wasting is classified as low or lowest due to geomorphic conditions (such as convex slope shapes, rock outcrops above or near the headwall of slide, or the terrain is gentle). However, if the slope near the failure is steep, concave, and contains unstable materials, the risk to accelerate the slide is classified as high and is more likely to be affected by ground and vegetation modifications. This will be clarified in the FEIS.

Comment #205: Risk to slope stability and sedimentation – Skiway equivalent to a road (7304)

The DEIS overlooks the risk to slope stability posed by punching a road straight through LHZ 2 terrain. There is a concern about the proposed skyway road crossing Pumphouse Creek. The proposed crossing of Pumphouse Creek would intercept a mapped wetland. The Northwest Forest Plan requires projects to avoid wetlands entirely when constructing new roads. (D03-3223, pages 6, 17, and 24)

Response: The Skiway is a skiing route, not a road; see responses to above comments. The Skiway (R-18) route would extend from the base of LC-6 to the base of Windsor. The Skiway Run would require terrain modification. Areas with less than 12% side slope would only require tree removal. In areas with a greater than 12% side slope excavation would be needed to create a 5-10% side slope area of approximately 16 feet wide. It would have some cuts and fills to attain desired grade and slope conditions. It would cross Pumphouse Creek below the mapped area of wetland. It would have mitigation measures to ensure acceptable effects to soils and slope stability.

The Standards and Guidelines at NWFP C-32 are not applicable to this action (construction of the Skiway) as it is not associated with a road.

Comment #206: Worst-case scenario for landslides during major weather events (7305)

The approximate number and volume of debris slides anticipated that could occur in 10 years, in 25 years, given a repeat of the 1997 storm in the Middle Branch, without the snow cover, is a worse case scenario that should be investigated and described in the DEIS. This impact to the watershed, even without the expansion effort, is within the range of possibilities. (D03-3191, page 2)

Response: Historical evidence and landslide surveys do not show active or recent landslides within the Special Use Permit area. There are no known landslides associated with any of the existing ski area developments. Landslides re-surveyed after the '97 Flood showed no new slides (see Chapter III-10). Records show that the area is under snow cover when the noteworthy flood events occur, such as the December 1955, December 1962, December 1964, January 1971, March 1972, January 1974, December 1981, and January 1997 storms. Slope stability analysis shows that the proposed ski run clearings are predicted to be safe and no new slides would likely occur as a result of the new ski run/lift development. Historical evidence does indicate that the terrain is susceptible to surface erosion when exposed soils are subject to severe thunderstorms during the summer. Also see response to Comment #142.

Comment #207: Risk of failures for stability not quantified with analysis (7306)

The analysis does not provide quantitative estimates of the increase in the potential for slope failure. (D03-3211, page 1)

Response: Quantitative slope stability analysis was completed on areas where steep terrain and/or Landslide Hazard Zonation (LHZ) 2 were found in or near ski run and lift clearings proposed under Alternatives 2 and 6. A computer software program called "xstabl" was utilized and 63 modeling scenarios, each with over 500 iterations were analyzed and conducted for the Middle Fork basin. Factor of Safety calculations of the areas analyzed were mostly well above 1.0, which indicates that the terrain where ski runs and lifts would be developed with Alternatives 2 and 6 would likely be stable. This will be clarified in the FEIS.

As discussed in the DEIS, the ski expansion proposal in Middle Fork of East Fork under Alternatives 2 and 6 affects approximately 16 acres and 13.5 acres, respectively of Hazard Zone 2. The only LHZ 1 affected with Alternatives 2 and 6 would be approximately 0.4 acres with the proposed Run 12 bridge crossing, which would span a portion of the wetland channel that is LHZ 1 (see DEIS pages IV-8 and IV-9). The large majority of the component projects in the Middle Fork basin with these two alternatives would be constructed on stable (LHZ 3 and 4) terrain.

Avoidance of the two highest hazard zones (LHZ 1 and 2) was utilized as a designed mitigation when ski runs, the Skiway, ski lift corridors, and the wetland crossing sites were located.

Comment #208: Cumulative probability of LHZ 2 impacts on Middle Fork (7307)

Slope failures due to proposed activities within the Middle Fork would adversely affect the lower reaches of the Middle Fork. A quantitative analysis should address the cumulative probability of slope failure within the Middle Fork. (D03-3211, page 1, 2)

Response: Site-specific mapping and cumulative effects analysis was conducted where component projects would occur in the Middle Fork area. A **qualitative** cumulative effects approach was utilized with respect to which Landslide Hazard Zones would be affected with proposed ski expansion, especially for activities located within Hazard Zones 3 and 4. Whereas, **both qualitative and quantitative** cumulative effects analysis were conducted for Hazard Zones 1 and 2, with particular emphasis at sites with steep slope gradients, older landslide features, and/or wetlands intersected with proposed ski developments.

Several computer runs/iterations were completed for “worst-case” scenarios analysis for mass wasting. Under modeling, even when groundwater levels were brought to the ground surface (saturated conditions) and soil and root cohesion was reduced to zero during modeling, only one of the computer runs predicted any new slope failure occurrences. This new occurrence for a potential failure was found in a small alder glade of Run 11, where steep slopes and groundwater occurs near and at the ground surface. Root cohesion at this portion of Run 11 is deemed necessary to maintain stable slopes. Therefore, if this site is developed with Alternative 2, mitigation would call for this portion of the alder glade to be trimmed, but not completely removed, in order to keep root strength for holding soil.

Under computer modeling, Factor of Safeties were calculated at locations where there was some potential for high-risk terrain that were mapped at the Site Scale. The vast majority of the component projects proposed are proposed in areas that avoid the highest landslide hazards and, therefore, when combined with computer modeling, the cumulative probability of any slope failures in the Middle Fork was found to be low (Factor of Safety ranges from 1.1 to 1.8).

Slope Stability field mapping was completed at least four different years (in 1997, 1998, 1999, and 2001) at Middle Fork proposed development sites. This site-specific mapping concentrated in locations where steep, concave slopes, and wetlands occur. No new tension cracks, debris flows, slumps, or any other active landslide indicators were found during each of these four mapping efforts. See DEIS Table IV-2 and Cumulative Effects on DEIS page IV-16, which provides the summary for risk for adverse effects on slope stability. Analysis and slope stability modeling processes will be clarified in the FEIS.

Physical - Effects on Soils - Erosion and Sedimentation

Comment #209: Impacts of activities on humus need to be addressed (7400)

The impact of activities on humus (soil organic matter), need to be addressed. (D03-3226, page 4)

Response: Humus is the stable end product of the long-term decomposition of site organic matter into the soil. Changes in site organic matter (duff, litter, large and small woody material) will over the long term ultimately affect the level of soil humus in a given area. Those activities that increase site organic matter should, in the long term, increase humus and those activities that either reduce site organic matter or remove topsoil through erosion or displacement would lower humus levels. A discussion on humus will be included in the FEIS.

Comment #210: Disturbed WEPP Model: why were absolute amounts presented? (7401)

What is the justification for presenting absolute erosion rates and sediment delivery amounts? (D03-3226, page 15; D03-3249, page 2)

Response: In the DEIS, absolute sediment yield amounts were presented in order to assess the potential impacts of past practices and proposed disturbances on the four affected watersheds. More specifically, a quantitative analysis of anticipated sediment yields to Reeder Reservoir was believed to be important due to the importance of the reservoir to the City of Ashland.

It should be noted that analysis under the DEIS did not directly use the WEPP model for its reported outputs. For the FEIS however, the *Disturbed WEPP* and *WEPP: Road* models will be used to estimate sediment yields for each proposed site disturbing activity. The WEPP model reports a sediment yield in absolute amounts. The supporting WEPP documentation indicates that the accuracy of the output figures is at best, plus or minus 50%. This will be clarified in the FEIS.

Comment #211: Disturbed WEPP Model: was there a range of possible outcomes? (7402)

What was the range of possible outcomes given the accuracy of the Disturbed WEPP model, the complexity of the analysis, the large number of inputs, the variability of the inputs and the variability of the results? (D03-3226, page 15; D03-3249, page 2)

Response: The DEIS did not report all possible outcomes, and as noted above, analysis under the DEIS did not directly use the WEPP model for its reported outputs. However, the FEIS will use the WEPP model to evaluate each site-specific disturbance within 300 feet of stream courses and will consider the accuracy as well as site specific input variables of each disturbance. This will be clarified in the FEIS.

Comment #212: Disturbed WEPP Model: what are confidence factors: was a sensitivity analysis done? (7403)

What is the justification for not doing a sensitivity study and presenting results with confidence factors? Which inputs is the analysis particularly sensitive to? (D03-3226, pages 15 and 16; D03-3249, pages 2 and 3))

Response: Sensitivity analysis is the responsibility the model builder, not the user. Users of a complex model such as WEPP should not have to make a sensitivity analysis every time they apply the model. (W. Megahan - personal communication 2004). This will be clarified in the FEIS.

Comment #213: Disturbed WEPP Model: what are the basis for model assumptions? Elements include weather, slope angles, erosion by landtype, stabilization, ground cover on runs, 30 year average rates, distance sediment travels, vegetation growth, global warming, mitigation measures employed (7404)

The Disturbed WEPP computer model has provided unreliable erosion data and cannot be used accurately to correlate data from Idaho to Mt. Ashland. The analysis assumes an unrealistic decrease in erosion rates that is not substantiated by data obtained at Mt. Ashland. Assumptions of effectiveness of erosion controls are not based on experience of the effectiveness of controls at Mt. Ashland or on hillslopes with similar soil and geologic characteristics. A complete description should be given of the methodology, assumptions, and simulations run. (D03-3205, pages 4 and 5; D03-3223, page 17; D03-3226, pages 16, 18 and 19; D03-3249, pages 3,4, and 5)

Response: The *Disturbed WEPP* and *WEPP: Road* model evaluates erosion and sediment delivery potential from disturbed forested terrain and forest roads, respectively. True erosion rates are highly variable due to large variations in local topography, climate, soil properties and vegetative properties so the accuracy of the model is plus or minus 50%.

The original analysis methodologies used for the 2003 DEIS were reconsidered following public comment and the extrapolation of absolute rates of erosion and sediment yields from the Batholith region to Mt Ashland were dropped from the analysis. Instead the FEIS will utilize the WEPP model and will use site-specific input variables (i.e., climate, soil texture, slope gradient, cover percentages, rock etc) for each disturbance proposed in the alternatives.

Recent monitoring of the reconstructed sediment dam adjacent to Comer lower terminal has shown that sediment delivery rates at that site have substantially decreased since the original monitoring of the dam began the late 1970s and early 1980s. Photo interpretation of aerial photographs taken in 1966, 1975 and 1998 has shown a marked recovery of vegetation on many of the disturbed areas. The FEIS will discuss these findings.

The assumptions on effectiveness of erosion controls are based on experiences in McDonald Basin and in the Mt Ashland study area. They were addressed on DEIS pages III-37 through III-41. In the FEIS, a complete description of methodology and assumptions used for the sediment yield analysis will be presented in a new Appendix.

Comment #214: Disturbed WEPP Model: what was the experimental design used? Was extreme testing utilized? (7405)

The EIS should describe the experimental design used for the analysis. There are a large number of possible variations in the assumptions and inputs so an adequate experimental design is required to justify whatever modeling inputs were used for the final results. (D03-3226, page 16; D03-3249, pages 2 and 3)

Response: See response to above comment. The Forest Service acknowledges this need. A complete description of methodology and assumptions used for the sediment yield analysis will be presented in a (new) Appendix to the FEIS.

Comment #215: Disturbed WEPP Model: was model validated from on-site measurements? (7407)

Reliable site specific monitoring must be performed in order to generate credible estimates of sedimentation rates. Existing estimates of sedimentation rates appear to be, at best, orders of magnitude estimates; however, the uncertainty is not quantified. Reliable site specific measurements of sedimentation rates should be used to complete the preliminary design of structural sedimentation controls and to evaluate whether the proposed measures are adequate and feasible. The only on-site data cited by the Forest Service is the 1978-83 erosion monitoring study of the Windsor and Ariel sediment dams, which is not reliable. (D03-3211, page 2; D03-3222, page 5; D03-3223, page 16; D03-3226, page 16; D03-3249, page 3)

Response: The WEPP model is the most appropriate, state-of-the-art erosion prediction model currently available for forested terrain (W. Megahan - personal communication 2004). The accuracy is stated to be at best, plus or minus 50%.

A reevaluation of sediment captured in the Windsor sediment was performed based on two more years of data and trap efficiency rates indicates that the six year average of sediment for the drainage area was 21 yards per year. Personal communication with W. Megahan suggests that this rate is within plus or minus 50% of actual rates. The six year's of data collection from the Windsor sediment dam study is believed to be sufficient for determining the accuracy of sediment yield predictions as modeled through the WEPP program. This will be clarified in the FEIS.

Comment #216: Disturbed WEPP Model: what was the basis for using this model? (7408)

Disturbed WEPP is not intended for sites “where soil is severely disturbed or compacted, such as roads and trails (or) construction sites” such as the Ski Area (Draft Disturbed WEPP, USDA Forest Service, 2000). The types of disturbance model users can select are typified by a 5-year old forest, a heavily logged site, a forest one or two years after a prescribed fire, or a forest two to three years after a wildfire, which do not appear to match up well to site conditions at the Ski Area during construction. What is the justification for assuming the modeling methodology adequately approximates the conditions being studied? (D03-3205, page 4; D03-3222, page 5; D03-3226, page 16; 3249, page 3)

Response: As noted above, The WEPP model is the most appropriate, state-of-the-art erosion prediction model currently available for forested terrain. It uses site-specific characteristics of the site (soil texture, slope gradient, vegetative cover percentage, disturbance type, buffer widths, etc.) to predict sediment yields (W. Megahan - personal communication 2004).

Comment #217: Disturbed WEPP Model: how was SNOTEL data correlated to Mt. Ashland? (7409)

WEPP is recognized as being extremely sensitive to input data and was run using precipitation data from off site. How was the Big Red Mountain SNOTEL data correlated to the Mt. Ashland Measurements? What is the justification for assuming the WEPP weather generator sufficiently models Mt. Ashland conditions? (D03-3205, page 4; D03-3226, page 17; D03-3249, page 3)

Response: The Medford NWS Weather Station, located in Medford Oregon (42.23°N, 122.52°W) was used as the primary climate station for the WEPP model (Draft and Final EIS analysis). The 75 years of climate data from this station was modified using the USDA FS ROCK: *Clime* program to best describe the climate of the Mt Ashland study area.

The climate program is included within the WEPP program and for this analysis, the mean monthly precipitation, number of wet days and monthly maximum and minimum temperatures were obtained from the Big Red Mountain SNOTEL station (<http://www.wrcc.dri.edu>) to modify the Medford Weather Station data. Big Red Mountain SNOTEL station is located 7.5 miles to the west of Mt Ashland and is similar in elevation (6,250 feet) and topography (a north aspect slope just off the ridgeline) to the Special Use Permit area. Because of these similarities it is believed to have very similar weather to the MASA Special Use Permit area. This will be clarified in the FEIS.

Comment #218: What on site measurements were used to validate use of Megahan? (7410)

The EIS should use more recent soil erosion data from the project site to derive predicted erosion rates. What on-site soil measurements were collected on Mt. Ashland to assess site-specific differences across the study area and how were they used for model correlation and validation? How was on-site data correlated with Megahan's results? What differences existed between the Mt. Ashland soils and the Idaho soils? Please ensure that the analysis properly applies the Ketcheson and Megahan (1996) research to Mt. Ashland. (D03-3222, page 5; D03-3223, page 17; 3226, page 17; D03-3249, page 3)

Response: In response to public comments and personal discussion with W. Megahan (2004), a direct extrapolation of erosion and sediment yield rates from the Idaho Batholith to Mt Ashland is now not considered by the Forest Service to be the most accurate method available for the sediment yield analysis. A site specific evaluation of each disturbance using the WEPP erosion model will be used in the FEIS instead of extrapolating Idaho Batholith data.

Comment #219: What is the meaning and basis of “natural rates” of erosion after vegetation re-establishment? (7411)

What is behind the assumption that sediment production will decrease quickly (i. e., within two years) due to reestablishment of vegetation and stabilization of disturbed soils. What is the justification for those claims and what on-site data supports those assumptions? What exactly does "natural rates" mean and how do they compare to measured erosion rates on undisturbed sites (DEIS, page III-23)? (D03-3226, pages 18-19; 3249, pages 4-5)

Response: The meaning of “natural rates” in the DEIS pertains to sites that have not had recent disturbances. For instance sediment rates related to soil disturbances of the original ski area development would not be considered natural rates of erosion. The assumption that sediment production will decrease quickly is based on personal communications with Walt Megahan and a considerable body of research summarized in the *Washington Road Surface Erosion Model* (WARSEM), located at (<http://www.dnr.wa.gov/forestpractices/adaptivemanagement>). Also see research literature for granitic soils in the Idaho Batholith (Ketcheson et al. 1999, Megahan 1974, Megahan and Kid 1972). On-site observation of projects, including disturbance on Avon and Upper Dream, by Forest Service personnel supports these findings (see the November 2002 Status Report on the 1992 Ski Area Restoration Environmental Assessment document; contained in the appendices to the Draft and Final EIS.

“Natural rates” of erosion are estimated rates of erosion from undisturbed sites. Measured rates of erosion for granitic soils have been measured in the Idaho Batholith where soil cover was greater than 75% and those rates were found to be 0.02 cubic yards per acre per year (Clayton and Megahan 1997). The actual rates of erosion for undisturbed forested sites at Mt. Ashland are likely to be slightly higher than measured rates in Idaho due to greater summer precipitation at Mt Ashland than the Idaho study sites (pers. com. – Walt Megahan).

Comment #220: What is the basis of claim that planting grass has been effective? (7412)

According to George Badura: “Revegetation, especially by grass, is not an effective erosion control method due to thin topsoils, low fertility and low water holding capacity.” What is the data showing the effectiveness of various mitigation/restoration measures that have been used on existing ski runs? What is the basis and supporting data behind claims that planting grass on ski runs has been effective? (D03-3223, page 20; D03-3226, page 18; D03-3249, page 4)

Response: Grass has been used effectively at a number of locations in the 1990s through the present time. These areas include Upper Dream, Avon, Lower Juliet (between the Lodge and Rental Shop), and Sonnet ski runs. Successful revegetation has also taken place at the Wastewater Treatment Facility. It is an effective treatment, especially when used in conjunction with other erosion control measures such as log and slash placement and water bars. It almost always succeeds if irrigation is used in the first year (although water is not available at most locations within the present area). The decomposed granitic soils do present challenges for successful revegetation due to the reasons mentioned in the comment, but ski area personnel through the years have experimented and learned how to successfully establish grass through mulching, fertilization (usually dolomite lime), and proper species type.

Supporting data for these statements come from visual observations of planting efforts associated with ground disturbing projects at MASA. The following three sample photos show visual evidence of successful revegetation through planting of grass seed (sometimes grass plugs are used). The first two photos were taken at the Wastewater Treatment Facility in early July of 2001, approximately 19 months after construction. The third photo is of Upper Dream and was taken in late May of 2002. This area was extensively recontoured in 1995 with an excavator and is one of the harshest growing sites at MASA. Note that the grass does not cover all bare soil like a manicured lawn. This is typical of native grass in undisturbed sites adjacent to and within the ski area. In this particular location, grass, in association with rock reinforced water bars has been very effective in mitigating erosion on 40-45 % slopes.





Comment #221: Basis of findings regarding 1977 Montgomery Report (7413)

What is the scientific justification for ignoring the 1977 Montgomery report that indicated the ski area was a major contributor of sediment to Reeder Reservoir? (D03-3226, page 18; D03-3249, page 4)

Response: The conclusion from the Montgomery Report that the ski area contributed large amounts of sediment to Reeder Reservoir was based on an unrealistic assumption that 1) erosion on ski runs was equivalent to that of roads and 2) that all of the erosion from ski runs was delivered to streams courses. Since the time the Montgomery Report was written, there has been a body of literature on erosion and sediment yield rates in mountainous terrain and also the development of erosion control models, such as WEPP, that has helped quantify the effects of disturbances on sediment yields. The FEIS will present more realistic erosion rates using the WEPP erosion model and site-specific disturbances documented from historical aerial photographs.

Comment #222: More information on Alternative 3 erosion consequences similar to 2 and 6 (7414)

The DEIS should better explain why Alternative 3 is predicted to have equal erosion to Alternative 2 and greater erosion than Alternative 6 when these latter alternatives would require more grading and construction over a larger area. (D03-3222, page 5)

Response: DEIS Alternatives 2 and 3 include more proposed grading than Alternative 6. Refer to DEIS Tables IV-6 through IV-10. Although Alternative 3 has less clearing for runs than Alternatives 2 or 6, the grading to improve the Betwixt run (that is not included in the other alternatives) creates more ground disturbance and therefore the potential for more erosion. This will be clarified in the FEIS.

Comment #223: Rationale for use of “spider” (impacts) versus 225 excavator (7415)

The DEIS provides no reason why a “spider” excavator would reduce impacts from those of a Caterpillar-225 tracked excavator. (D03-3223, page 5)

Response: The discussions on DEIS page II-34 explain the features of a “spider” type excavator. Consequences were discussed at DEIS pages IV-62 & 63. To minimize ground and vegetation disturbance and potential for sediment production in highly sensitive terrain, an alternative to large crawler excavators was proposed. A “spider” is a trackless, walking excavator with two adjustable, articulated legs with pads and two articulated legs fitted with tires. The relatively light (16,000 pound) spider excavator is about 30% of the weight of a tracked excavator. Where necessary, it can be air lifted in and out of construction sites.

The minimum 6-foot wide stance enables the machine to work in tight places. A typical excavator is about 70% wider than the spider. The legs with 22-inch wide front pads and 20-inch wide rear wheels exert about 13 pounds per square inch pressure on the ground surface, which minimizes soil compaction and disturbance of ground vegetation. The ‘spider legs’ can also be fitted with 30”x30” pads to further reduce standing ground pressure to about 8 pounds per square inch, or about 60% of an excavator. Unlike an excavator, the spider excavator can step over large obstacles, such as logs and negotiate through steep terrain and closely spaced trees.

Tracked equipment has the tendency to shear the upper ground surface and vegetation, particularly when making turns. A spider excavator moves by pulling or pushing with the two legs with pads while the other two legs move along on rubber tires that roll across the ground surface. There is approximately 8-13 pounds per square inch pressure exerted on the ground surface or vegetation by a spider, however, there is less shearing action imparted which results in reduced disturbance.

While the ground pressure of the spider is about 70% of an excavator, the area of the leg pads and tires of a spider is approximately 30% of that of a Caterpillar 225 excavator (for example). As such, the area of ground disturbance is proportionally reduced with the use of a spider. This is a benefit where operating in sites where minimal ground or vegetation disturbance is a goal. The spider also has the advantage of being able to work on very steep or irregular topography that would be very difficult or impossible to operate a tracked excavator without severe ground disturbance. This will be clarified in the FEIS.

Comment #224: DEIS does not address long or short-term erosion impacts of chairlift construction (7416)

The DEIS does not show how the new construction will avoid the same severe impact nor does it address whether the heavy erosion due to chairlift construction would have significant long-term or short-term impacts at any scale. (D03-3223, page 10)

Response: Original chairlift construction included road building by tracked dozers and extensive clearing of all vegetation. This created highly disturbed soils with high sediment yields the decade or so after construction. Proposed construction of lift towers as described on page IV-39 of the DEIS does not involve building roads to the towers. The actual construction would disturb a relatively small area. Excavation for the towers would be completed by hand, except where the work could be readily accessed by the excavator. Tower and footing construction materials would be delivered by helicopter. Short and long term impacts will be evaluated at a site-specific scale in the FEIS using *Disturbed WEPP* modeling.

Comment #225: DEIS did not quantify acreage of disturbance (road construction) (7417)

The DEIS fails to quantify the acreage that would be disturbed by road construction. (D03-3223, page 13)

Response: The discussion at DEIS pages IV-44 through 46 identified the amount of area that would be disturbed for each of the proposed road segments.

Comment #226: Sediment delivery and concentrated flows; what about diffused flows? (7418)

Analysis assumes that sediment delivery never occurs from sediment originating more than 300 feet from a stream channel. This ignores the reality of the rill and gully flow transport systems on Mt. Ashland which can and does transport sediment further than assumed by this study. In general, erosion and sediment delivery analysis in this study seems more appropriate for diffuse overland flows, not the concentrated flows, which are a major mechanism of both erosion, surface flow, and sediment delivery on Mt. Ashland. Unsurfaced roads in the Ashland Watershed and surrounding drainages sit exposed to the erosive force of rain and therefore experience “high rates of surface erosion” even without flow concentration (BWA p. 35). Cut slopes, fill slopes, graded area prisms and building footings in an expansion area would be no different. (D03-3205, page 5; D03-3223, page 18)

Response: The analysis does assume that active gullies are sediment transport systems and treats them as stream channels in this analysis. Therefore if a disturbance is within 300 feet of a gully, some portion of sedimentation from eroded material is assumed to occur (this will be further discussed in a new Appendix to the FEIS). Rill erosion features are small, relatively undefined channels that can form into gullies depending on the length of slope, slope gradient, percent cover, and type of disturbance. Erosion and sediment delivery rates from originating from rill and sheet erosion will be calculated and documented in the FEIS for each disturbance within 300 feet of a channel using the WEPP erosion model.

Unsurfaced roads, cuts, fills, as well as building, tower and terminal footings, will “experience high rates of surface erosion” without concentrated flows, especially within the first two years after construction. This is based on personal communications with Walt Megahan and a considerable body of research summarized in the *Washington Road Surface Erosion Model (WARSEM)*, located at (<http://www.dnr.wa.gov/forestpractices/adaptivemanagement>). Also see reference research literature for granitic soils in the Idaho Batholith (Ketcheson et al. 1999, Megahan 1974, Megahan and Kid 1972). As soil cover increases, soil erosion is reduced. This occurs over time with armoring of the soil with larger rock fragments, plant establishment or litter input near adjacent forest or reinvading plants. Mitigation measures that provide for retention of soil cover will also reduce erosion. These measures are addressed in the EIS. On-site observation of projects, including disturbance on Avon and Upper Dream, by Forest Service personnel supports these findings (see the November 2002 Status Report on the 1992 Ski Area Restoration Environmental Assessment document; contained in Draft and Final EIS Appendices).

Comment #227: What is the disturbance effects of LC-13 versus Skiway? (7419)

Environmentally speaking, is there an understanding of the impact on soil and erosion caused by placement of towers to accommodate the Pumphouse lift (LC-13)? Is there a chance of creating more surface disturbance than a full-blown Skiway in Alternative 2? (D03-3248, page 5)

Response: The effects of the LC-13 lift in terms of erosion and sediment production were discussed at DEIS page IV-43. The effects of the Skiway in terms of erosion and sediment production were discussed at DEIS page IV-57. With proper mitigation measures, both projects would have low potential for sediment delivery to streams.

Comment #228: Snow loading: analysis of total weight of ground pressure (v. psi) (7500)

The analysis should include the total weight applied to the ground combined with the results of a hydrologic study that would determine the structure of the wetlands and their sensitivity to the application of mechanical forces. (D03-3226, page 20, D03-3249, page 5)

Response: The analysis and Figure IV-1 discussed on DEIS pages IV-59-60 reveals that the increased ground pressures associated with grooming equipment or skier loading is virtually undetectable once at least two feet of snow has accumulated. The analysis is based upon compacted snow depths and takes into account the total weight of snow groomers, skiers, hikers, etc., and reveals the calculated stress that is transmitted to the ground surface beneath the snow. Calculations of estimated stress transmitted to the ground takes into account not only the total weight of the load, but also the area over which the load is distributed (i.e., the area of the snow groomer tracks) and depth of snow through which the stress is attenuated. It also displays the anticipated stress at the ground surface based upon the accumulated snow pack alone.

The analysis suggests that two feet of snow should accumulate prior to allowing equipment to perform snow grooming. Forest Service assessment of winter logging activities confirms this determination (Flatten 2002). Early ski season pre-compaction snow pack depth and moisture content monitoring and assessment are needed to determine the acceptable snow conditions before allowing grooming equipment on the snow atop any wetlands. This is to ensure that when grooming activities are initiated that the minimum two-foot required thickness of compacted snow pack is maintained. Monitoring of the wetland conditions will be required to confirm the anticipated level of wetlands protection is achieved with the proposed minimal snow pack depth.

Physical - Effects on Watershed Resources

Comment #229: Quantitative estimate for potential for increased erosion to streambank (7700)

It is believed that the snowpack will be enhanced by the grooming and packing required on ski runs and this will serve to reduce the rate of snowmelt, adding to the retention of water in the watershed system. The potential for increase erosion and other adverse changes to the streambed due to increased peak flows along the Middle Fork below the developed area should be considered. (D03-3200, page 3; D03-3211, page 2)

Response: As stated in the DEIS at page IV-2, “groomed snow pack on existing and proposed ski runs would typically melt a week or two later than in the surrounding forested terrain.” The 1991 FEIS stated that snow grooming would result in snow remaining on-site “for several more days longer than areas without snow grooming” (p. IV-17). However, snow-grooming effects on snowmelt rates are not quantifiably known. Observations at MASA show that melt rates are similar on ski runs and naturally open areas with the same aspect and elevation (pers. obs. Johnson 1999).” Snow grooming has no effect on water quantity relative to ungroomed areas (Birkeland 1996).

Observation by the Forest Hydrologist indicates that there has been no obvious increase in channel erosion below the current ski area and there is no reason to believe expansion would cause increased erosion in the channels below the Middle Fork expansion area. Damaging peak flow events are generally a product of storm events. Increased peak flows in autumn have been observed in areas that have been clear cut and which as a result have greater soil moisture when compared to areas that are forested. Winter peak flows are associated with storm events that often include rain on top of snow. The rain melts the snow, which adds to the amount of runoff. There is no history of damaging peak flows in the Ashland Creek area occurring during the time of spring snowmelt.

Grooming of the ski area would not change the overall amount of snow in the drainage, but it might slightly reposition it for better skiing conditions and a slightly delayed melt rate as stated above. Given the lack of documented damaging flows in the spring, there is no reason to believe that the expansion of the ski area would change this (References: Rothacher, J. Dows Harvest in west slope Douglas-fir increase peak flow in small forest streams. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station Research Paper, PNW-163. 13 pg. 1973; Harr, R.D., W.C. Harper, J.T. Krygier, and F.S. Hsieh.

Changes in storm hydrographs after road building and clear-cutting in the Oregon Coast Range. Water Resources Research 11(3): 436-444. 1975; and Ziemer, R.R. Storm flow response to road building and partial cutting in small streams of northern California. Water Resources Research 17(4): 907-917. 1981). Also see response to Comment #234.

Comment #230: Effects to wetlands and plant community from increased runoff (7750)

How will increases in peak flows affect the wetland plant community and the tree growth in the area? What is the range of potential impacts on the character and function of the wetlands in the Middle Fork from increased sediment loading and flows, increased volume and velocity of water related to proposed activity in the Middle Fork? (D03-3191, page 1; D03-3192, page 1)

Response: This comment assumes that there would be an increase in peak flow following expansion of the ski area and that this would have an effect on the lower watershed. There is nothing to indicate this would be the condition (see response to above comment). Mitigation measures to be employed in development of the new runs and lifts would prevent any increase in sedimentation in the wetlands or stream channels. Forest Service experience with these erosion/sediment control measures indicates that they would be successful.

Comment #231: Effects to wetlands – water table from blowdown (clearing effect) (7751)

The recent monitoring site visit by Forest Service personnel indicates that blowdown of the trees in the stand near the proposed bridge crossing leads to surface pooling of water due to the high water table. This is new information. (D03-3202, page 1)

Response: This comment assumes a cause-effect relation between the tree blowing over and water pooling. Observation of the area by the Forest Hydrologist indicates that there has been no change in the amount of water on the site. The blowdown was a natural occurrence. The blown down tree had a large, flat root mat that is typical of trees growing in areas with high water tables. When the tree tipped over it exposed the water flowing across an impervious surface, but it did not change either the water table or amount of water. If enough of the trees in the area were to blow down, there would probably be a change in hydrology. Spring runoff would probably increase, although to what extent is not clear as subsurface flows, observed in holes in the ground in the wetland, move rapidly across an impervious surface. If the timing of runoff changed substantially, the wetland could become drier and its characteristics would change. This will be clarified in the FEIS.

Comment #232: Will the expansion injure water rights? (7775) (D03-17, page 1)

Response: See the response to Comment #148 above regarding water rights. The Forest Service is not aware of and does not believe that any existing water rights would be adversely affected with ski area expansion.

Comment #233: Are there (other) water rights in the area that will be affected? (7776) (D03-17, page 1)

Response: See the response to comment above. The ski area has been using water from the spring since it began operation in 1964; the Forest Service is not aware of any complaints from downstream users during that time that would lead one to believe that the ski area's water use is damaging other water rights. The Jackson County Watermaster's office would have a record of any such complaints; upon checking, no record of complaint was found.

Comment #234: Snow compaction and delayed runoff from cleared and groomed runs (7777)

It appears that the compaction of snow on the improved runs by skiers and snow grooming machinery would increase the density and water content of the snow thereby improving late spring and summer flows over a longer seasonal period. This increased density would appear to also reduce or delay runoff caused by seasonal rains. (D03-55, page 1)

Response: Snow grooming and skier traffic forces air out of the snow pack, thereby increasing snow density. It does not increase the water content (snow water equivalent). Early research in northern California by Anderson and by researchers at the Fernow Experimental Forest in Colorado studied the effects of openings on snow accumulation and melt. Orientation of openings in the forest canopy can change snow accumulation and the timing of snowmelt. The runs in the expansion area of Mt. Ashland are not specifically oriented to promote snow accumulation or to change melt rates. It is doubtful that there would be much effect on timing or amount of runoff from the clearings to create the runs. The changes would not noticeably increase the amount of municipal water available to the City of Ashland. References: Alexander, R.R., C.A. Troendle, M.R. Kaufmann, W.D. Shepperd, G.L. Crouch, and R. K. Watkins. The Fraser Experimental Forest, Colorado: Research Program and Published Research 1937-1985. USDA Forest Service Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-118. Anderson, H.W. Forest cover effects on snowpack accumulation and melt, Central Sierra snow laboratory. Trans. Am. Geo. Union. 37(3) 307-312. 1956. Anderson, H.W. Managing California's snow zone lands for water. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station Research Paper PSW-6. 28 pp. 1963. Also see response to Comment #229.

Comment #235: Quantitative estimate of change in peak flow – Middle Fork area (7778)

The analysis should include a quantitative estimate of the change in peak flow at the lower edge of the proposed developed area along the Middle Fork. (D03-3211, page 2)

Response: Projected changes to flow parameters were presented in Table IV-19, DEIS page IV-72. Any changes in flow are not expected to be large due to the small amount of land affected by expansion.

Physical - Effects on Water Quality - ACS Objectives

Comment #236: Specific estimates of contaminant loading (7800)

The EIS should include specific estimates of increases in contaminant loading, and about the proposed treatment and control of pollutants from the new impervious surfaces and ski runs. (D03-3222, page 4)

Response: Effects on water quality were discussed in the DEIS at pages III-73 & 74; consequences were discussed at pages IV- 91 through 95. A variety of undesirable water quality parameters were considered under the Clean Water Act including traditional physical and chemical constituents such as pH, bacteria concentration, temperature, discharge, and chemical pollutants. This comment does not provide a clear definition of “contaminant loading”. While there is some risk of water quality pollutants from expansion activities, mitigation measures are designed to prevent these occurrences, and if they were to occur, the effect would be mitigated to result in minimal effect. Therefore it would be difficult to quantify an effect that should not happen. In a worst-case scenario, specific and quantifiable estimates of changes (adverse effects) in the identified parameters were predicted to be very minor (if at all) at the Site Scales and unmeasurable at the Watershed Scales.

Comment #237: Provide more detail (rationale) for stream water temperature effects (7801)

There is concern about the predicted lack of effects of vegetation and land clearing on stream temperatures in the project area. The EIS should provide some justification to support the conclusion that no changes to stream temperature would occur. (D03-3222, page 4)

Response: This comment is from EPA and follows a statement by that agency that “Upper Ashland Creek is considered impaired and may be listed as impaired on the 303(d) list for high temperatures.” “Upper Ashland Creek” is not on the 2002 ODEQ 303(d) list for high temperatures. If it had been under consideration, it was evaluated and found to meet the state standard. In fact, the entire length of Ashland Creek is not listed for high temperatures on the 2002 list. Forest Service measurements of stream temperatures in East Fork Ashland Creek show summer temperatures to be well below the 64°F standard.

When shading vegetation is removed, there is a potential for a resultant increase in stream temperature. If there is clearing within the Riparian Reserve that would increase the amount of solar radiation impinging on the stream surface, then there is a potential for increased temperatures, at least at that site. The distance downstream that the elevated temperatures would be measurable can be calculated as can the on-site increase.

Comment #238: Provide more detail on sensitivity of ERA CWE ratios (7802)

The EIS should explain the sensitivity of the values to changing resource conditions in the ERA model. What and how much restoration activity or negative impact would cause the risk ratio to move significantly? How significant is the difference between a ratio of 0.269 and 0.939 or 0.939 and the stated yellow flag threshold of 1.0? (D03-3222, page 9)

Response: Calculations derived from the documented discussion of the ERA model (DEIS Appendix E) would show that it would take approximately 108 additional acres equivalent to a road (ERA assumptions) with the Ashland Creek watershed to move (increase) the risk ratio one percentage point. For example, in Upper Neil Creek, it would take 105 acres equivalent to a road to move the risk ratio from .939 to 1.0. This will be clarified in the FEIS.

Comment #239: Cumulative past private logging and other developments not included (7803)

The cumulative impacts analyses are inadequate as none mention past, current and future impacts from private lands logging, other public lands logging, roads, other development on Mt. Ashland, such as radar and TV and weather stations. (D03-3224, pages 25 and 26)

Response: Activities that occurred prior to 1994 were accounted for in the satellite imagery that was used for this analysis. On NFSL, activities that have occurred since 1994 were mapped and used to update the imagery. Though not individually listed by name, past actions were therefore accounted for in this way. On lands under other ownership (i.e., private), assumptions were made to account for activities that might contribute to cumulative effects. For example, the recent logging on private land in Neil Creek was accounted for in the analysis. Cumulative effects assumptions were documented in DEIS Appendix E (Appendix F in FEIS).

Comment #240: Mitigation or restoration as excuse for degradation (7804)

The Northwest Forest Plan does not allow mitigation as an excuse for degradation. The DEIS is replete with reasons how mitigation will minimize the impacts. (D03-3224, page 38)

Response: The EIS did not utilize mitigation as an excuse for degradation. It does consider restoration as an action to improve the trends at watershed scales, which would help to offset the adverse physical effects which are associated with any ground-disturbing action. Mitigation is designed to reduce the effects to acceptable levels (within Standards and Guidelines). As discussed in the recent (March 22, 2004 ROD) and in response to Comment #153, the proper scale for federal land managers to evaluate progress toward achievement of the ACS objectives is the fifth-field watershed and broader scales. It removes the expectation that all projects must achieve all ACS objectives, but would reinforce the role of watershed analysis in providing context for project planning. The decision clarifies that the nine ACS objectives would be attained at the fifth-field watershed scale and not at the project or site level.

Comment #241: Cumulative effects model; no disclosure of TOC and ERA values (7805)

There is no showing of how the TOC and ERA values were determined. The ERA/TOC method is not transparent, and the DEIS does not disclose the data used to reach the values assigned for watershed condition ratings or recovery thresholds. (D03-3223, page 22)

Response: All assumptions regarding the ERA model were documented in DEIS Appendix E. Specific reference to this model and its assumptions was made at DEIS pages III-77 and 78.

Comment #242: ERA model and unique hydrologic characteristics (7806)

How does ERA model fit unique hydrologic characteristics of Mt. Ashland? (D03-3223, page 22)

Response: As noted above, all assumptions regarding the ERA model were documented in DEIS Appendix E (FEIS Appendix F). Factors relating to soil and geologic characteristics were accounted for in the model. Also documented in this Appendix is discussion on the development of the threshold of concern regarding the elements that are assessed such as channel stability, soil erodibility, hydrologic response, etc.

Comment #243: Were cumulative effects model results validated by a hydrologist? (7807)

Why did not a hydrologist compile the analysis in Appendix E? (D03-3223, page 23)

Response: The cumulative effects model was compiled by a Forest Service analyst, based on consultation from several Forest Service and consultant professional hydrologists, including experienced users of the Equivalent Routed Area model used by the Klamath National Forest.

Comment #244: Discussion of past and reasonably foreseeable actions included in cumulative watershed effects analysis (7808)

The DEIS should account for ongoing impacts to these watersheds during the off-season. Summer projects are wide ranging and occur throughout the ski area. These projects are essential to the regular upkeep needed to sustain a functioning ski area. These projects must factor in to the cumulative effects analysis. Many projects are small, but they are cumulatively significant when aggregated over decades. Severe weather events are reasonably foreseeable and therefore must factor into the cumulative effects analysis. (D03-3223, pages 23 and 24)

Response: All activities that are ground disturbing were included in the cumulative effects analysis. Many of the summer projects are operational and have no effect, or actually improve conditions by completing restoration work. Over decades these projects have improved the current condition of the ski area. Weather events are not an element of the cumulative effects analysis. Weather or other natural events such as wildland fire are not considered “reasonably foreseeable” under NEPA (40 CFR 1508.7) because they are not planned ground disturbing activities.

Comment #245: Bear WA recommendations of equipment in Riparian Reserves (7809)

Excavation and other use of heavy equipment in Riparian Reserves would contradict recommendations in the Bear Watershed Analysis (1994). (D03-3223, page 25)

Response: While there is no requirement to follow recommendations contained in a Watershed Analysis, or other analytical document, the use of heavy equipment within Riparian Reserves is being proposed with specific mitigation measures to ensure attainment of the Riparian Reserve Standards and Guidelines of the Aquatic Conservation Strategy. In Alternative 6, the use of a low ground pressure excavator is prescribed. This will be clarified in the FEIS.

Biological - Landscape Ecology Effects

Comment #246: Discussion of 2001 Quartz Fire and fragmentation (8000)

There is no analysis of the recent Quartz Fire, how it has fragmented old growth forest and the roads put in on private lands to log salvage. (D03-3224, page 26)

Response: In regard to landscape and connectivity, the Quartz Fire was discussed at DEIS page IV-150; “In 2001, the adjacent Little Applegate watershed experienced a major fire, know as the Quartz Fire. Occurring on Forest Service and BLM managed lands, this naturally caused event was 3-5 miles northwest of Mt. Ashland. This fire does not add to adverse affects on connectivity for the Siskiyou Crest; in fact, at the upper elevations of this fire, the fire severity was low and actually improved conditions for wildlife habitat and connectivity.”

Privately owned lands much lower in elevation and several miles from the Siskiyou Crest and within the Quartz Fire were salvage logged. Since these lands were not old-growth forest prior to the fire, the salvage logging of the scattered residual timber from several harvest entries did not add to late-successional habitat fragmentation effects. Roads to access these lands and stands that were salvaged essentially existed prior to the fire. This will be clarified in the FEIS.

Comment #247: Cumulative biological connectivity, including private land development (8001)

The DEIS fails to adequately address the effects of ski area expansion on biological connectivity - both from any on-site expansion and from the cumulative effects of correlative near-site private development. (D03-3199, page 2)

Response: See response to Comment #158 and #159, regarding connectivity.

Comment #248: Quantify fragmentation by habitat affected and isolated by clearing (8002)

The effects of fragmentation should be quantified by calculating the total area of forest habitat either cleared for ski runs and other facilities or isolated from other forest habitat by the clearing. (D03-3211, page 2)

Response: See response to Comment #158 and #159, regarding connectivity. The main concern with MASA is the effect to connective corridors (i.e., the links) along the Siskiyou crest. The Special Use Permit area is not currently a core area, but may provide some linkage to core areas such as the McDonald Peak IRA. As previously noted, the Special Use Permit is allocated to Developed Recreation; any wildlife habitat it provides is auxillary to the primary goal of this allocation: human developed recreation.

Biological - Effects on Engelmann Spruce

Comment #249: Discussion of worst case scenario for blowdown (8100)

Additional blowdown and canopy opening is expected but there is no way of knowing if this will be an additional 5% or 10% more. This uncertainty is discussed in the DEIS but there is no worst-case analysis to guide decision making. (D03-3202, page 1)

Response: Although the effects were discussed and consequences were not predicted as a “best case” scenario, this uncertainty about predicted consequences will be clarified in the FEIS.

Biological - Effects on Vegetation Conditions and Forest Health

Comment #250: Drying effects regarding wetlands, streams and runs (8200)

At the very least, edge effects will tend to dry out seasonal streams and wetlands in the areas adjacent to ski runs and have significant adverse impacts on vegetation within Riparian Reserves. (D03-236, page 5)

Response: Openings tend to increase streamflow by reducing loss of water through evapotranspiration. Increases in summer flow in streams following vegetation removal are well documented. A report by Harr, referenced below, presents an excellent summary of small stream hydrology.

In summary, openings in a watershed must be of sufficient size to produce measurable changes in stream flow. Minimum summer flows increase following vegetation removal; they do not dry up as suggested in the comment. The increased water available following creation of the ski runs could be a benefit to the wetlands. This will be clarified in the FEIS. References: Harr, R. D., Hydrology of small forest streams in western Oregon. USDA Forest Service Pacific Northwest Forest and Range Experiment Station General Technical Report PNW-55. 15 p. 1976. Hibbert, A. R. Forest treatment effects on water yield. In: W.E. Sopper and H. W. Lull (eds.) International symposium on Forest Hydrology. Pergamon Press, New York. P 527-543.

Comment #251: Discussion of edge effects associated with ski runs (8201)

There is no discussion in the DEIS regarding the edge effect and how it would impact the landscape outside the actual ski runs. Studies have shown that the edge effect can occur up to one-quarter mile into the forest. Edge affect impacts were not disclosed, analyzed, or discussed. (D03-3224, page 58)

Response: Although the edge effects were discussed and consequences were predicted (DEIS page IV-155 through IV-157, edge effects will be more thoroughly discussed in the FEIS.

Comment #252: Discussion of expansion effects in terms of fire risk and hazard (8202)

The removal of tree canopies would increase the fire hazard by opening the site to direct solar radiation and horizontal wind movement. The long term presence of heavy equipment, motorized vehicles, mechanized tools and people would drastically increase the risk of anthropogenic ignition. (D03-3223, page 15)

Response: The current fire risk and hazard conditions were discussed in response to Comments #101, #142, and #162. It is certainly true that the presence of heavy equipment, motorized vehicles, mechanized tools and people would increase the risk of anthropogenic ignition. However, given the prevalent conditions at this site at this elevation, the Forest Service does not believe that the risk would “drastically” increase. Further, standard operating procedures would be employed to mitigate the change of a fire starting, as well as immediate suppression if one were to start. This will be clarified in the FEIS.

Biological - Effects on Sensitive Plants

Comment #253: No analysis of snow compaction, etc. on lupine or horkelia (8300)

The Forest Service provides no study or analysis of how compaction of snow, or other factors could adversely impact the Mt. Ashland lupine population. In addition, the DEIS states that Janyne's Canyon Buckwheat would probably be negatively impacted by a longer-lived snowpack. However, there is no discussion about the longer-lived snowpack negatively impacting Henderson's horkelia or Mt. Ashland lupine. (D03-3224, pages 49 and 54)

Response: DEIS Pages IV-59 & 60 discusses the pressure at the soil surface under a snow pack, of skiers, snow groomers, and snow loads, and how they might affect soil density and ground vegetation at various snow depths. Page IV-162 discloses an unknown effect of a longer-lived snow pack on those small parts of the lupine and horkelia populations that would be affected. However, this effect is most likely to be adverse (because these species typically grow in wind-scoured areas where the snowpack disappears early in the spring). This will be clarified in the FEIS.

Comment #254: Discussion of lupine/horkelia protection - Conservation Agreement (8301)

The DEIS states that the recently signed Conservation Agreement (CA) will take care of threats to the plants. However, the CA has not been implemented and no work has been completed or even started. The Rogue River and Klamath National Forests have done a very poor job of protecting Mt. Ashland lupine and Henderson's horkelia. Vehicles are allowed to drive over populations, populations are trampled by foot traffic, and posts have been dug for a fence which has destroyed habitat. (D03-3224, pages 49-50)

Response: Forest Service believes it is adhering to the implementation schedule in the CA. The fence referenced in the comment was authorized several years ago to provide a vehicle barrier after determining it would not affect the viability of the lupine/horkelia populations. The Forest Service recognizes the impact that the mentioned summer recreation activities are having on the populations and is taking measures as identified in the CA. Most of these impacts are not connected to the winter activities proposed in this EIS process for ski area expansion. Also see response to Comment #115, and discussions regarding lupine and horkelia and the CA in FEIS Appendix B.

Comment #255: Discussion of population viability models (8302)

No attempt has been made for modeling population viability for rare plants. Instead, determination of effects on long term population or species viability is based on professional judgment and experience of the Forest Botanist. (D03-3224, page 58)

Response: Modeling and the predicted effects of models was discussed at DEIS page IV-159. The comment correctly states that population viability is based on professional opinion. "There is much interest and controversy among conservation biologists and ecologists regarding ways to predict "minimum viable population" (MVP) sizes. Sophisticated demographic models that predict MVP could be valuable if assumptions about environmental influences and threats were accurate, and if birth rates and death rates would continue unchanged into the future. Unfortunately, it is not possible to make these kind of assumptions for the populations discussed here, and no attempt at "modeling" population viability was made in this BE process. Determination of effects on long-term population or species viability in this BE is based only on the professional judgment and experience of the Forest Botanist. Primary factors are number of individuals in populations, number of populations, extent and nature of the disturbance or habitat alteration, and expected response of individual plants to that disturbance or habitat alteration."

Population viability modeling for plants takes years to conduct properly and is very expensive. Models must use assumptions about environmental conditions and effects which are themselves unproven and untested. The Forest Service has no reason to believe they would yield more accurate estimates of effects than those described in the DEIS. Besides pertinent habitat and ecological attributes, the DEIS discloses the portion of affected rare plant populations which would experience activities described under various alternatives. In most cases the DEIS also describes population sizes and/or area estimate and meta-population sizes over broader geographic areas.

Comment #256: Explanation of mitigation for horkelia (IV-159) (8303)

The DEIS states that horkelia plants on the moraine will be protected by a “mitigation measure” (IV-159). There is no discussion as to what this mitigation measure will be. (D03-3224, page 66)

Response: The DEIS did not include the description of the mitigation measure proposed for Henderson’s horkelia at page IV-159; the description for this mitigation measure was described at DEIS page II-104. This was an error and will be corrected in the FEIS. Although the small horkelia patch on the Moraine is not within areas planned for construction it is adjacent to the proposed Moraine Lodge and could be indirectly affected by construction activities (e.g., heavy equipment moving from one location to another). Additional mitigation will include fencing off the population and notification of construction workers and ski area personnel that the area must be avoided. This will be clarified in the FEIS.

Comment #257: Discussion of lupine/horkelia effects from summer use (8304)

In regards to effects to Mt. Ashland lupine and henderson’s horkelia, of far greater concern is the extent of summer activities at or near the summit afforded by having a publicly accessible road available for hikers, bicyclists, and vehicles. These effects can all be (and have been) much more detrimental to the unprotected plants than any activities over snow. (D03-3219, page 3)

Response: Though not specifically stated in the DEIS, nor germane to the analysis for ski area expansion, the Forest Service agrees with this statement. The majority of the management activities prescribed in the Conservation Agreement are designed to confine summer recreation impacts. Also, many of the activities underway and authorized in the 2003 Lupine/Horkelia Habitat Improvement Decision Memo are prevention measures meant to reduce impacts of summer recreation.

Biological - Effects on NWFP Bryophytes, Lichen, and Fungi

Comment #258: Fungal diversity (soils and erosion) properties (8400)

Fungal diversity and balance in impacted soils is not considered. This could be negatively impacted by clearing runs, soil compaction, etc. and could have far-reaching implications for revegetation and soil erosion. Suggest consulting expert mycologist Paul Stamets (www.fungiperfecti.com) for more about this issue. Fungi should also be considered for their erosion control properties (same reference). (D03-3205, page 3)

Response: Where soils that are severely impacted such as soil removal at building sites, lift terminals, roadcuts associated with parking lot additions, the habitat for fungi establishment and growth would be severely limited. The loss of topsoil, compaction, loss of nutrients subsequently affects fungal health and revegetation of the disturbed site. Recovery of very disturbed sites at this elevation requires time (decades or greater). However there can be some benefit in the use of mycorrhizae in the establishment of native plants. In the DEIS, page III-35, a discussion of use of the benefits of seedlings inoculated with mycorrhizae is presented. Dr Michael Amaranthus and David Steinfeld describe recent experiments conducted in the McDonald Basin area (two miles west of the Mt Ashland Special Use Permit Area) with inoculated native grass seedlings in an article written for the Sept/Oct 2004 edition of Erosion Control Magazine (www.forester.net/ecm_0309_symbiotic.html). This will be clarified in the FEIS.

Biological - Effects on Biodiversity/Outstanding Plant Communities

Comment #259: Effects to whitebark pine (adjustments to proposals based on occurrence) (8500)

Expansion plans should be modified to insure the survival of all whitebark pines on Mt. Ashland. This is particularly true relative to the following proposed projects: Chairlift LC-13, Run 17, and the road extension to the Moraine Lodge and Chairlift LC-6 top terminal. (D03-2085, page 4; 2245, pages 4 and 7; and 3199, page 2)

Response: Under the DEIS, Chairlift LC-6 (Alternatives 2 and 6), Run 17, and the Falstaff Road extension would not affect the whitebark pine population. LC-13 will be modified slightly under Alternatives 5 and 6 in the FEIS to avoid whitebark pine. Under Alternative 3, the north side whitebark pines would be lost due to construction of the restrooms and ski patrol hut, the clearing around these buildings, the unique placement of lift LC-6 under this alternative, and perhaps also the unique placement of the Falstaff Road extension. This will be clarified in the FEIS.

Comment #260: Logging activities and risk of introducing new disease (e.g., phytophthora) (8501)

Logging activities have the potential to spread exotic plant diseases (e.g., new species of *phytophthora*) by infecting water flowing into the Ashland Watershed, opening wounds on unharvested trees, and machine vectoring of inoculum. (D03-2095, page. 2)

Response: Two exotic species of *Phytophthora* cause tree damage in Southwest Oregon. *Phytophthora lateralis*, the cause of Port-Orford-cedar root disease, has a very limited host range. It readily kills Port-Orford-cedar and rarely impacts Pacific yew when yew is growing with Port-Orford-cedar in areas of high inoculum. Throughout the range of Port-Orford cedar, mitigating measures are in place to reduce the likelihood of transporting *P. lateralis* from infested areas to uninfested areas. These include permanent and seasonal road closures and contract specifications requiring operators to wash vehicles before leaving infested areas. Neither Port-Orford cedar nor *Phytophthora lateralis* occur within the area affected by the proposed MASA ski expansion in the Middle Fork area.

Phytophthora ramorum (a new species of *phytophthora*) is currently confined to areas south of southern Humboldt County in California and to approximately 11-square miles north and east of Brookings, OR in Curry County. *Phytophthora ramorum* is regulated by state and federal quarantine laws. It is unlawful to transport, host bark, twigs, forest stock, and any associated infested soil outside the regulated areas. Transporting greenery or nursery stock of hosts requires mitigation and proof of inspection before transport. Infection by *Phytophthora* species is not associated with tree wounding.

Biological - Effects on Terrestrial Wildlife Habitat

Comment #261: Discussion of fisher and ability to find unoccupied, predator free habitat (8700)

The DEIS does not explore if the fisher(s) will be able to find other, unoccupied, predator free habitat. The DEIS states that the AWPP project will not impact fisher habitat (IV-183). However there is no discussion re private lands and other public lands logging. (D03-3224, page 54)

Response: The predicted consequences to Pacific fisher and its habitat were discussed at DEIS pages IV-182 & 183. It is not clear in the comment what is meant by “predator free” habitat, nor why it would be required of this species. The effects analysis based on the known biology of the species, is discussed and includes reference to habitat requirements for a 3-mile radius. The Pacific fisher is a Forest Service Sensitive species.

Comment #262: Discussion of neotropical migratory birds and Executive Order 13186 (8701)

The DEIS does not analyze, discuss or demonstrate compliance with Executive Order 13186, regarding the “Responsibilities of Federal Agencies to Protect Migratory Birds.” (D03-3224, page 55)

Response: Executive Order 13186 calls for Memoranda of Understanding (MOUs) for the USDI and USDA. Finalization of these MOUs is in progress at this time, however, the Executive Order does not contain project specific guidelines or requirements. Since these MOUs are national in scope and are not finalized at this time, US FWS recommends (in the interim) consideration of mitigation measures for these birds (pers. com. Dave Clayton USFWS, 2004).

Neotropical migratory birds were discussed at DEIS page III-138, 139, and IV-184. DEIS Chapter II includes mitigation measures for neotropical breeding seasons. This will be clarified in the FEIS.

Comment #263: Effects of night lighting on wildlife (8702)

Effects of night lighting on wildlife were not considered, nor are impacts of night time ski activities in the expansion area. (D03-3205, page 3; (D03-3216, page 2)

I do not feel the DEIS adequately addresses the impact of further lighting and night skiing on wildlife. It is well documented that artificial light has negative impacts on a variety of different organisms including mammals, birds, fish, amphibians, reptiles and insects. Examples include the disturbance of migration patterns, disruptions in feeding behavior, complete avoidance of lit areas, disruptions in reproductive patterns and an overall negative affect on nocturnal wildlife physiology (Adamany et al., 1997, Beir 1995, Bergen & Abs 1997, Borg 1996, Buchanan 1993, Frank 1998, Upgren 1996, Ogden 1996, Braden 1998, Milius 1999).

Response: The references cited in this comment were reviewed by the Forest Service (see The Urban Wildlands Group - www.urbanwildlands.org). They seem generally to apply to large-scale illumination of urban environments associated with cities or large facilities. Many of the species cited in this literature are not associated with the Mt. Ashland area. This literature also discusses behavioral effects on certain species that may or may not be associated with night lighting.

For most Forest Service projects, the human visual element is usually the issue. Most of the neotropical migratory species aren't in the area during the winter, when the ski area and its associated intermittent night lighting would be in use. Resident, nocturnal species (e.g., fisher) may be affected. There is no known specific research on how night lighting at ski areas affects wildlife, aside from the anticipated “operational impacts” associated with “increased human activity” that results in impacts to nocturnal or migratory species (snow grooming, etc.).

Comment #264: Consultation with USFWS on NSO habitat (8703)

Has the Forest Service consulted with the US Fish and Wildlife Service, as required under the consultation rule in the Northwest Forest Plan? What was the result? (D03-3230, page 4)

Response: As stated in the DEIS at page IV-178, “The RRNF initiated consultation on Threatened species by submitting (August 28, 1998) a Biological Assessment to the USFWS as per requirements under Section 7 of the Endangered Species Act. Biological Opinion 1-7-F-98-414 was signed by USFWS on June 3, 1999. Consultation with USFWS for the Ski Expansion Project was documented under this Biological Opinion (BO). This BO stated: “...the proposed project is likely to adversely affect but is not likely to jeopardize the continued existence of the spotted owl. Furthermore, the Mt. Ashland Ski Area Expansion proposal would not result in the take of any spotted owls.” The RRNF is in the process of reinitiating consultation (updating) on the Biological Evaluation because of changes in the Proposed Action since 2000.”

Recent analysis (2004) on northern spotted owl (NSO) habitat shows that the current habitat conditions actually more than previously estimated and that the correct effects on habitat from the most impactful alternative (Alternative 2) are actually less than predicted on DEIS page IV-177. The 1999 BO from USFWS has a threshold of 54 acres of suitable NSO habitat being removed. The current estimate would include a corrected maximum of 44 acres of habitat removed. As part of the updating process, since the 44-acre reduction is not greater than the previous BO on removing 54 acres, the USFWS finds that the 1999 BO remains valid. Appendix M to the FEIS includes copies of the 1999 BO and a recent letter of concurrence and validation of this situation between the Forest Service and the USFWS.

Biological - Effects on Aquatic Habitat and Fish Populations

Comment #265: Discussion of effects on rare macroinvertebrates (8900)

There are large numbers of macroinvertebrates in the Middle Branch (reference II-151). The *salmopectera* is only the second known in Oregon; the caddisflies (*scientific names listed*) are rare and may eventually become sensitive taxa (Weissman 2000). The loss and/or the reduction of these species is not discussed or analyzed. In fact these species are totally discounted. (D03-3224, page 53)

Response: The effects on macroinvertebrates was generally discussed under DEIS Section 12, Effects on Aquatic Habitat (DEIS pages IV-190 through 200). Specific effects to the species identified in the comment were not addressed. These effects will be disclosed in the FEIS discussion under aquatic habitat.

Human - Effects to Scenic Quality

Comment #266: Effects of night lighting not analyzed (9000)

Visual impacts of additional night lighting is not considered despite the fact that this would be a substantial alteration to the nighttime viewshed in the Rogue Valley area. (D03-3205, page 3)

Response: Visual effects of additional night lighting were discussed in the DEIS at pages IV-216-217. Rogue Valley residents would be most affected by increases in night lighting as the ski area generally faces north toward the Valley floor.

Human - Effects to Transportation

Comment #267: Basis of adequacy of Access Road; additional factors to consider (9300)

What is the source of the comment that the Mt. Ashland Access Road has adequate capacity to accommodate increased traffic? What is the change in the level of service? (IV-229) Does this comment take into account inexperienced drivers driving on a steep, winding, snow-covered icy road? Does it account for problems caused by putting on and taking off chains and the result of spinouts and wrecks? (D03-3224, page 21)

Response: The source of the DEIS comment was Eric Niemeyer, PE, Traffic and Development Engineer for Jackson County (1999). At a 25 to 30 mph speed, levels of service calculations are not applicable Niemeyer (2004). Based on a 25 percent increase in traffic with 500 vehicles entering the parking lot in the peak hour (as opposed to the current 400 vehicles per hour), the service level is considered adequate. This would allow for an approximate 250-foot separation (about 7 seconds) between vehicles at 25 miles an hour. This will be clarified in the FEIS.

The Forest Service assumes that most drivers to MASA have driving experience in winter conditions. There will always be certain individuals who lack experience (or common sense) when either driving or putting on chains in winter conditions. These individuals may slow or block traffic due to their inexperience, just like on any other public road during inclement weather conditions.

Human - Effects Associated with Skiing Demand

Comment #268: Was a credible market analysis completed (by MAA)? (9400)

Has MAA done a creditable market analysis? (D03-15, page 1)

Response: As a business venture, MAA would be expected to construct only those facilities for which capital was available. As stated in Section I, (Purpose of and Need for Action). The Purpose and Need for the Proposed Action does not include an element that suggests the need for additional market share in order to be successful. Rather, the Proposed Action is intended by MAA to address current shortcomings at MASA. While additional market share could be a beneficial result, the actual need is to make MASA more suitable for lower level skiers and other non-skiing recreationists. As such, any market analysis in support of the proposed facilities would be conducted by MAA in conjunction with site specific planning and financing of the improvements, rather than at this stage of the NEPA process.

Comment #269: Basis of percent capture of local & county market: comparison - other areas (9401)

There is an assumption that MASA would capture over 75% of the Jackson County market and 25% of the remainder of the local market (IV-244). Where does this data come from? How does it compare to other ski areas? (D03-3224, page 11)

Response: Ski visitation projections are based upon a number of variables and assumptions, including market share capture. MASA currently captures the vast majority of the local market and, with the proposed improvements, would be expected to continue to do so. The 75% local market capture rate is based both on historical trends and the professional opinion of ski area planners.

Comment #270: New information from 2002-2003 season: 42 peak parking days (9402)

The current parking lot cannot accommodate all visitor cars in the parking lot on 42 peak days per season (2002-2003 season data. (D03-3220, page 3)

Response: There is no data to suggest that parking lot capacity is exceeded 42 days per season. In the 2002-2003 season, capacity was exceeded 25 times according to car counts provided to the Forest Service by MAA. Also see comment #185. This will be clarified in the FEIS.

Comment #271: Validate estimates of expected visitation in initial years of development (9403)

We suggest that a more accurate estimate be made of the expected increase in visitation for the first years after the first phase of improvements are made. In our evaluation, information from the ski industry will support that there will be an initial increase in visitation higher than that modeled in the DEIS. (D03-3220, page 6)

Response: The analysis of projected growth in skier visitation in the DEIS assumes a higher annual average growth rate in the first eight years after improvements to the ski area are completed. Some of the increase in growth in this period likely would be concentrated in the first two to three years after improvements are in place.

Higher visitation during this period would improve the financial feasibility of the improvements because use of a discount rate in the analysis makes revenues from earlier years more valuable than those from later years. However, these effects would have a relatively minor impact on the overall financial feasibility of alternatives. Furthermore, other conditions could adversely affect visitation during specific years.

Human - Effects to Lift-Served Skiing at MASA

Comment #272: Fear factor due to LC-13 lift; uncommon and requires height (9500)

The LC-13 Chairlift would cross over Ariel and would be very high in the air. What this essentially means is that Novice and Low Intermediate skiers would be scared to ride that lift. These are the same skiers that MAA is trying to invite to their facility. (D03-701, page 2; and 888, page 2)

Response: It is not unusual to have lifts high in the air (more than 30-40 feet). What is somewhat unusual in this case, although not unique, is that LC-13 would not be going directly up, or close to, the fall line as do most lifts, especially those serving Novice skiers. This lift is aligned on the cross slope on relatively steep terrain for much of its distance. This terrain would sharply fall away to the chairlift riders' right side as they are riding up the lift. Some skiers, not just Novice and Low Intermediate, might be afraid or uncomfortable in riding the lift, especially those with a fear of heights. It is difficult to measure the effect this might have on use of this lift, but some skiers might avoid it all together.

To help mitigate the effects of crossing the fall-line discussed above, the lift can be configured with a clockwise rotation so skiers are riding on the "uphill" side of the alignment, closer to the ground. To mitigate a potentially uncomfortable experience for guests who are afraid of heights, many resorts install safety bars and footrests on lifts that are excessively high off the ground. There are examples of existing resorts that have crossing lifts that are ridden by novice and low intermediate skiers (e.g., Breckenridge, CO and Squaw Valley, CA).

Comment #273: LC-13 creates congestion and safety hazard (9501)

The LC-13 Chairlift will create an unattractive "busy-ness to the whole western half of the current ski area. Part of Mt. Ashland's charm is in its unobtrusive atmosphere. In addition, the bottom terminal is located in an area that is already an extremely populated area. To put another terminal there would make it very, very unsafe. (D03-888, page 2; and 3215, page 2)

Response: This lift was developed as part of Alternatives 5 and 6 in the DEIS to address Purpose and Need with less consequence in regard to the Significant Issues. While it may contribute to an unattractive "busy-ness" for some people, it would provide access to the easier terrain associated with the LC-6 Chairlift and the existing Dream and Caliban ski runs. The Forest Service agrees that the proposed bottom terminal location is an area that is already very congested. Adding LC-13 would make it more congested and may contribute negatively toward a high quality recreation experience. However, the Forest Service believes that through proper design and signing in the lower terminal area, this complex of three terminals could be made to operate in a safe manner under Alternative 6.

This comment highlights a functional consequence of Alternative 5, wherein additional lift capacity is introduced to increase marketability of the resort, without a commensurate increase in terrain. The result is higher slope density. In Alternative 6, LC-13 will function primarily for access to LC-6 and will have limited use for repeat skiing, thus lower trail density.

Comment #274: Effects on skiers (skier days) and grooming equipment from slash and erosion treatments (lop, scatter, logs, etc.) (9502)

What is the impact on the number of skier days for each alternative due to the use of lopping and scattering? Exactly which runs will use lopping and scattering (and what measures will be used on other runs)? How will the use of lopping and scattering impact early season opening and end of season closure dates for any new runs? How will the logs impact the ability of snow grooming machinery to pack early season snow and groom runs during low snow periods? What is the relative safety and financial liability for each alternative due to skier injuries because of potential exposure of the logs during low snow periods? (D03-3226, pages 21-22; and 3249, pages 6-7)

Response: The use of lopping and scattering would not affect skier days for two reasons. First, material would be cut into pieces or scattered in such a way that it will generally not be higher than 15-18 inches above the ground surface. Second, snow pack weight would compress or push down limbs and debris to at or near the ground surface in many cases. As stated in the DEIS at page II-62, where heavy concentrations of slash would prevent safe skiing/grooming operations, hand piling or mechanical chipping of excess slash would occur. Lopping and scattering would not affect early season and end of season closure dates. The ski area generally opens with about 24 to 30 inches of snow. This is adequate to cover most obstacles created by lopping and scattering. As stated in the DEIS at page IV-3, Runs 9, 12, and the Skiway (Run 18) may open sooner than some of the existing steeper runs due to their relative gentle slopes which would not be exposed to the same scraping effect of skier edges and grooming. Finally, lopping and scattering was used in the 1993 "Run Widening Project." at MASA in much the same way it is being proposed now. Although implemented on a much smaller scale (1.5 acres), there was no discernable difference between areas on runs that had been widened and those that had not been widened in terms of obstacles that might exist for skiers and groomers.

The use of logs for erosion control would have very little or no effect on snow grooming activities. As stated in the DEIS at pages II-59-60, it is estimated that ten percent of the trees larger than 12 inches DBH would be left on site for erosion control purposes, as woody material, and for leveling snow (filling in low areas) when grooming runs. Most of these larger trees would be used in cut and fill areas on the down slope side for both erosion control purposes and to actually help provide ease of grooming by providing for a less steep fill slope. Logs left directly in the runs would be less than 12 inches DBH and would function in a similar manner as logs placed cross slope on Lower Caliban and Lower Tempest ski runs as part of the 1993 "Run Widening Project." Safety and financial liability would be identical in all alternatives. The ski area does not open until designated ski runs are reasonably free of obstacles. This is even less of a factor in the spring when the ski area closes. In most cases (over 90%) the ski area has good snow coverage when it closes in early to mid April. The decision to close is based on lack of business in the spring when people pursue other interests, not on snow coverage. Natural and human-created obstacles are an inherent risk of skiing.

Comment #275: Seasonal availability of lower elevations runs (e.g., south facing R-12) (9503)

Ski runs at lower elevations will open later and close earlier compared to existing runs at higher elevations. Proposed Run 12 in Alternative 6 would require unnecessary excavation and would be sun exposed on its southerly aspect just before the crossing of the Middle Fork. This exposure could shorten the period of use in the spring or in low snow years near the lowest elevation within the Special Use Permit in the Middle Fork area. (D03-1885, page 1; 2371, page 2; 3200, page 5; 3226, page 21; and 3249, page 6)

Response: LC-6 in Alternatives 2 and 6 is about 400 feet lower in elevation than the lowest point in the current ski area. LC-7 is about 500 feet lower. As stated in the DEIS at page III-6, snow depths near the base of LC-6 have been recorded at approximately 86 percent of the depth recorded at the measuring site near the Base Lodge, about 600 feet higher. Two additional measurements taken in December 2003 and January 2004 actually showed depths to be nearly equal at both locations.

The DEIS (page III-6) also showed estimated snow depths based on snow water equivalent from the Big Red Mountain SNOTEL Site. The DEIS concluded on page IV-3 that sufficient snowfall exists to support ski expansion activities on lower elevation runs in general. The lowest portion of Run 12, before the Middle Fork crossing in Alternative 6, might possibly experience problems with premature closure in the spring during low snow years due to its south facing aspect as would runs within the current ski area, none of which face south. This will be clarified in the FEIS.

Comment #276: Consequences (human safety) upon LC-13 lift derailment? (9504)

What would happen if the Windsor to Moraine Lift (LC-13) were to derail? (D03-3248, page 5)

Response: “Derail” is old terminology for the word “derope.” A deropement occurs when the cable (haul rope) that transports the chairs bounces or falls out of the rolling sheaves that are attached to the lift tower. In the specific case of one lift crossing over another, LC-13 over Ariel for example, safety features would be built into both lifts so that LC-13 would not fall onto Ariel in the case of a deropement.

Safety requirements for deropements are detailed in accordance with *American National Standard Safety Requirements for Passenger Ropeways--Aerial Tramways, Aerial Lifts, Surface Lifts, Tows, and Conveyors (ANSI B77.1)*. Safety requirement examples include automatic stopping of both lifts if a deropement occurs, minimum vertical clearances when both lifts are fully loaded, and installation of rope-catching devices. As stated in the DEIS (Mitigation Measures, page II-113), all applicable ANSI codes would be followed for all lift construction and operation. A certified tramway engineer would design and oversee all construction to make sure that all codes are followed.

Human - Effects to Recreation Excluding Life-Served Skiing

Comment #277: Potential windy conditions at proposed tubing facility (9700)

There is concern that tree removal at the proposed Tubing Facility may increase blowdown and expose users to increased wind impacts, thereby reducing a quality recreation experience. (D03-894, page 2; 3221, page 11; and 3225, page 7)

Response: Due to its location on a south facing slope of the Siskiyou Crest, the Tubing Facility would be wind exposed during most storms (DEIS, page IV-254). Depending on intensity and duration of each storm, this could detract from a quality recreation experience (similar to the wind exposed Sonnet slope).

The overall positive benefits of this non-skiing winter recreation opportunity would be expected to outweigh any negative effects to the recreation experience associated with wind exposure. Effects of wind would not be as severe as on the ski area because guests stay on the ground (i.e., surface lifts vs. aerial lifts) and would benefit, at least partially, from protection by the surrounding forests.

The facility was designed by an expert with over 18 years of experience in resort and mountain planning, Chris Cushing of SE Group, and makes use of ideal terrain in a location that can be easily integrated into MASA’s current operation.

Comment #278: Effects from night lighting (tubing facility) on backcountry nighttime use (9701)

I like the idea of the Tubing Facility, except the lights already have a big impact up there when I backcountry ski at night. The Tubing Facility would increase that impact. (D03-915, page 2)

Response: As stated in the DEIS at page IV-218, it is expected that additional lighting at the Tubing Facility would blend in with the night glow produced within the current ski area. The greatest change would be in the night view from the California Viewshed and the Greensprings portion of the Rogue Valley Viewshed. Virtually all backcountry skiing in the area takes place west of Mt. Ashland along both sides of the Siskiyou Crest (day and night). The Tubing Facility lights would not be seen from most locations in this area. An exception might be along the ridgeline that divides the East and West Forks of Grouse Creek above and to the southwest of Grouse Gap.

Comment #279: Consequences of skiway (summer ATVs and mountain bikes) (9702)

If there is a Skiway (Run 18), how will you keep all ATVs out when the snow is gone? Aren't mountain bikes discouraged? (D03-1553, page 1)

Response: Public use of ATVs is prohibited within the Special Use Permit area. Based on past experience, illegal use of ATVs at the ski area and within the Ashland Watershed has not been a problem except for rare infractions on the 2060 Road. The Forest Service does not expect this would be a problem on Run 18. If this were not the case, a gate could be placed at a location near the beginning of Run 18 that would prevent ATV use. Unlike other areas that are more open and less steep, ATVs could not get around a properly designed gate here due to the adjacent steep and forested tree stands.

Mountain bikes are not allowed within the ski area except on the Bull Gap Trail. Illegal mountain bike use infrequently occurs (two or three times a year) on Upper Dream and Falstaff. Almost all mountain bikers have respected the closure regulation at the ski area. Continued signing of the closure and information/education efforts with local users, clubs, and individuals should deter further illegal use of ski runs for mountain bike use. At some point in the future, a properly designed low impact mountain bike trail system might be a possibility at Mt. Ashland subject to NEPA analysis. Mountain bike trails are a common element of summer recreation at other ski areas, however, MAA has not put forth such a proposal.

Comment #280: Consequences to Nordic skiers, including excessive "tracking" (9703)

The DEIS recognizes the impact of lift-assisted users on Nordic skiers in the West Ridge/Rabbit Ears area (section IV-D. 10b). However, in addition to the "audio and visual contact" concerns, Nordic skiers are potentially impacted by the excessive tracking of the Road 20 corridor where lift-assisted skiers/boarders do not have an adequate gradient to return to the lift-assisted area. (D03-2241, page 1)

Response: As stated in the DEIS at pages IV-252 and 275-279, interactions between Nordic and lift-served skiers are expected to remain the same or possibly decline in Alternatives 2, 3, 4, and 6 and increase in Alternatives 1 and 5. These interactions would include "tracking." This term is used to describe the tracks left by skiers and boarders on the snow surface. Tracking compacts and changes the consistency of the snow surface and can negatively affect the recreation experience of Nordic skiers.

Comment #281: Safety concerns associated with boundary enforcement (Alt 3) (9704)

Alternative 3 will create additional safety problems for the Ski Patrol because it will cause a serious boundary enforcement problem west of the chairlift. We will not have easy access to respond to medical emergencies and provide transport out. This will also increase search and rescue operations. (D03-3215, page 2)

Response: This is a valid concern, as skiers would assuredly partake in tree skiing activities to the west of LC-6. This situation would require that MAA Ski Patrol develop new operating procedures for addressing the "off-piste" skiing that would occur and the appropriate measures to adequately patrol this area. Management options include the creation of entrance gates for monitoring access into the backcountry and possible development of return routes from the backcountry into the lift/trail network. Ski area boundary management relative to Alternative 3 was discussed in the DEIS at page IV-261.

Human - Effects Associated with Economics

Comment #282: What is total cost of alternatives? (9900)

The full costs of the proposed ski area expansion are not included in the DEIS. It ignores the cost of each alternative, despite the fact that one of the purpose and needs is to ensure the financial viability of the Ski Area. (D03-201, page 1; 256, page 1; 3224, page 27; and 3226, page 2)

Response: The total costs of each alternative was reflected in the economic assessment documented in Table IV-63, DEIS page IV-289. Total costs, as well as other cost factors will be slightly revised and disclosed in the FEIS.

Comment #283: Claim of 12 new positions and significant economic impact (9901)

The DEIS claims that the increase in 12 full time employees that is expected to result from the expansion of the ski area will help stabilize the unemployment rate in the area. While it is certainly the case that the creation of any job will help stabilize the unemployment rate in some fashion, the impact from these 12 new positions is negligible in relation to the size of the unemployment situation in the area. To claim that the creation of these positions will have a significant economic impact is unfounded and disingenuous. (D03-3226, page 3)

Response: The DEIS does not claim that ski area improvements in total or the addition of 12 employees by itself would have a *significant* impact on the local economy. In fact, the DEIS states that “effects (on employment) would be relatively insignificant when compared to the total employment in the combined service and trade sectors of Jackson County and the City of Ashland.”

While economic effects would not be considered significant, they would be beneficial and would include increases in full-time employment at the ski area, increases in construction employment during development of improvements and indirect increases in employment at other businesses in the area due to expenditures by MASA employees, construction workers and additional visitors to the ski area. Furthermore, as indicated in the comment, any increase in employment can “help” stabilize unemployment though no single increase by itself would stabilize employment completely. It went on to state that construction employment increases in Jackson County would increase less than one-half of one percent and operational employment increases would be relatively insignificant, 0.02 percent in Jackson County (pages IV-283-284).

Comment #284: Ecosystem services: value of no expansion? (9902)

Methods of economic analysis for calculating a “value” of unaltered ecosystems exist and have for many years. The DEIS makes no attempt to determine the economic value of the ecosystem as it exists without further alteration (i.e., ecosystem has value other than what humans can extract from it via the market-based economy—clean water value, solitude value, wild places, etc. I failed to find more than a passing sentence that made reference to community values. How do you measure the costs to Mt. Ashland’s ecosystem services and health in the proposed expansion area for all the alternatives that call for expansion? Please clearly explain your accounting for this. (D03-2158, page 1; 2367, page 1; and 3205, page 3)

Response: Natural resource economists have, in recent years, begun to place their focus on another aspect of resource management, which sees natural ecosystems as essential components of planetary life support system and attempts to quantify these functions under the general term “ecosystem services”. Direct relationships and clear principles for accounting for such things are only beginning to be developed. A fairly inclusive and broad list of such services is described by G. Daily et al., Ecosystem Services: Benefits Supplied to Human Societies by Natural Ecosystems, ESA, in Issues in Ecology.

In general, these are global sorts of concerns, such that changes that might occur in the overall picture from actions at this scale would be of a most marginal value, sometimes approaching zero. Effects on the ability of the ecosystem to provide these types of services was discussed, both qualitatively and quantitatively, in the appropriate sections of this DEIS, relating to each individual resource. The Forest Service has, as often as not, led the way in consideration and study of ecosystem values, without feeling the need to attach the price tags that would permit an economic or financial accounting.

Human - Effects Associated with Financial Feasibility

Comment #285: Construction and operational costs of Windsor to Moraine Lift (Alternative 6) (10000)

Adding Chairlift (LC-13), as proposed by the Forest Service in Alternative 6 would add approximately \$800,000 to \$1,200,000 to the cost of the expansion. In addition, there would be approximately \$50,000 a year needed to maintain the lift. The MAA feels the cost of the suggested lift and its annual maintenance far outweighs the benefits and recommends reconsideration of this feature. This lift would be unnecessary with the use of the skiway that would allow beginners to easily and safely reach the LC-6 lift as proposed in Alternative 2. (D03-884, page 2; (D03-922, page 1; (D03-1885, page 1; (D03-2371, page 2; (D03-3215, page 2; (D03-3248, page 5)

Response: The Forest understands that proposed Chairlift LC-13 would require additional capital investment by MAA. However, NEPA regulations require that the Forest Service consider all reasonable alternatives to ensure that the proposed actions are well conceived and thoroughly evaluated (40 CFR 1502.14a). In Alternative 6, the Forest Service developed LC-13 to lessen the effects relative to Proposed Run 18 (Skiway) and to provide a different method of access to the Middle Fork area and the western portion of the Current Facility.

Comment #286: Include presentation of past MAA financial data and trends (10001)

Presentation of past MAA financial data and trends is completely missing and ignored. How do you forecast future performance if you don't look at what's existing now and shortly in the past? Please summarize in one place the ski area's current costs with net revenues. (D03-916, page 1; (D03-2367, page 2)

Response: Trends, cost and net revenues will be displayed in more detail in the FEIS.

Comment #287: Base year (2003) data and trends missing and ignored (10002)

The Cogan base year for future projections is the 2002-2003 ski season for which the MAA has so far provided the community no financial or operational data. (D03-916 & 925, page 2)

Response: In the FEIS, the base year will be founded on an analysis of costs, revenues, visitation and skier days during the previous five-year period. This is a much more reliable way to establish base costs and revenues than looking at a single year of operations. Information for 2002/03 was not yet available when the DEIS was prepared. However, skier visits for that season were 102,479, with a net income of approximately \$230,000, both well in excess of DEIS base year estimates. This implies that the analysis could be considered to be conservative. This will be clarified in the FEIS

Comment #288: Replace COC analysis with broad, multiple regression analysis (10003)

The Cogan economic study should be replaced by a broad, multiple regression analysis that attempts first to explain the ski area's past operation and financial experience, and, second, forecast the area's future with a variety of expansion proposals. (D03-916 & 925, page 2)

Response: The analysis in the DEIS assessed a variety of factors that typically affect skier visitation, including historical and expected future skier visitation and population growth at the local and regional level, consistency of terrain with skier abilities, comfortable carrying capacity, and market size. A broad multiple regression analysis as described in this comment would not address or reflect many of these factors. The analysis assessed the possibility of good and bad snow years by assessing three visitation forecast scenarios (low, medium and high).

Furthermore, the analysis was conservative in several respects, including assumption of a relatively high discount rate, visitation rates on average lower than have been experienced on average at MASA during the last 20 years, and a financing scenario that is more conservative than proposed by MASA. As a result, the DEIS analysis is both comprehensive and conservative. The need to conduct a multiple-regression analysis as recommended by the commentor is not warranted.

Comment #289: Document costs of required mitigation measures and restoration projects (10004)

The DEIS should, but does not, address costs of mitigation measures likely to be needed as a result of this and other management activities. (D03-921, page 1) The costs for mitigation and restoration have been grossly underestimated. I say this from experience in trying to restore past soil resource problems. Examples of costs are: air lifting rock rip rap to the needed site and manually hand placing the rock, etc. (D03-2168, page 10)

What is the estimated cost of these expensive attempts to fix erosion problems? (D03-3224, page 31) We expect from the little financial information we have been able to locate, that these cost estimates will not fully cover the costs of environmental mitigation and restoration. (D03-3226, page 2 & 21) Long term costs should be detailed for each mitigation measure, for long-term financial projections and risk analysis. (D03-3249, page 6)

Response: Mitigation/restoration costs were included in the DEIS analysis. Specifically, Mitigation costs (i.e., the costs of measures identified in Chapter II, Section I, F, 8) were built into the development costs for the individual ski area facilities. The DEIS displays the anticipated restoration costs should the ski area be abandoned, based on the 1992 Restoration Environmental Assessment and Decision Notice. However, additional costs will be incorporated into the updated analysis for the FEIS based on a more thorough evaluation of individual project components, and timing of restoration projects to coincide with other construction projects in order to minimize mobilization costs.

For example, the placement of Large Woody Material and Small Woody Material into eroding stream channels would coincide with heli-logging operations to minimize costs and site disturbance. The installation of structural stormwater controls would coincide with construction activities requiring heavy equipment, such as lift construction, so that mobilization costs would be absorbed into the larger construction activities. Overall, the restoration and mitigation cost estimates used for this analysis are considered to be reasonable and conservative.

Comment #290: Effects of global warming on snow pack on viability (10005)

The economic analysis should incorporate a sensitivity study on the impact of global warming. (D03-3226, page 21; (D03-3249, page 6)

Response: See response to Comments #131, #198, and #199 regarding the effects of climatic change on snowfall and the relationship to economic viability of the ski area.

Comment #291: Costs of phase 1, financing loan, etc., is not clearly disclosed (10006)

Please summarize in one place, who will pay the costs for expansion, how will the costs be financed? (D03-2367, page 2) raising the additional funds for the first phase of Alternative 6 would require the operator to take on debt, or extend a fundraising campaign with no guarantee of successfully being able to raise these additional funds. (D03-3220, page 4) The cost of the loan discussed in the DEIS (for phase 1) is approximately \$375,000 per year for ten years. The DEIS however, does not discuss or disclose the total cost of financing this loan. (D03-3224, page 12)

Response: Assumptions about financing are described concisely on DEIS page IV-288 third, fifth and sixth bullets under the list of assumptions. The financial analysis includes/incorporates the cost of debt to service the loan referred to in the third bullet. It assumes that the ski area would take on debt to finance the first phase of improvements and begin fundraising at the same time to finance Phase 2 and 3 improvements. Furthermore, the analysis incorporates a “discount rate” to account for a variety of factors associated with financial risks and costs, including the borrowing rate for debt incurred in Phase 1, and the risks associated with undertaking improvements, the potential for poor snow years, changing economic conditions and other factors. This analysis is conservative for the following reasons:

- The Ski Area has stated that it plans to fund improvements in all phases through fundraising or retained earnings, rather than through a loan. This would substantially reduce the cost of improvements and increase overall net revenues.
- The analysis incorporates a relatively high discount rate (20%). Use of a lower discount rate would make the analysis more financially favorable.
- The analysis assumes a gradual growth in skier visits, rather than an early spike associated completion of improvements, which is probably more likely to occur. Use of the discount rate reduces the value of longer term growth in comparison to shorter term growth, making this assumption about gradual growth conservative.
- The analysis includes low, medium, and high visitation growth scenarios to account for potential variations in snowfall (e.g., several bad snow years in a row), overall economic conditions and other factors.

The assumptions regarding financing the proposed expansion will be clarified in the FEIS.

Comment #292: Explain data and assumptions underlying Table IV-63 (10007)

This table should show data used, an explanation of the data and should display numbers instead of vague lettering. This table, even with the vague numbers shows that low visitation trend will make Alternatives 2 and 6 unfavorable from a financial perspective. What model with what historical validity generated this output? (D03-3224, page 12)

Response: This table will be revised in the FEIS to show the dollar value of net present value for each alternative. Economic feasibility analysis will be expanded and clarified in the FEIS (Appendix I).

Comment #293: Explain total costs and cost of Phases? (10008)

Please summarize in one place, the expected financial costs for each of the 3 phases for each expansion alternative, including equipment purchases - such as ski lifts; equipment rental - such as helicopters for logging, dozers, etc.; services- such as environmental monitoring; material - such as concrete, steel, etc. (D03-2367, page 2). Appendix I does not show the cost of the second and third phases of each alternative. Thus, the DEIS does not show how MAA will pay for the proposed expansion. (D03-3224, page 12)

Response: These tables from the spreadsheets will be revised in the FEIS to show major cost items or categories of costs for each alternative.

Comment #294: Possibility of poor snow years not factored into the economic feasibility (10009)

The statement on page IV-4 of the 2000 DEIS says: “Years of inadequate snow depth for full operation and the timing of early season storms could adversely effect operations of the Mt. Ashland Ski Area.” This is the only reference to the possibility of bad snow years; bad snow years are never discussed or analyzed further. The possibility of poor snow years is not factored into the economic analysis of the ski area. (D03-3224, page 21)

Response: The possibility of poor snow years or other conditions is factored into estimates of future skier visitation and the analysis of financial feasibility. Three visitation growth rate scenarios were described and evaluated in the DEIS. Page IV-238 states that “low and high rates represent potential fluctuations based on varying snow, weather and economic conditions.” In other words, the low growth rate scenario reflects the possibility of a series of poor snow years.

Comment #295: More detail on estimated cost and projected net income figures (10010)

Please summarize in one place, the annual operating costs with net revenues - you have projected for each alternative, taking into account high, medium, and low visitation. (D03-2367, page 2)

Response: This table will be revised in the FEIS to show major categories of revenues and expenses, net income and net present value for each alternative for each scenario (low, medium and high).

Comment #296: Clarify financing of improvements (loans, fund-raising, etc.) (100011)

We suggest that the analysis include more detailed estimated cost and projected net income figures. Include the conclusion of an analysis which makes the assumption that the improvements are financed through a fund raising campaign and excess net operating income. (D03-3220, page 5)

Response: See responses to Comment #291 and #295 above.

Comment #297: Rationale for analysis using period 1996 - 2001 (snowfall) (10012)

The DEIS references Appendix I; that analysis only accounts for historic accounting data from ski area operations in the period from 1996 to 2001. It does not account for the previous 30+ years of operations on Mount Ashland. (D03-3223, page 2)

Response: For the purposes of estimating future operational and maintenance costs, more recent data (i.e., from the last five years) is much more reliable, useful and relevant than more historical data (e.g., from 10 to 30 years ago). Many conditions have changed in those intervening years, including equipment costs, environmental regulations, wages and a variety of other factors. The Forest Service believes that the time period used for analysis is reasonable, sensible and typical to ski area analysis.

Comment #298: Breakeven analysis based on “marginal” costs (10013)

Expansion will not threaten the long-term viability of the ski area. Our break-even point is about 75,000 skier visits and we have averaged a little over 88,000 visits over the past 11 years. It is useful when analyzing the effect of expansion on the financial security of the area to focus on the marginal costs of operating the expanded ski area, without taking into account the fixed costs of operation that do not increase because of expansion. So how many boarders and skiers does it take to break even after the tubing revenue is considered? (D03-2168, pages 55-58)

Response: To some extent, the analysis of financial feasibility, costs and revenues is a marginal cost analysis. It starts with a base year set of revenues and expenditures, then assesses the marginal costs and increases in revenue resulting from proposed improvements for each alternative. The analysis assumes that some types of costs will increase only marginally and at a lower rate or percentage than others.

For example, a relatively small increase in administrative personnel and associated costs is expected, while costs related to on-mountain staffing (e.g., ski patrol, lift operators, etc.) are related relatively directly to increases in the number of ski lifts and acreage of new trails. After identifying marginal increases in costs and total revenues based on projected total visitation and average annual days of operation, the analysis identifies which alternatives would represent a positive return on investment, or a positive net revenue over the course of the period analyzed (20 years).

The analysis also takes into account assumptions about the relationship between visitation and expenditures on meals, rentals and other items; discount rates; financing methods; and other factors. While the analysis does not identify a “break-even” point explicitly, those alternatives with a net present value or total net income that is close to zero roughly represent a “break-even” point visitation scenario.

SUBSTANTIVE COMMENTS - DECISIONS

Comment #299: Issue separate decisions for watershed restoration (non-controversial) and controversial aspects (14000)

The Forest Service should issue two separate decision notices on this project in order to prevent non-controversial improvements from being held hostage by the high controversial decisions about development in the Middle Branch area. Non-controversial improvements include watershed restoration projects, remodeling the base lodge and improving/increasing the beginner and novice terrain near the lodge. (D03-894; and approx. 20 other letters)

Response: As stated in the DEIS and elsewhere in this Response to Comments Appendix, all watershed restoration projects would be completed prior to or concurrent with the first development phase in the first year. Some restoration projects require that material (such as large logs/woody material) be brought in and/or placed, which would require equipment (such as helicopters). This equipment would be more readily available with concurrent construction or development activities.

Further, some material for restoration (e.g., large woody material) would come from clearing activities associated with lifts or runs in proximity. The Forest Service believes that restoration activities can be accomplished most efficiently from a labor and materials standpoint, as well as minimizing environmental effects, if done concurrently with new construction while still contributing to watershed recovery. For the reasons discussed above (efficiency and logistics) this suggestion was not considered as part of this (or any) alternative considered in detail. Further, the method in which the agency prepares its decision is found to not be germane to an element of an alternative.

Comment #300: Describe flexibility in function of authorized buildings, especially in previously disturbed areas (e.g., Rental Shop and Lodge) (14001)

Since the entire area between the Lodge and Rental Shop is previously disturbed, the ROD should specify that the proposed building square footage should be approved for construction in one or more buildings, within this overall area. (D03-3220, page 5)

Response: The Forest Service agrees that there must be some flexibility for exact site locations for buildings in this area. This EIS process is intended to provide site-specific approval for the new/expanded building(s). The fact that the ground between the Lodge and Rental Shop has been previously disturbed would suggest that the environmental effects of building construction would be minimal. Therefore, the EIS provides analysis and the Record of Decision would provide authorization of a specific size of building with designated uses. Exact locations and function of each building(s) would be determined at implementation. As long as the building(s) fall within the parameters of the analysis and approval, no additional NEPA would be required.

SUBSTANTIVE COMMENTS - OTHER

Comment #301: Identification of Environmentally preferable alternative; one alternative preferable over another (15000)

We (EPA) concur with the Forest Service that Alternative 6 is environmentally preferable to Alternative 2. (D03-3222, page 2)

Response: The Forest Service has not identified the “environmentally preferred alternative” in the DEIS. Section 1505.2(b) of NEPA requires that, in cases where an EIS has been prepared, the Record of Decision (ROD) must identify all alternatives that were considered, "...specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.

The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the "agency's preferred alternative" is different from the "environmentally preferable alternative," although in some cases one alternative may be both. It is identified so that agencies and the public can understand the lead agency's orientation.

Additionally, the Forest Service has not made reference to one alternative preferable to another. Under NEPA regulations and Forest Service policy, a “Preferred Alternative” has been identified in the DEIS. This is not the same as the environmentally preferable alternative, which is identified in a Record of Decision.

Comment #302: Reported observations of summer flow by “Members of Ashland Community” (15001)

“Members of the Ashland community have reported observations of substantial surface flow in the Middle Fork and well hydrated vegetation in the immediate vicinity of the creek in August 2003 in contrast to much lower flows and vegetation conditions outside the riparian area (Headwaters Group October 2003)” (D03-3222, page 4)

Response: The Forest Service finds this statement to represent unsubstantiated observation and “here-say” evidence. The Forest Service has found a substantial number of biased statements during the comment process that appear to suggest science or evidence, but that are actually opinion supporting certain viewpoints without evidence. The Forest Service feels that the Environmental Protection Agency should not be using this type of evidence nor utilizing or supporting these types of comments. The issues of late summer flow are addressed elsewhere in this Response to Comments and will be further clarified in the FEIS.

Comment #303: Discussion of consistency findings with ACS objectives in the EIS (15002)

The EIS must disclose whether the action is consistent with the primary components and NWFP Standards and Guidelines for the ACS. (D03-3220, page 8)

Response: Under NEPA, findings are made by the Responsible Official in a decision document, not within the EIS itself. While evidence needs to be present in the EIS to support a finding, the overall consistency finding with ACS objectives would have been made in a forthcoming Record of Decision, if an expansion alternative were selected. Also see response to Comment #153 and #240 regarding the recent decision that changes the way ACS objectives are evaluated and how findings are made.

Comment #304: DEIS document length does not meet CEQ guidelines (15003)

Although the language of the DEIS for the MASA expansion is admittedly understandable by the public at large, the sheer size of the document alone is daunting enough to impede meaningful public comment. The document is much too long to be read, analyzed, and thoughtfully commented upon by the general public. It egregiously strays from the page limit guidelines set forth by the CRQ. (D03-2704, page 2)

Response: Based on more recent litigation and decision of the courts, the page limit criteria of CEQ guidelines appear to be somewhat dated. Litigation records show that as the depth (and length) of complaints increases, so does the need for the documented analysis record (and its length). Forest Service experience shows that under litigation, a detailed record is necessary to support complex analysis and decisions, as is the anticipated case here.

For the Mt. Ashland Ski area Expansion EIS, the Forest Service has chosen to place most of the necessarily and relevant information in the EIS itself or its appendices, as opposed to other sources. This was deliberately done to ensure that the public (and the courts) have the most relevant information readily available. Examples of this strategy include the fact that there are no “stand alone” Biological Evaluations or other “stand alone” specialist reports. Also note that there were two different styles (and lengths) of summaries produced for the DEIS. This was done to provide the public with several versions of the document, appropriate to the needs of the reviewer.

Comment #305: Request for more than a minimum comment period on the FEIS (15004)

Thank you for extending the (DEIS) comment period 30 days. I ask that you provide more than the minimum of response time on the FEIS. (D03-3192, page 32)

Response: There is no requirement for a Comment Period on a Final EIS. Therefore there is no minimum response time. A Comment Period on an FEIS is discretionary, by the Responsible Official. At the time of the preparation of this Response to Comments Appendix, the Responsible Official has not indicated any plans to offer a formal Comment Period on the FEIS.

LIST OF RESPONDENTS

Mt. Ashland Association (Proponent) and/or Permit Holder (City of Ashland)

Gino Grimaldi, City of Ashland	Bill Little, MAA	Tom Pyle, MAA	Rick Saul, MAA
Jeff Hanson, MAA	Doug McGeary, MAA	Tom Reid, MAA	Greg Williams, MAA
Cate Hartzell, City of Ashland	Bruce Meek, MAA	Ron Roth, MAA	

Business/Business Organizations

Robert Anno, Allweather Wood	Lindsey Skinner, ComNet Marketing Group, Inc.	William Thorndike Jr., Medford Fabrication	Darwin Thusius, SULA Technologies
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Chambers of Commerce

Jacqueline Roberts, Grants Pass/Josephine	Dana Welsh, Ashland
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County Elected Officials

Harold Haugen, Josephine Co. Commissioner	Sue Kupillas, Jackson Co. Commissioner
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Environmental Organizations

Susan Jane Brown, Northwest Ecosystem Defense Center	Tonya Graham, Headwaters	Tom Rose, Rogue Group Sierra Club	Cindy Williams, Headwaters
Lori Cooper, Soda Mountain Wilderness Council	Doug Heiken, Oregon Natural Resource Council	George Sexton, Klamath-Siskiyou Wildlands Center	Dave Willis, Soda Mountain Wilderness Council
Tom Dimitre, Rogue Group Sierra Club			

Federal Agency

Judith Leckrone, Environmental Protection Agency	Lee Preston Sleeper, U.S. Dept. of the Interior
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Industry Interest

Scott Kaden, Pacific Northwest Ski Areas Association	Danielle Lindler, Klamath Alliance for Resources and Environment	Linda McGavin, NW Ski Club Council
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City Agency or Official

Tom Anderson, Shady
Cove Mayor
Lindsay Berryman,
Medford Mayor

Leigh Lucas, Rogue River
Mayor

Larry Parducci,
Phoenix Mayor

Hank Williams, Central
Point Mayor

State Agency

Bob Rice, Oregon
Water Resources Dept.

School Representative

Kendall Butler, Seventh-
day Adventist

Gary MacGraw, Mt.
Ashland Racing Association

Rene Masteres, Special
Olympics

Valri Williams,
Ashland High
School

Individual/Family

D A
Isaac Abbott
Pamela Abbott
Kath Abelson
Rhonda & SC Abrahams
Noreen Ackermann
Pat Acklin
RJ Adamek
Anna Adams
Chris Adams
Sandra Adams
James Adams
Karyn Adams
Stephen Adams
Lesley Adams
Warren Addicott
Avis Adee
Peter Adesman
Colledge Adrian
Mark Adrian
Hilary Ahola
Carrie Ahola
Elizabeth Aitken
Selene Aitken J
Patricia Ajhar
- Albersharst
Alonzo Alcalá
George & Frances Alderson
Paul Alie
Jon Allard
Sharon Allen
David Allen
Scott Allison
Jay Almarode
Lisa Almarode
Laura Alpert
Susan Alston
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Alan Ameen
Deborah Ameen
Alan Ameher
Sherry Amen
John Ames
Muriel Ames
Joe Amicarella
Sue Amidon
Chris Ammon
Carol Ampel
Bryan Amrein
Dorothy Anacleto
Vikram Anantha
Richard Anderson
Nancy & Bert Anderson
Janet Anderson
Jason Anderson
Richard Anderson
Joan Anderson
Erik Anderson
Nancy Anderson
Theodore Anderson
Shel Anderson
Cherrie Anderson
Elise Anderson
Jim Andresen
Jil Andrew
Tiki Andrews
George Andries
Dustin Andries
Patricia Andris
Anthony & Debra Anker
Stephen Ankrum
James Annala

Robert Anno
Nancy Anno
Matthew Appel
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Dave Appleby
Robert Arago
Jessica Arguigo
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Steve Armitage
Daniel Armitage
Arthur Armstrong
Jennifer Arnold
Cleda Arnold-
Priscilla & Elliot Aronin
Aura Aryeff
Dani Arzner
Jill Asher
Lisa Asher
Anne Ashford
Carolyn Ashlock
Stuart Ashmore
Scott Ashpole
Sindelar Aslaug
Suzi Aufderheide
Irene Ausgsburger
Aaron Ausland
Angela Austbo
John Austbo
Kirk Austbo
John Austbo
Judy Austbo
Kurt & Valerie
Kurt Austermann
Valerie Austermann
Fred Austermuehle
Tessa Austermuehle
Tonya Austin
Jason Austin
Hillary Axford

Diana Ayala
Regina Ayars
Gini Badger
Edward Baich
Berton Bailey
Anne Bailey
Diana Bailey
Mark Baker
Gordon Baker
Brigid Baker
Barry Baker
Roxi Ballard
Weathers Stan Bambauer
Linda Bandino
Michael Bansmer
Curtis Barber
Debra Barchard
Karen Barker
Paula Barnes
Brent Barr
Jim Barrett
James Barrett
Lynn Barris
Bruce Barrows
Gayla Barrows
Pat Barry
Jack Barth
William Bartlett
Karen Basin
Patrick Bates
Alan Bates
Austermann John Batt
Annette Batzer
Britt Bauer
Charlie Bauer
Anna Baumstalk
Andy Bayliss
Mary Bayliss
Thomas Beam

Kelly Beatley	Daryl Boehm	Lisa Brown	Esthie Campbell
Louise Beauchamp	Susan Boehnke	Dominique Brown	Matt Campbell
Caludia Beausoleil	John Boehnke	Rivers Brown	Daniel Campbell
Colin Beck	Lyn Boening	Carol Brown	Beth Campbell
Keith Bedard	Carol Bogedain	Karen Brown	John Campbell
Keith Bedard	Spencer Boheboy	Adam Browne	Beth Campbell
Julie Bedford	Adele Bol	Jim Browne	Desiree Campov
Frank Bedogne	Diane Bolduc	Debbie Brownell	Mel, Sheila & Micah Canal
Bonnie Beebe	Sharon Bolles	Robert Brownscombe	Mel Canal
Erin Beem	Kristi Bond	Brooks Bruce	Robert Canape
Sara Bein	John Bonin	Don Bruner	Mirin Canchola
Erika & David Bekermeier	Diana & Darryl Boom	Leslie Bryan	Stephen Canning
Shelyea Belfione	Tony Boom	Jerald Bryan	Susan Canty
Frances Bell	Judith Boothby	David Bryan	Patrick Caplis
Kevin Bell	Fred Borngasser	Lou Bubala	Vicki Capp
Nancy Bell	James Botsford	Teresa Bubb	Ernie Carbajal
Elizabeth Belles	Greg Bounds	Val Bubb	Lorianne Carey
Richey Bellingner	Casey Bourgeois	David Bublitz	Peter Cariwi
George Bellis	Alex Boutacoff	Tamera Buchanan	Jean Carley
Elisha Belmont	Joseph Bova	Dustin Buchthal	Joel Carlson
James Bender	Kathi Bowen-Jones	Marlene Buck	Debra Carlson
Carla Bender	Traycee Bowerman	Dave Buckalew	Sue Carr
Jack Benedict	Robert Bowlus	Mary Buckalew	Andrew Carrick
Curt Bennett	Anne Bowman	Shirley Buckmaster	Michael Carrigan
Henry Bennett	Loren Bowman	Derek Budd	Marjorie Carson
Kris Bennett	Ryan Bowman	D Budhe	Nancy Carter
Josh Benton	Angela Bowman	Kathy Buffing	Robert Cartmell
Joe Bentsen	Linda Bowman	Amy Buffman	Janie Casad
Chris Benware	Sheryl Boyd	Helen Bulkin	Bern Case
Michelle Berditschesky	Anna Boyd	Steve Bulkin	Heather Casewell
Beth Berghofer	Robert Boyer	Daniel Bulkley	David Cass
Jerry Bergman	Barbara Brack	L.Daniel Bulkley	Robert Casserly
David Bernard	Roger Bradshaw	Annie Buma	Dave Cassidy
Doris Bernard	Teresa Brain	Herbert Bumgaaner	Regina Castellon
Jaimie Bernhagen	Wes Brain	- Bungay	Paul Caswell
Irene Bernstein	Elizabeth Branch	Tracy Bungay	Rick Caswell
John Berry	Kate Brandy	Florence Bunker	Casy Catalano
Charles & Kristin Biechler	Kay Brashears	Chris Burge	Bryon Catalano
CW Biegert	Zekra Brasher	Kelly Burge	Carmela Catapano
A Bigelow	Gregore Bratt	Brian Burgess	Maney Cayle
Domonic Biggi	Frances Brayfield	Marilynn Burke	William Cerf
Joan Bille	Marieke Brecheisen	David Burkhart	Gene Chamberlain
John Bille	Melanie Breidenthal	Tom Burnham	Bonnie Chamberlain
Diana Biller	Kristen Bremicker	Nancy Burnham	Gene Chamberlain
Bernie Binder	John & Tema Brenes	Ted Burnham	Christine Chamberlain
Bernhard Binder	Rebecca Brenton	Patrick Burns	Steven Chamberlain
Helga Binder	Lawrence Bressler	John & Julie Burns	Glenna Chamberlain
John Bischoff	Fitzhugh Brewer	J. Burr	Chris Chambers
Luna Bitzer	Fitz Brewer	Robert Burr	Christopher Chappa
Joe Bitzer	Peter Brewer	Jessica Burrell	Eric Chappell
Melanie Bjorge	Bill Brewster	Pamela Burry-Trice	Lawrence Charles
Oscar Bjorlie	Marilyn Briggs	Penelope Burt	Amy Charley
Twyla Black	Fred Briggs	Wallace Burton	Matthew Charley
Leslie Black	Marilyn Briggs	Doug Burwell	Noel Chatroux
Pauline Black	Julianne Britton	Kendall Butler	Claudia Chaves
David Blackman	Richard Brock	KD Butler	Sue Chenault
Scott Blair	Axel Broda	Kendall Butler	Dustin Cheney
Terall Blalock	Bonnie Brodersen	Myles & Mary Butner	Joe Chermesino
Tim Blanchard	Karlinne Brodine	Lisa Buttrey	Craig Chesnut
Rob Blickensderfer	Jacqueline Brodsky	Jeanette Buxton	Andrew Chester
Alana Bliss	Vicki & Zach Brombacher	Gayle Byrne	Asha Cheval
Beth Bloch	Arinda Brook	Nancy Cagle	Peter Chidsey
Jason Bluhm	Monica Brooks	Shane Cahanids	Annie Chilla
Cindy/Darrell/Jason Bluhm	Torry Brooks	Terry Cain	Willard Chinn
Michael Blum	Daphne Brooks	Jessie Caldwell	Willard & Donna Chinn
Dave Bobb	Jeff Brooks	Kelly Caldwell	Marcus Choi
Dorothy & S. Charles Bocci	Jamie Broome	Rob Caldwell	John Chonelin
George Bock	Edwin Brosbe	James Caliva	N Chourey
Dwight Bode	Joey Brown	Mary Cammann	Anna Christensen
Anne & Al Bodin	James Brown	Sam Campbell	Crissey Christian
Gregory Boehm	Russell Brown	Phil Campbell	Nicholas Christian

Steve Christiansen	John Coulter	Linda Davis	Robert Drake
Kathleen Christy	Ruth Coulthard	Zachary Davis	Robin Dressler
Chris Church	Nina Council	Dean Daviscourt	Linda Drishill
Nick Cicero	Mary Jane Cox	Janice Dawn	Michael & Karen Dudenloeffler
Thomas Clark	Thomas Coyle	Nancy Day	Gary Duell
Kevin Clark	J emma Crae	Nita Day	Sandra Duffy
J. Michelle & William Clark	Paul Crafft	Paula Daystar	Marianne Dugan
Angela Clark	Adam Crane	Joan de Saint Phasle	John Dumas
Jason Clark	John Dillon	Craven Constance Dean	Thomas Dumont
Diana Clarke	John Craven	Bree DeArmond	Colleen Dumont
James Clason	Richard Crawford	Robert DeArmond	James Duncan
Leslie Clausen	Vern Crawford	Stockel Debby	Charles Dungan
Don Clay	Richard & Janet Crawford	Sidney DeBoer	Jeff Dunn
Duane Clay	Neale Creamer	Derek DeBoer	Lisa Dunn
AL Clay	Dolores Cressman	Jake DeBoer	Linda Dupray
Connie Clayton	Hazel Crest	Julie DeBolt	Sarah Durand
Andrew Clem	Sarah Cribb	Mark DeBolt	Daniel Durant
Todd Clement	Richard Crimi	KE Deckelman	Dan Durant
Shannon Clery	Ken Crocker	Dee Decker	Robert Duval
Miriam Close	William Cronin	Jack Deckwar	Timothy Dwyer
Wendy Close	Elizabeth Cross	Nathan DeHart	Lois Eagleton
Karl Cloyd	Claire Cross	Jay DeLapp	Connie Eamshaw
Connie Cloyed	Nancy Cross	Aldrich Kathryn DelGatto	Margo Earley
Susan Coburn	Travis Crossland	Susan Delles	E Eason
Cheryl Coburn	Liz Crosson	Robin DelRio	Philip Eastman
F. Troy Coburn	Helga & Bill Crosswell	Cheryl Demaray	Kent Eastman
Doris Cochran	Brandie Croucher	Donald Denman	Christine Eastman
Dolores Codwallaler	Ronald Crowell	Marty Denneti	Ann Eaton
Jack Coelho	Mary Croy	Brandon Despotakis	Melissa Eaton
Debora Coen	Daren Croy	Richard Desroches	Mark Ebersold
Wanda Coffman	Jared & Suzanne Cruce	Mike DeSylvia	Karen Ebersold
Richard Cole	Bret Cudd	Gordon Detzel	Carolyn Eckel
Herbert Cole	Kermit Cuff	Ramona DeVaul	Jack Eckhardt
Virginia Collier	Jo Cullumbine	Kenneth DeVeny	Leland Edwards
Eaton Conant	Marvin Cunningham	Sally DeVenny	Samantha Edwards
Joseph Concini	Larry Cunningham	Terrell DeVilbiss	Michelle Edwards
Sandra Conghlin	John Curran	Lewis Devlin	Kathleen Edwards
Trea Connick	Beverly Curran	Laura Deyarman	Rob Edwards
Marcia Connolly	Barry Curran	A. Michael Dianich	Marilyn Edwards
Diane Conrad	Jim Curtis	Clifford Dickason	Cathy Egelsta
Irene Conroy	Carol & Clark Custodio	Jill Dickerson	Joanne Eggers
Robyn Conroy	Jeanne Daae	Sharon Dillinger	James Eisenhard
Diana Coogle	Robert Dady	Alexandra Dilworth	Dawn Ek
Patricia Cook	Chuck Dahl	Alice DiMicele	Brett Ekart
Lily Cook	Mary Dahlgren	Tom Dimitre	Rebecca Elgin
Gary Cook	Matthew & MaryJennifer Damon-	Tollenaere, Dorothy & Theodore Dimitre	Shelley Elkovich
Del & Sally Cook	James Daniels	Jeffery Dimitre	Ben Elkus
Bridget Cooke	Jeff Daniels	Robin Dimitre	Elizabeth Ellingson
Cynthia Cooke	Nettie Daniels	Tamara Dixon	Vesta Elliott
Trudy Cooper	Joe Danielson	Kyle Dobson	David Ellis
G Cooper	Darcy Danielson	Randy Dodge	Dwight Ellis
Larry Cooper	Nick Daniken	Kenneth Doerfler	Myriah Ellis
Diane Cooper	Jacqueline Danner	Dack Doggett	Tustin Ellison
Justine Cooper	Karen Daoust	Matt Dolinar	Patrick Elston
Judith Cope	JW Darr	Randy Dolinger	Chris Endeikat
Sandra Copeland	Darlene Dart	Judith Dolmatch	Scott English
Margaret Copeland	Robert Dasch	Viola Donahue	Forrest English
Paul Copeland	Jeremy Davee	Nona Donahue	Wendy Eppinger
Aaron Corbet	Janelle Davidson J	ason Donn	William Epstein
Carol Corbridge	Linda Davidson	Trudy Donnelly	Steve Erickson
Jill Corcoran	Judy Davidson	Tim Donovan	David Ericn
Donald Cordell	Mark Davidson	William Donovan	TJ Ernst
Chris Cornett	K Davidson	William Dormon	Kent Erskine
Rachelle Coronado	Chelsea Davis	Adrian Dorris	Myra & Alan Erwin
Danny Corrigan	Jack Davis	John Dowd	Joel Escandon
Terry Corris	Howard Davis	Mageen Downey	Solamon Estin
Marilyn Costamagna	Heather Davis	Stephen Drablk	Melodie Ethel-King
Devin Costello	Greg Davis	Mike Drager	Jerry Evans
Brenda Cotta	Brian Davis	Annette Drager	Linda Evans
Chris Cotton	Donna Davis	Brian Drager	Wanda Evans Prefanidis

Lorraine Evenson	Mary Ann Foskeet	Linda Gerschler	James & Rita Grauer
Roy Eyman	Christine Fowler	Howard Getzoff	Brian Graunke
RL Eyman	Greg Fowler	Robert Gheckson	Stephen & Patti Graves
Patrick Fahey	Chris Fowler	Nicola Giardina	Melanie Graves
Louann Faist	Vicki Fox	Bruce Gibbs	Donald Gray
Pat Faist	Vincent Fox	John Gibson	Gerald & Grace Green
Ellen Falkner	Marshall Fox	Mark Giese	Chris Green
Douglas Falkner	Meredith Foxx	Kathy Gilkison	Paul Green
Peter Fallaw	Steven Foye	Kent Gill	Keri Green
Jessica Fanning	Al Francis	Kim Gill	Jim Green
Herbert Farber	Hanneli Francis	Jim Gillespie	Daniel Greenblatt
Paul Farley	Bill Francis	Patrick Gillette	Joel Greenblum
Rod & ML Farmer	Jocelyn Francis	Nina Gillette	Lisa Greif
Chris Farrell	Hoeper Frank	Mary Gillette	David Gremmels
Barbara Feinstein	Brian Fraser	Monica Gilman	Ann Gressett
Ed Felan	Stuart & Ardis Fraser	David Gilstrap	Susan Grider Williams
Ruth Feller	Monte Fraser	Hunter Gimbel	Enid Griffin
Fred Felter	Ardis Fraser	Iris Gimbrett	James Griffin
Richard Fenker	Tiffanie Frazier	Brian Ginn	Dru Griffin
Janet Fergus	Jim Freeberg	Hans & Bertha Giovanoli	Rolly Griffith
Gary Fergus	James Freeberg	John Gisclon	Roland Griffith
Tim Ferguson	Christlin Freedman	Bill Giulie	Brandon Griffith
Frank & Drusilla Fern	Sally Freeman	Hayden Glatte	Marie Griffith
Stefanie Ferrara	Dennis Freese	Marlene Gleason	Tiffany Grisen
Jason Ferrer	PA Freltz	Edward Glick	Eric Grisen
Linda Ficere	Shelly French	David Glimpse	Charles Grist
James Ficke	Constance Frenzen	William Glozer	Ernestine Griswold
Jason Fields	John Fricker	Jim Goes	Thomas Gritzka
Norman Fincher	Hannah Friedman	Richard Goff	Eric Grooters
Karen Fincken	Sidney Frisk	Maxine Goff	Thomas Grunden
Mary Fink	Anita Fronck	Barbara Goheen	Daniel Guevara
Judson Finley	Suzanne Fry	Elizabeth Goines	Greg Gunion
Alice Finley	Aaron Fuller	Esther Goldberg	Russell Gurley
Willard Fischer	Mary Gabriel	Deidre Goldberg	Dan Gustafson
John Fisher	Dorothy Gage	Frank Moore	Russell Gustafson
Steven Fisher	Ann Gagnon	Jack Moore	Audrey Gustafson
Steve Fisher	Jeane Gaither	Richard Moore	Jim Gyllenskog
John Fisher	Francisco Galaviz	Patricia Moore	William Haberland
Johanna Fisher	Robert Gale	Michael Goldman	Juna Haggart
Dot Fisher-Smith	Jake Gallop	Pamela Goldsmith	Aaron Haglan
Nancy Fisher-Smith	Pamela Galusha	Adrian Golledge	Sam Haid
Ellen Fite	Gabe Gambee	Katie Gomez	Jim Hajek
Judy Fitzgerald	Gary Gamble	Grace Gonzales	Christy Hald
Rebecca Fitzgibbon	Linda Gamble	Edith Gonzalez	Carolyn Hald
Debbie Fitzpatrick	Anthony Gamez	Rachel Goodman	Joan Haley
Nick Fitzpatrick	Peter Gandesbery	Sanford Goodman	Lee Halfmann
Joseph Flaherty	Linda Ganim	James Goodwin	Luke Hall
Don Flaming	L. Ganim	Pamela Goodwin	Russell Hall
Hilary Flaming	Marciano Garcia	SG Goosser	Kristine Hall
Katharine Flanagan	Gloria Gardiner	Douglas Gordenier	Jean Hall
Patrick Flannery	Bruce Garetto	Seon Gordon	Rebecca Hallock
Joe Flatt	Laura Garlington	George Gornick	Barry Hamilton
Fred Fleetwood	Terrence Garner	Richard Gorringer	Bill Hamilton
Fredric Fleetwood	Sue Garred	Ken Gosling	Susan Hamilton
Elizabeth Flemmer	Norman Garrett	Mort Gossett	Ryan Hamilton
Steve Fletcher	Linda Garrison	Phil Gossner	Barry Hamilton
Rex Fletcher	- Garvey	Jon Gottshall	John Hammond
Jeanne Fletcher	Chris Garvey	Naomi Gould-Maisel	Blair Hampson
Andrew Fletcher	Frank Gast	Virginia & Philip Govedare	Florence Hancock Inman
Delia Flones	John Gates	Mark Grabow	Barbara Hanel
Urban Florin	Jocelyn Gates	Cynde Gragert	Mark Hanschka
Matt Flotho	Kurtis Gazin	Phyllis Graham	Richard Hanse
Andre Flynn	Gordon Geeseman	Susan Graham	Susan Hansen
Julianna Flynn	Jim Geltz	Andrew Graham-Collier	Rich Hansen
Benjamin Foley	Livio Genise	Caroline Granat	Scott Hansen
Maril Folger	Linda Gentry	Richard Grant	Bruce & Barbara Hanson
Benjamin Folley	Michael Gentry	Robert Grant	Keith Hanson
Donald Fontenot	Scott Gerardt	Joy Grant	Sandy Hanson
William Forester	Mary Jane Gere	David Grant	Alice & John Hardesty
Lori Lawrence	Forrest Judy Gerlock	Lisa Grant	Steven Hardie
Mary Fortier	Adam Gerritsma	Raliegth Grantham	Scott Harding

Cynthia Harelson	Joan Hertzberg	Beatrice Hooper	Marle Jandreau
Joseph Hargrave	Kris Hess	Sandra Hoover	Alan & Katharine Jansen
Jon Harker	Rick Hester	Russ Hopkins	Larry Jansen
Brandon Harkey	Carlene Hester	Russell Hopkins	Alysia Jantzer
Sam Harmon	Caroline Hetrick	Joseph Hoppe	Mark Jantzer
Douglas Harmsen	Judy Heumann	Carol Horn	Davis Reginald Jarone
Cindy Harper	Douglas Hewett	Charlotte Horning	Laura Jarrell
Linda Harris	Darla Hewlett	Alan Horobin	Garrick Jee
Annaliesa Harris	Julia Heydon	William Horrocks	William Jenkins
Kenneth Harris	- Heydon	Richard Hosley	Jan Jennings
Garry Harris	Richard Heymann	Edward Hosley	Courtlandt Jennings
Deborah Harris	James Hibbert	Charlotte Hottinger	Carol Jensen
Kelly Harrison	Richard Hicks	Michael & Jacqueline Houck	Joan Jensen
Jane Harrison-Houner	Letty Hicks	Terry Houser	Frances Jensen
Einan Harshman	BG Hicks	Stephanie Houston	Burness Jessica
Hank Hart	B.G. Hicks	Ben Hovelman	Laura & Steve Jessup
Susan Hart	Mark Hidde	Dorthea Hover-Kramer	Leigh Johnson
Richard Hart	Mark Hiddr	Mechtild Howard	Ara Johnson
David Harter	Ronald Higgins	Paul Howard	Holly Johnson
Greg Hartlay	Dennis Higgins	Dave Hoxie	Marjorie Johnson
Robert Harvey	Annette Higinbotham	David Hoye	Kevin Johnson
Melissa Harwood	Judith Hill	Lester & Judy Hoyle	David & Jennifer Johnson
Robert Hasel	Seth Hill	Jim Hubbard	Janice Johnson
Dora Haslett	Janice Hill	Chalese Huckeby	William Johnson
Jack Hass	Gerald Hill	Imogene Huffine	Philip Johnson
John Hassem	Francis Hill	Daniel Hughes	Ara Johnson
Jim Hassler	Terrence Hill	Robert Hughes	Ron Johnson
Tracy Hassler	Ben Hillebrant	Shane Hughes	Judi Johnson
Shawnette Haste	William Hilligoss	Blake Hughes	Linda Johnson
Skip Hathaway	McKenzie Hilmer	Leah Hughes	Nancy Johnson
Ray Havira	Tom Hilton	Phyllis Hughes	Christopher Johnson
Brandan Hawley	Marjorie Hilton	John Hulburd	Edwin Johnson
Delbert Hawley	Thomas Hilton	William Hull	Robin Jokinen
Elizabeth Hayes	Laurel Hines	Cari Hulse	Kristin Jones
Brittany Hayes	JMC Hinrichson	Linda Hunn	Mary Ann & Brad Jones
Dale & Edwin Haynes	Marjorie Hipp	Roxanne Hunnicutt	David Jones
Christine Haynie	Jordan Hirsch	Susan Hunt	Greg Jones
Susan Hedges	Gerald Hirschfeld	Gaylene & Irwin Hurley	Jeff Jones
Nancy Hegg	Ty Hisatomi	Steven Hurley	Kim Jones
Jeffrey Heglie	Cary Hisatomi	Tracy Hurst	Reggie Jones
Mae Heide	Kevin Hockley	Hal Hushbeck	Sinda Jones
Dawn Heidegger	RB Hodge	Michael Huston	Greg Jones
Eve & Denis Heidtmann	Beverly Hodge	Michael Huston	Melvin Jones
John Heinz	Laura Hofer	Janice Huszti	Katherine Jones
John Heisel	WH Hoffbuhr	Robert Hutchins	Stephen Jones
Gerhard Heiter	Kathryn Hoffbuhr	Nancy Hutchins	Mary Ann Jones
Aaron Heller	Julie Hoffman	Barbara Hyatt	David Jones
Hazel Heller	Tricia Hoffman	John Hyland	Greg Jones
Ray Heller	Beth Hoffman	Carol Ingelson	Sinda Jones
Robbie Henderson	David Hoffman	Catherine & David Inglis	Mary Ann Jones
Paul Henderson	Seth Hofstetter	Chris Isely	Zane Jones
Robert Henderson	Jane Hogan	Karen Isely	Doreen Jones
Richard Hendrickson	Christian Hold	Scott Jablonski	Jessie Jones
Joel Henigson	Katie Holden	Andrea Jablonski	David Jordan
Gloria Henneman	Lawnn Holden	Gary Jackman	Jonathan Jordan
Carl Henny	Melvin Holdener	Daryl Jackson	Margot Jordan
Brandon Henry	HJ Holen	Bruce Jackson	Michael Jorgenson
Dharmika Henshel	Shane Holiday	Joan Jackson	Carolyn Jorgonson
Dawn Hensler	Bill & Mary Ellen Holland	Steve Jackson	Strahl Joseph
Randy Hensley	Bryan Holley	Jeanette Jackson	Robert Joseph
Michael Hentz	Kathy Hollis	Cooper Elizabeth Jackson	Helen Josey
Hank & Ruth Herman	Kate Holloway	Kate Jackson	Nick Joslin
Bill Hernan	William Holmes	Greg Jacob	Louis Junghans
Patricia Heron	June Holmes	Linda Jacobs	GR Kaczor
Dorcas Herr	Charles Holmgren	Mark Jacobs	Michael Kahn
Jacob Herring	Betty Holstine	Laura Jacobsen	Brenda Kameenui
Gary Herring	Jason Holt	Emily Jacques	Shawn Kampmann
Krista Herring	Kerchival Holt	Robin James	Jacob Kann
Steven Hersch	Jerilyn Holt	Samuel James	John Karl Jr.
Marna Hershey	Steven Holwerda	Stephen Jamieson	Helenita Kassler
Sarah Hertlein	Robert Hoogendyk	Hal Jamison	Justin Katsinis

Gail Kauffman	Leigh Knox	Cory Lescher	Sheeba Loeber
Zac Kauffman	Scott Knox	John Leuthe	Lars Lofgren
Ryan Kauffman	Doug Knudson	Laurie Lewis	Kayla Lofgren
Chris Kaufman	Carol Knutson	Richard Lewis	Mark Lofthouse
Mary Kaufmann	Ruth Kocher	Kathryn Lewis	William Lofthouse
Paul Kay	Greg Koenig	Scott Lewis	LeeAnn Loftin
Chase Kayes	Henry Kohn	Carolyn Lewis	Robert Loftin
Liz Keane	Michael Konidakis	Scott Lewis	Paul Lofton
John Kearns	Mary Korbolic	Larry Lewis	Robert Lofton
Richard & Estelle Keefer	Vivian Korn	Prescott Lewis	Porter Lombard
Joe Keenan	Todd Kother	David Lexow	Kaye Lombard
Denise Keenan	Ted Kovtunovich	Joanne Lexow	Barbara Lombardi
Charles Kehoe	Alexander Krach	Helen Leybold	Robert Lombardi
Fred Keip	Eric Kresh	Kay Leybold	Ivan Long
David Kellenbeck	Roland Kretschmann	David Leybold	Chad Long
Michaele Kelley	Matt Krizk	Carolyn Leybold	Daniel Longanecker
Claudia Kelley	Jan Krupnick	Micah Lieberman	Wilbur Longanecker
Dan Kellogg	John Krygier	Greta Lieberman	Ernest Longhini
Wayne & Rhee Kelly	Susan Kuhn	Terence Lieberman	Claudia Longhini
Eva Marie Kelly	Wade Kuntz	Steve Lieberman	Tom Lonsdale
Trever Kelly	Sue Kupillas	Arthur Lindberg	Connie Lonsdale
David Kelly	Judith Kurinsley	Jessica Lindberg	Brent Loogman
Paul & Vasiliki Kelly	Franklin Kutil	John Lindgren	Richard Loogman
Natalie Kelly	Deborah Kyle	Randy Lindgren	Don Looney
Eva Marie Kelly	Wentela Kym	Conny Lindley	Elizabeth Looney
Todd Kemp	Kevin LaBarbara	Conny & Walter Lindley	Craig Loop
Megan Kemple	Mary LaBarre	Adrena Lindley	Matthew Loop
Jerry Kenefick	Kyle Lachmund	David Lindley	Louise Lopes
Kate Kennedy	Jessica Lacourse	Roxane Lindner	Kirby Lopez
Robert Kennedy	Carola Lacy	Edith Lindner	Susan Lopez
Cathlin Kennedy	Cathi Lair	Blanche Lindon	Charles Love
Art Kent	Bruce Laird	Mary Lindon	Laura Lowey
Eletheah Kesarah	Natalie Lamproe	Ryan Lindsay	Sean Lowry
Robert Kevan	Keith Lamproe	Joseph Lindsay	Biruta Loy
John Kewy	Gene Landsmann	Caroline Lindsay	Bill & Mary Lucas
Craig Kiest	Lynn Lane	Judith Lindsay	Jack Luce
Kenneth Kigel	Frank Lang	Doreen Lindstedt	Robert Ludwig
Clair Killen	Lois Langlois	Nancy Lindstedt	Vic Lukas
Vickie Killion	Judith LaNier	Nancy Linerud	Brad Lyon
Roy Kimball	Miriam Lanning	Eric Linerud	Michael Maas
Roy & Sheila Kimball	Janet Larmore	Robert Linikous	David Maas
Jess Kimball	Jim Larrabee	Carrie Linikous	John MacDiarmid
Sheila Kimball	Kathryn Larue	Gregg Lininger	Riley MacGraw
Janet Kimball	Elizabeth Laskey	Jay Lininger	Gary MacGraw
Tracy Kimler	Sharon Laskey	Wayne Linn	Lisa Mack
Charles & Reida Kimmel	Carrie Lassen	Karen Linn	Susan Mackinnon
John Kinard	Chuck Laurenson	Matt Linnemeyer	Sally Mackler
Al Kincaid	Jerry Lausmann	Heather Linnemeyer	Ginger Macklin
Scott King	Steve Lawrence	Hyla Lipson	Linda Mackown
Herschel King	Muriel Lawrence	Roma Lipson	Kathleen MacMichael
John & Feather King	James Lawrence	Sasha Lithman	VL Madsen
Marsha King-Rosine	Sue Lawrence	Colleen Lithman	Hanne Madsen
Marshall Kinkead	Molly Lawrence	Pat Litjens	Julie Madsen
Phyllis Kirk	Kerry Lawrence	Jessica Litjens	Tammy Maggio
Mike Kirkpatrick	Matthew Lawrence	Thom Little	Marcia Magness
Lindea Kirschner	Christie Lawson	John Little	John Mahan
Rick Kirschner	Esther Lawson	Stella Lively	Carlie Mahar
Aden Kirschner	Dorothy Layman	Vic & Claudia Lively	Dan Mahar
K Kiteley	Gargory Layton	Clyde Locklear	Belle Mahoney
Thomas & Judith Klapproth	Jeff Le	Bean Laurie Locklear	Diana Rosemary Maitland
Connie Kletzer	Belva Lean	Charles Lockwood	Dave Maize
Skipper Klimcheck	GL LeBlanc	Paul Lockwood	Melladee Makelacy
- Kling	Virginia Lebrun	Mary Lockwood	Alex & Lillian Maksymowicz
Arnie Klott	Thomas Lecroy	Nancy Lockwood	Marshall Malden
Robin Klotz	Brendan Lee	Cierra Lockwood	Angela Maldonado
Deborah Knaif	Terrence Leeds	Sarita Lockwood	Patricia Malone
Nicole Knapp	Meredith Leigh	Jilayne LoCurto	Julie Maloney
Keustie Kneeland	Steve Leith	Jack LoCurto	Terrance Maloney
Scott Knob	Robert Lemmens	Stewart Loeber	Kate Maloney
Daniel Knox	Virginia Lemon	Veva Loeber	Joshua Maltsberger
Amanda Knox	John Leonard	Susan Loeber	Penryn Manceau

Maryann Manchuelle	Judith McClure	Gordon Metz	Jack Moore
Steven Mandell	Stewart McCollom	Frances Meuleveld	Bernard Moore
Robert Manes	Jim McConnell	William Meyer	Cathy Moore
Timothy Mangin	Logan McConrell	Larry Meyer	James Moore
Jason & Belle Mann	Anne McCormick	Kim Meyer	Lesa Moore
Joe Manning	Randy McCormmach	Diane Meyer	Ray Moore
Joseph Manning	Robert McCoy	Kyle Meyer	Phyl Morello
Leta & Stan Marchington	PK McCoy	Bill Meyer	Daniel Moret
Stanley Marchington	Alan McCreedy	Elizabeth Meyerding	Patti Morey
Ashley Marcu	Tony McCullough	Leslie Meyerding	Jean Morgan
Mimi Margulies	Patricia McCurry	Philip Michael	Julia Morgan
Lynda Marikos	Lynette McDougal	Jacob Michel	Cynthia Morgan
Michelle Marikos	Michael McDowell	Mary-Kay Michelsen	Edward Morgan
Paul Marikos	Christine McElroy	Steven Miesen	Leslie Morgan
JoAnn Mark	Jean McElroy	Mitch Mihalovich	Katherine Moritz
Phyllis Markee	David McFarlane	Marko & Elaine Mikulich	Al Morlang
Irvine & Sharon Marler	Douglas McGeary	David Mildrexler	David Morris
Irvine Marler	Tom McGill	Alan Miller	Lane Morris
Linda Marple	Mary McGilvra	John Miller	Cody Morrison
Tom Marr	Ester McGinnis	David Miller	Edgar Morton
Boomer Marshall	Jim McGinnis	Robert Miller	CJ Moser III
Dan Marshall	Wendy McGowan	Gregory Miller	Michael Moses
Leanne Marshall	Heather McGregor	Jessica Miller	Victoria Mosse
Tyler Marshall	Bruce McGregor	Teresa Miller	Emily & Brian Mostue
Heather Martin	Dawn McGuire	Natalie Miller	Sara & Louie Moye
Jeff Martin	Diane McKelvey	Joan Miller	Charles Mueller
Randy Martin	Kevin McKelvey	Jayne & Jason Miller	Melissa Mueller
Lea Martin	Kelsey McKelvey	Denise & Robert Miller	David Mueller
Dawn Martinez	Doug McKenna	Lorna Miller	Judy Muir
James Martyr	Michael McKenzie	Gretchen Miller	Theodore Mularz
Setsuko Maruki	Charlotte McKernan	Henry Miller	Ruth Mularz
Roy Marvin	Ruth McKibben	Gary Miller	Marilyn & Bill Mull
Max Marvin	Sue McKlin	Christine Miller	Robert Mullen
Tracy Marvin	Maggie McLaughlin	William Miller	Robert Mumby
Malena Marvin	Candace McLaughlin	John Miller	Osgood Munger
Tom Marvin	Douglas McLean	Robert Miller	Steven Munson
Ellie Marzocco	Rod McLeod	Katherine Mills	Kate Murphey
Charles Mason	Moina McMath	Walton Martha	Milne, Oscar & Roberta Murphy
Dorothy Mason	Tom McMurray	Emily Minah	Kim Murphy
Randy Mason	Tom McMurray	Louis Mincer	Nancy Murphy Kincaid
Carey Massage	Bernice McNeel	Melanie Mindlin	Roger Murray
Sherrill Massey	Brian McOween	Richard Minean	Harold Murray
Renee Masters	Ashley McSweeney	Rick Minear	Michael Murray
Gerald Masters	Bin Mead	Richard Minear	Eric Murtin
Lisa Masterson	Howard Mead	Ron Mink	Francis Mushral
Robin Matoush	Mignon Mead-Shikaly	Mark Minnis	Tom Mustard
Victor Matoush	Kathleen Meagher	John Minto	Michael Myers
Chris Matthews	Howard Mechtild	Georganne Mintun	Lawrence Nagel
William Matthews	Richard Medley	Louise Mitchel	Rob Nagle
Robert Matthews	Alfred Medley	Brent Mitchell	Lew Nash
Richard Mattos	Tamara Medley	Chuck Mitchell	Paul Nash
RA Mattos	Grant Medley	Zephyr Mitchell	Douglas Nash
Gregory Mattos	Bruce Meek	Karen Mitchell	Loren Nassbaum
Laura Mattz	David Meeker	Fred Mittleman	Douglas Naverson
Franklin Mauntz	PJ Meier	Toshio Miyake	Ryan Navickas
Jonathan May	Helen Melick	Inara Miyake	Eric Navickas
John Mayben	Rachel Melissa	David Moehl	Ryan Navickas
Teresa Mayer	Chris Melotti	James & Shirley Moffat	Deborah Nawa
David Mayer	John Melson	Jacqueline Moffatt	Robert Naymik
Ed Mayer	Anna Menanno	Moksha Mokma	Terry Nelsen
Bob Mayers	Susan & Gino Menanno	Renee Mollan-Masters	Arron Nelson
Richard Mayfield	Cathy Mendell	Craig Monen	Mark Nelson
Joanne McAdam	Mateo Mengis	Jeffrey Monosoff	Stacey Nelson
Woutie McAdams	Michael Meredith	Robert Montgomery	Carl Nelson
Pat McAleer	Mike Meredith	Blair Moody	Rex Nere
Esther McAlpin	Colleen Merickel	Carol Moody	Ralph Neuman
Michael McAndrews	David Merritt	Rick & Pamela Moon	Martha Newell
Jas McArthur	Len Merryman	Marlene Moore	Barbara Newell
Barbara McAusland	Butch Meruste	Terry & Will Moore	Denise Newick
Angelina McClean	Mike Messenger	Catherine Moore	Gary Newland
Marcy McClintick	Cal Messerli	J.Robert Moore	Daniel Newman

Tyler Newman	Mitch Pallotta	Erika Petitt	Len Ramp
Judith Newton	Donna Palmer	Bill Petitt	Jo Ramsey
James Newton	Mary Palmer	Koko Petitt	Jacqueline Randall
Jennifer Newton	Monica Palmesano	Frances Petschek	Don Randall
Kimberlina Nichols	Candace Palmesano	Kathleen Petty	Russ Rapper
Ed Nicholson	Mike Papas	Alan Phelps	John Rask
NR Nicholson	Phil Paquin	Chester Phillips	Ginger Rasmussen
Jac Nickels	Aaron Pardee	John & Nancy Phillips	Steven Rath
Bill Nielsen	Sava Parisi	Richard Phillips	Euli Rath
Tory Nieto	Daniel & Susan Park	Doug Phillips	Chris Rawlings
Tony Nieto	Liola Parker	Steve Pierce	RA Ray
Rich Nilsen	Heidi Parker	Neilia Pierson	Mike Ray
Vivian Nininger	Eric Parkinson	Ivan Piesh	Gary Ray
Linda Nisbet	Steve Parmewter	Kiley Pinder	Matt Ray
Jerome Nitzberg	Kristin Parrish	Matthew Pinkerton	Gisela Ray
Robby Noack	Laurie Parrish	Don Pinkham	Joseph Rayburn
Gary & Joyce Ann Noleroth	Matt Parrish	Marcia Pinneau	Chris Rayburn
Paul & Robin Noll	Lisa Parrish	Tim Pio	Joe Rayburn
Larry Nollenberger	John Parsons	Donna Pioli	Joseph Raybyrd
Pete Nordquist	Mary Passero	Kelly Pipgras	Tracie Raymond
Peter Nordquist	Randy Passey	Jim Pittenger	Rebecca Rdesinski
Jeff Norman	Kathy Passmore	Elaine Plaisance	Ellie Read
Jeffrey Norman	Chaya Patchell	Judith Platt	Tim Ream
Julie Norman	Darryl Pate	Daniel Platter	Kathryn Reder
Cynthia Norton	Hedelies Pate	Jason Plotts	Adam Redford
E. Jeanne Norton	Carole & Colin Patrick	Bob Plummer	Ray Redpath
Kirsten Novak	Brian Patridge	Ryan Poe	Dennis Reed
Tsutae Novick	Monica Patridge	Ray & Anita Polani	Robert Reed
Victor Novick	Lorna Patterson	Sherre Polumsky	Erich Reeder
Gordon Nunuolly	Bruce Patterson	R. Kenneth Pons	Justyn Reese
Jeromie Nutting	Judith Patterson	Eloise Ponte	Dorsey Reeves
Naomi Nystrom	Tia Patterson	Andrea Porfirio	Adele Regnier
Harmony O.	Jeff Pattschull	Carol Porto	Angelica Rehkugler
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RESPONSE FROM OTHER GOVERNMENTS, ELECTED OFFICIALS AND AGENCIES

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Federal Agencies

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

November 4, 2003

Reply To
Attn Of: ECO-088

98-078-AFS

John Schuyler, Acting District Ranger
Ashland Ranger District
United States Forest Service
Rogue River National Forest
645 Washington Street
Ashland OR 97520

Dear Mr. Schuyler:

We have reviewed the draft Environmental Impact Statement (EIS) for the **Mt. Ashland Ski Area Expansion, (CEQ Number: 030337)** in Ashland and Scott River Ranger Districts, Rogue River National Forests in Southwestern Oregon. We have conducted this review in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The draft EIS examines five action alternatives and the no-action alternative. Alternative 1, the no-action alternative, would continue operation of the existing ski area facility and continue with existing management activities. Alternative 2, the proposed action, would include development of new ski areas including ski lifts and runs on the east and west sides of the Middle Fork of the East Fork of Ashland Creek (the Middle Fork), west of the current ski area, widening of existing runs, development of a tubing facility, several guest service buildings, lighting, a number of infrastructure improvements, and expansion of the existing parking lot. Alternative 3 is similar to Alternative 2 but avoids locating ski runs and lifts on the west side of the Middle Fork. Alternative 4 places the expansion area about a half-mile to the east of the existing ski areas at a location referred to in the EIS as "The Knoll." Alternative 5 adds additional ski terrain and lifts mostly within the present ski area "footprint." Alternative 6 is very similar to the proposed action, but it reduces ski facility development in the Middle Fork. Alternative 6 is identified as the US Forest Service's preferred alternative in the EIS.

We commend the Forest Service for responding to public comment by making substantial changes in the proposed action since the original draft EIS was published in February 2000. We have rated the preferred alternative in the EIS, EC - 2 (Environmental Concerns - Insufficient Information). Our major concerns are that the Ski Area expansion may increase erosion in the highly erosive soils of the expansion area, causing water quality effects downstream in Cottonwood and Ashland Creek, the latter of which is the City of Ashland's water supply; the addition of impervious surface for parking could degrade water quality in Cottonwood and Ashland Creek; and ski area construction may adversely affect the flow regime and wetlands in upper Ashland Creek during low flow situations in the drought season. In addition, we are concerned that watershed scale effects to riparian reserves cannot be ruled out, which would put some Northwest Forest Plan (NWFP) Aquatic Conservation Strategy objectives at risk of not being met.

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Accordingly, we believe that the most environmentally preferable development alternative would be Alternative 3, or some similar project design that limits constructing ski lifts and runs to the east side of the East Fork of the East Branch of Ashland Creek, and reduces the effects to all of these resources over the entire project site. We concur with the Forest Service that Alternative 6 is environmentally preferable to Alternative 2.

This rating and a summary of our comments will be published in the *Federal Register*. A copy of the rating system used in conducting our review is enclosed for your reference. Thank you for the opportunity to review this draft EIS. If you would like to discuss this letter, please contact Jonathan Freedman at (206) 553-0266.

Sincerely,

Judith Leckrone Lee, Manager
Geographic Unit

Enclosures

EPA's Detailed Comments on the Mt. Ashland Ski Area Expansion

Purpose and Need

The purpose and need discussion has been greatly expanded from the previous draft to specifically analyze each separate goal the project is attempting to achieve and describe how the EIS developed each alternative to respond to the mix of needs presented. The EIS also more fully discusses the question of skier demand in local, regional and national contexts. We generally concur with Purposes 1-5, and strongly support Purpose 6: Maintain and Improve Trend of Watershed Recovery.

Alternatives

The EIS has taken a thorough look at alternatives, including the addition of Alternative 4, which examined expansion in the Knoll area, and the addition of Alternatives 3, 5, and 6, which respond to environmental considerations that were added to project goals since preparation of the original EIS. We commend the Forest Service for being responsive to public input and making major improvements in the analysis of alternatives in order to minimize environmental impacts.

We have a strong preference for Alternative 3. Based on information presented in the EIS, we conclude that in the critical area of effects to aquatic resources, including water quality, instream flows, erosion and sedimentation, Alternative 3 would entail less risk of environmental damage in Ashland Creek basin than with either Alternative 2 or Alternative 6. This is because ski lifts and ski runs would be confined to the east side of the critical upper portion of the East Fork drainage. In addition, Alternative 3 limits both direct and indirect impacts to the McDonald's Peak Roadless Area and avoids direct impacts to the regionally rare Engelmann spruce grove. According to the information in the EIS, Alternative 3 accomplishes most of the terrain balance and diversity purposes as well or almost as well as Alternatives 2 and 6 and does so at less economic risk than the latter two. According to information in Chapter 2, the substantive difference between Alternatives 2, 3 and 6 is that the first two create about 25% more novice terrain and 20% more intermediate terrain than Alternative 3. In Appendix I of the EIS, the financial feasibility analysis states that "the performance of 2, 3, and 6 is reasonably similar." It also states that Alternative 3, unlike the other alternatives, yields a favorable economic result under low, medium, and high visitor scenario trends. This figure is attributed to lower capitalization costs, and because less capital is put at risk. We recommend that the Forest Service select Alternative 3, or a version of it that confines development to the east side of the East Fork drainage.

Water Quality and Impervious Surfaces

EPA has concerns about potential project effects on water quality in Ashland and Cottonwood Creeks. Ashland Creek discharges into Reeder Reservoir, the source of water supply for the City of Ashland. Reeder Reservoir is a Clean Water Act Section 303(d) listed water quality limited water body for sedimentation. Upper Ashland Creek is considered impaired and may be listed as impaired on the 303(d) list for high temperatures. There is little data on Cottonwood Creek, although it is a tributary to the Klamath River, which is classified as an impaired stream.

We are concerned about the addition of impervious surface for the expansion of parking at the

Mt. Ashland Ski Area. Construction could increase sediment delivery to the headwaters of Cottonwood Creek, while use of the parking lot and operation of could increase the discharge of contaminants and sediment from parking lot runoff and road sanding. Maintenance of ski runs with motorized equipment in closer proximity to surface waters than before could cause an increase in the discharge of contaminants, particularly in Ashland Creek. The EIS should include specific estimates of increases in contaminant loading, and about the proposed treatment and control of pollutants from the new impervious surfaces and ski runs. This may include the location, size and type of oil / water separators, stormwater ponds, water quality swales or settling ponds and proposed operation and maintenance of these facilities. We are also concerned about the predicted lack of effects of vegetation and land clearing on stream temperatures in the project area. The EIS should provide some justification to support the conclusion that no changes to stream water temperatures would occur.

Instream Flows

EPA has concerns about potential project effects on surface water flow in Ashland Creek, which as noted above, discharges into Reeder Reservoir, the source of water supply for the City of Ashland. Ski area expansion may cause a change in the flow regime in creeks draining the project area, particularly Ashland Creek. All action alternatives include the addition of impervious surface, and disturbance associated with vegetation and land clearing associated with the Ski Area expansion such as construction of ski runs and lifts on steep slopes with unstable soils. These activities can change the periodicity of surface runoff, increase creek flows during "rain on snow" storm events, and increase the potential for erosion.

Expanding the Ski Area on Ashland Creek may also reduce groundwater storage near the surface, resulting in the decrease of low flow surface water during the drought season, which may cause impacts to special aquatic sites, increases in water temperature, water quality impacts and a reduction in water availability downstream. Members of the Ashland community have reported observations of substantial surface flow in the Middle Fork and well hydrated vegetation in the immediate vicinity of the creek in August 2003 in contrast to much lower flows and vegetation conditions outside the riparian area (Headwaters Group October 2003). This suggests that the substrate of the Middle Fork drainage within the project area may be acting as a significant groundwater recharge or discharge area throughout the summer. If so, there could be a risk that construction of ski lifts and ski runs could disrupt this function, potentially lowering drought season flows in the Middle Fork and removing hydrology from vegetation communities in the Special Use Permit area.

The EIS needs to present more information on current surface flows in the Middle Fork. The figures which appear on III-63 do not present a complete picture of existing flow conditions in the Middle Fork. There is also little specific information in the EIS regarding soils or substrate in this part of the project area that could explain either increased groundwater storage capacity and discharge or these surface flows. Given the potential impacts to surface flow, the EIS should clarify where the data has been collected, and what the period of record is so it is possible to determine how much water might be discharged from the project area from the Middle Fork. Based on the information presented and the customized stream flow model, discussed again in Chapter IV on Page IV-71, the EIS predicts very minor increases in flow in both Ashland Creek, but does not discuss in sufficient detail how the conclusions were derived. The EIS should describe the use and application of the stream flow model, and support the results with additional explanation. Without such explanation, it is difficult for EPA to

determine what the indirect effects to the flow regime might be, and what referred effects might occur to vegetation communities such as project area wetlands in the Middle Fork. The EIS and the Record of Decision (ROD) should commit to monitoring surface flows in Ashland Creek during and after construction for any effects to surface flows, and if any effects are found, should also commit to performing mitigation measures to either minimize or compensate for the effects.

Soil Erosion

The potential for soil erosion is a major concern for this proposed project. The EIS acknowledges that many soils at the Ski Area have granitic origins which have a higher potential for surface erosion and failure because of steep slopes, often unconsolidated material and coarse grain size. Disturbed areas such as road cuts in the vicinity of the project site show large quantities of unconsolidated granite being moved downslope. Construction would consist of removing vegetation and topsoil and disturbing soil cover, all of which could greatly increase erosion. The EIS, on Pages II-13, and Map III-3, shows that some construction areas in riparian zones in the Ashland Creek watershed have substrate classified as having high potential risk for both sediment delivery and landslides.

On Page III-19, the EIS states that the Forest Service used the Water Erosion Prediction Project (WEPP) model for predicting runoff, choosing "Disturbed WEPP" to characterize the possible effects of constructing the proposed ski area expansion. Disturbed WEPP is described by those who developed it as suitable for sites with little soil disturbance but a definable amount of soil residue cover. Disturbed WEPP is not intended for sites "where soil is severely disturbed or compacted, such as roads and trails (or) construction sites" such as the Ski Area (Draft Disturbed WEPP / WEPP Interface for Disturbed Forest and Range, Runoff, Erosion and Sediment Delivery, USDA Forest Service, 2/00). The types of disturbance model users can select are typified by a 5-year-old forest, a heavily logged site, a forest one to two years after a prescribed fire, or a forest two to three years after a wildfire, which do not appear to match up well to site conditions at the Ski Area during construction.

In addition, the EIS states that measured rates of soil erosion to granitic soils have been extrapolated from Idaho, and these rates have been compared to the results of sediment monitoring at Mount Ashland from the 1970s and 1980s. While we acknowledge that these estimates use the best existing information, we would have more confidence in them if 1) we could be certain that the WEPP model was appropriate for the site conditions and 2) if the results had been compared to measured recent erosion rates from the project site. Additionally, it may not be correct to compare roads to rills on the construction site (III-26). The results of the Montgomery report (1977) described in the EIS are an indication of how important assumptions about erosion rates for different land use types can influence the results of any model. The EIS should therefore use more recent soil erosion data from the project site to derive predicted erosion rates.

The EIS states that erosion will more than double in the Ashland Creek basin under all alternatives aside from alternatives 1 and 5. The EIS should better explain why alternative 3 is predicted to have equal erosion to Alternative 2 and greater erosion than alternative 6 when these latter alternatives would require more grading and construction over a larger area. The restoration projects only account for a decrease of 5 cubic yards of sediment erosion in Ashland Creek and .2 cubic yards in Cottonwood Creek. The EIS should also better explain how estimated annual sediment delivery to streams was derived, and include more complete descriptions of ongoing monitoring efforts designed

to predict the amount of erosion that might be expected from construction. In addition, the EIS should include a more complete description of the size, location, and plans for operation and maintenance of sediment ponds.

The historical data the EIS displays about the effects of the original ski area construction (Page III-33) shows a large "pulse" of erosion in the years following the original development. The estimates were based on aerial photo interpretation, not actual systemwide data collection. The analysis attributes most of this to the construction of new roads, which should not occur on as large a scale for the expansion. Chapter IV of the EIS should discuss whether some risk remains for such an erosion pulse to occur, given project site substrate and soils, the relative size of the new work, and the lack of ground-truthed data from the critical initial post-construction years. Some conclusions may be drawn from the historical experience with erosion control measures at the Ski Area as presented in Chapter III and Appendix E.

Parking

The Forest Service has stated in informal communications with this office that there are parking shortages on approximately 12-14 days per year, usually when there has been recent snow and the weather is clear. The EIS states that the existing lot is narrow and difficult to maneuver in when full. Vehicles are often parked on the County Road leading to the Mt. Ashland Ski Area during busy weekends and holidays, causing safety concerns.

In conversations with Forest Service staff in July 2002, we expressed concerns about the addition of impervious surface for expanded parking and requested that the Forest Service consider alternatives such as expanded shuttle service that focus on getting more users to the ski area, not necessarily more cars. The Forest Service should consider directing the Mount Ashland Association (MAA) to develop a bus shuttle service that would operate from the junction of the Ski Area access road with Interstate 5 to minimize creation of new impervious surfaces for parking. Such a shuttle service would transport skiers to and from the ski area on busy weekend days when the parking lot is full. Members of the local community have informed our office that there is State of Oregon land (Department of Transportation) and private land that may be available for vehicle parking. It may be possible for MAA to consider a pricing scheme that encourages ski area users to car pool by charging fees (or higher fees) to autos with less than 3 persons for parking at the ski area. This could provide additional income for MAA and incentive for ski area users to car pool or use the shuttle service from the base of the County Road. While we acknowledge that the EIS describes that MAA has incurred a cost for sponsoring a shuttle service from the City of Ashland, we would strongly encourage the Forest Service to fully consider such an option in the EIS. The use of pricing incentives at the ski area, along with providing free parking along the Interstate 5 turnoff could help minimize the costs to MAA and most importantly, to minimize the creation of impervious surface at the Ski Area.

If this option proves unworkable, we would recommend moving the new parking area to the Alternative 4 location at the Knoll, where the risk of stream sedimentation and contamination may be less than at the proposed site for all of the other Alternatives. The Knoll is characterized in the EIS as an area with more stable slopes, at much greater distance from areas mapped as Hazard Zones 1-2 (although the EIS does not predict a reduction of sediment delivery to Neil Creek compared to Alternative 2). The Knoll may also be a site where treatment of runoff may be easier to manage. This

option would still require operation of a shuttle to take ski area users the short distance to the ski area on busy weekends. However, it would reduce or eliminate the present hazardous situation, where drivers searching for spaces share a highly confined paved area with pedestrians, it could minimize the release of contaminants to surface waters.

Wetlands

The EIS states that Upper Ashland Creek within the project study area contains about 28.4 acres of wetlands, or about 2.6% of the project survey area (based on National Wetland Inventory data). There are 187.13 acres of wetlands in the entire Upper Ashland Creek watershed, about 1.4% of that survey area. Based on this data, the study area contains about 6.5% of the wetlands within the Upper Ashland Creek basin. Wetlands in the project area are presently almost all undisturbed and functioning normally. Direct effects to wetlands are forecast to be small under all of the alternatives (as high as .54 and .83 acres for alternatives 2 and 6 respectively). However, the listed indirect effects of Alternatives 2 and 6 are greater (7.33 and 8.36 acres respectively). The predicted effects under Alternative 3 are less than for Alternatives 2 and 6. Affected wetlands include high value forested wetlands supporting alder, regionally rare Engelmann spruce and montane meadows.

The Specific Watershed Effects Section starting on Page IV-74 discusses the effects from the construction of ski runs and ski lifts, including land clearing, contouring, excavation, filling and addition of impervious surface on various aquatic functions in wetlands and riparian areas, but concludes that implementation of the proposed Best Management Practices (BMPs) would minimize effects. It is somewhat difficult for reviewers to evaluate whether the proposed BMPs are sufficient to bring effects to a minimal level until it can be seen how BMPs are applied and perform in a specific location. The EIS and the ROD should include a commitment to monitor affected wetlands to verify whether BMPs are proving successful, and if not, employ contingency measures to ensure that effects are kept to the predicted minimal level.

Mitigation, Restoration Measures, Best Management Practices (BMPs) and Monitoring

Proposed mitigation measures, proposed BMPs and monitoring appear in Chapter II and in the resource impact analysis Sections of Chapter IV. The list of watershed restoration projects listed in Chapter II is detailed. Proposed mitigation, BMPs and monitoring discussions are distributed throughout Chapter IV and sometimes described in general terms (see above Section). However, it is difficult to evaluate how much compensation for lost natural resource functions may be predicted from implementation of these projects, and difficult to tell what impacts the projects are intended to compensate for, if done as mitigation. The Forest Service should create a separate Section in Chapter IV, or a Section in the ROD summarizing mitigation, restoration, BMPs and monitoring projects, with a description of the intended compensation for specific impacts, as appropriate.

Implementation of the Northwest Forest Plan Aquatic Conservation Strategy

The Northwest Forest Plan's (NWFP) Aquatic Conservation Strategy (ACS) includes four primary components, riparian reserves, key watersheds, watershed analysis, and watershed restoration, and nine objectives. Since the proposed action takes place on lands within the NWFP area, the EIS

must discuss whether the action is consistent with the primary components and NWFP Standards and Guidelines for the ACS. The EIS has broken out this analysis by watershed.

The Standards and Guidelines for Riparian Reserves state that intermittent streams, if in unconsolidated material or granite, should include buffers ranging from 75 to over 200' depending on the slope class (See graph entitled Ecological Protection Width Needs on Page B-15 of the NWFP ROD). The EIS should state whether these guidelines were used to establish final riparian area boundaries.

The NWFP Standards and Guidelines for Recreation Management under Riparian Reserves specify that new recreational facilities within riparian reserves should be designed so as not to prevent meeting ACS objectives, and that existing developed recreation practices that retard or prevent attainment of ACS objectives should be adjusted or eliminated.

The EIS should describe how the proposed expansion and continued operation of the Ski Area will not preclude or retard meeting ACS objectives. The EIS shows that the Ski Area expansion will encroach on riparian reserves in the project area, particularly in Ashland Creek. The document also states that site scale effects to the ACS objectives of landscape features, watershed connectivity, physical integrity of aquatic systems, water quantity, floodplain inundation regime and plant community structure and function would be degraded. The analysis presumes the effectiveness of proposed BMPs and restoration measures to determine that the ACS objectives of water quality and sediment regime would be maintained. The EIS should explain in more detail how the proposed BMPs would accomplish this.

The EIS further concludes that the project would maintain ACS objectives at the watershed scale. The EIS presumes the effectiveness of proposed BMPs and restoration measures to determine that objectives are maintained at the watershed scale, and also relies upon the relative small size of the affected site in comparison to the watershed to arrive at this effect determination. The ACS Strategy Objectives of water quality, sediment and water quantity impacts on the Middle Fork of the East Branch of Ashland Creek may not be confined to the site but could extend a considerable distance downstream. However, the analysis states that effects would not be measurable at the watershed scale. The information presented in the EIS is not sufficient to support these conclusions. The EIS should describe in more detail how the Forest Service arrived at the watershed effect determinations of "maintain" for these three ACS objectives.

Cumulative Watershed Effects

The EIS states that the cumulative watershed effects, with the exception of the Upper Ashland Creek watershed, are minimal due to the small amount of affected area within the other watersheds. Table IV-22 uses a Forest Service model called the Equivalent Roadless Area (ERA) which considers the percentage of roaded area, develops a Threshold of Concern based on a number of hydrologic and substrate characteristics such as slope stability and channel sensitivity to derive a Watershed Sensitivity Level risk ratio for project area watersheds in the analysis area, and finally a risk ratio. We recommend that the EIS explain the data in Table IV-22 a little more fully. Neither the past impacts on the affected watersheds, the present conditions nor the assumptions of future activity that the model used are

discussed in any detail. Also, the final risk ratio numbers are somewhat difficult to interpret. Ratios for upper Neil Creek are at approximately 0.940, compared to much lower ratios for the other watersheds. The EIS should explain the sensitivity of these numbers to changing resource conditions in the ERA model. What and how much restoration activity or negative impact would cause the risk ratios to move significantly? How significant is the difference between a ratio of 0.268 and 0.939, or 0.939 and the stated yellow flag threshold of 1.0? Some of this information may be explained in Appendix E, but a summary discussion should appear in the main document to assist reviewers in interpreting the results.

D03-3222
10/10

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 336
Portland, Oregon 97232-2036

IN REPLY REFER TO:

003 - 737
11

State Agency

003-17
12

September 12, 2003

ER 03/626

John Schuyler, Acting District Ranger
Ashland Ranger District
645 Washington Street
Ashland, Oregon 97520

Dear Mr. Schuyler:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Mt. Ashland Ski Area Expansion, Rogue River and Klamath National Forests, Jackson County, Oregon. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Preston A. Sleeper
Regional Environmental Officer



Bob Rice
<Robert.D.RICE@wrds
tate.or.us>

To: Comments-pacificnorthwest-rogue/river-ashland@fs.fed.us
cc: Larry.P.MENTEER@wrds.state.or.us
Subject: Mt. Ashland Ski Area Expansion

08/01/2003 01:35 PM

Thank you for the opportunity to comment on the DEIS for the Mt. Ashland Ski Area Expansion.

The Water Resources Department's comments are focused on the water quantity. There are two major issues: 1) Will the expansion injure water rights and 2) Does the Mt. Ashland Ski Area have or need a water right?

1. Will The Expansion Injure Water Rights?

Page I-36 states that the ski expansion "could affect the timing, volume (yield) and distribution of water and flow regime of streams, meadows and wetlands." Are there water rights in the area that will be affected?

2. Does The Mt. Ashland Ski Area Have Or Need A Water Right?

Page II-28 states "An underground spring provides the source of the ski area's drinking water. Its flow is estimated at 12 gallons per minute." The various alternatives also indicate that additional water storage capacity is needed.

A water right may be necessary for the spring. If a water right is needed for the spring, then additional rights will be needed for storing the water. The following information provides more information on whether a water right is needed.

The State considers spring water to be private property if the flow from the spring is insufficient to form a natural watercourse off of land under a single ownership. A natural watercourse is a defined channel with a perceptible outlet. Generally flows have to be quite low throughout the year not to have created a natural watercourse. If a spring or the area down gradient has been altered in a manner that prevents the spring water from forming a natural watercourse off of the property, then water rights are required.

A spring is defined in the statutes as "a point where water emerges naturally from the earth as a result of gravity flow or artesian pressure" (ORS 537.800). The use of water from a spring, which would not run off the property in a defined channel under natural conditions, is exempt from water right requirements. The rate at which water may be used under the exemption is limited to that amount which would emerge naturally from the ground. "Naturally," in this context, means before any alterations, which improve storage, access, or the ability to appropriate water.

Spring owners may develop their springs to improve storage, access, or the ability to appropriate the water by a variety of methods including digging out the spring, laying perforated pipe, or building a cistern where the spring emerges. If the spring development results in an incremental increase in flow, then the additional water produced is ground water. The use of the incremental increase in flow is subject to the ORS 537.545 exemptions or permit requirements, as appropriate. The exemption for any single industrial or commercial purpose is an amount not exceeding 5,000 gpd.

City Official

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**CITY OF
ASHLAND**

If you have any questions, please call me at (503) 378-8455 x 238 or Larry Menteer, the local Watermaster in Medford at 541-774-6880.

Bob Rice Robert.D.Rice@wrд.state.or.us
Field Services Division Voice: 503-378-8455, ext. 238
Water Resources Department FAX: 503-378-8130
158 12th Street NE
Salem, Oregon 97301-4172 <http://www.wrd.state.or.us>

October 16, 2003

John C. Schuyler
U.S. Forest Service
645 Washington Street
Ashland, OR 97520

Dear Mr. Schuyler:

Enclosed are comments approved by the Ashland City Council on October 7, 2003, in response to the July 2003 Forest Service request for Comments on the Draft Environmental Impact Statement (DEIS) for the Mt. Ashland Ski Area Expansion.

Also enclosed is a printout of all comments received by the City of Ashland related to the proposed expansion. These are being sent to you as background information. They do not represent the opinion of the City of Ashland.

I would like to thank you and your staff for the many hours that you have spent with city staff and the City Council assisting us with the review of the DEIS.

If you have any questions regarding the City's comments on the DEIS please feel free to contact me.

Sincerely,



Gino Grimaldi
City Administrator

Enc:

ADMINISTRATION
20 East Main Street
Ashland, Oregon 97520
www.ashland.or.us

Tel: 541-488-6002
Fax: 541-488-5311
TTY: 800-735-2900



PHOTO DIVISION: 13/24/03

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DEIS COMMENTS

SUBMITTED BY THE CITY OF ASHLAND, OREGON
October 7, 2003

on the

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

MT. ASHLAND SKI AREA EXPANSION

Ashland Ranger District
Rogue River National Forest
Jackson County, Oregon

Scott River Ranger District
Klamath National Forest
Jackson County, Oregon

The following comments are provided by the City of Ashland (City) in response to the July 2003 Forest Service request for Comments on the Draft Environmental Impact Statement for the Mt. Ashland Ski Area Expansion. These comments were approved by the Ashland City Council on October 7, 2003.

Comments are organized under topic headings for ease of consideration. However, issues are interrelated and commonly impact or encompass other issues under other topic headings. Issues should not be narrowly construed or evaluated, based on topic headings. If additional information or clarification is needed, please contact:

Gino Grimaldi
City Administrator
City of Ashland, Oregon
City Hall
20 East Main Street
Ashland, OR 97520
541-488-6002
Fax: 541-488-5311
www.ashland.or.us

I. WATER QUALITY & QUANTITY - Any development in the Ashland Creek Watershed has the potential to affect water quality and quantity for the citizens of Ashland. Water quality and quantity is of the utmost importance to the City and the City urges the Forest Service to take all steps necessary to protect this resource.

A. The Forest Service should require the Mt. Ashland Association (MAA) to hire an independent third party Quality Assurance/Quality Control (QA/QC) Team of 2-4 persons highly specialized in the soils and hydrology. The QA/QC Team should be selected by a community team of 6-9 persons, including City Staff, Forest Service Staff, and interested community groups. The QA/QC Team should be paid for by MAA and should report directly to the City and Forest Service and give direction to MAA and its contractor. The QA/QC Team should be hired prior to construction design completion so that the erosion control, mitigation, restoration/ remediation activities can be defined through a specific erosion and sediment control strategy prior to construction bidding. Once a contractor is selected, that contractor must understand the authority of the QA/QC Team and be responsive to its recommendations.

The QA/QC Team should monitor:

1. Effects of expansion on soils: QA/QC Team should analyze each specific area of construction impact to define the mitigation/restoration activities associated with each soils type.
2. Effects of erosion: The QA/QC Team should provide specific BMP (best management practices) to significantly reduce or control the negative impacts due to erosion. This set of BMPs must be specific to the alternative selected and be fully defined for the soils types.
3. Over-snow timber removal: It is recommended that this be the primary removal method and that if work cannot be completed over snow, then that proposal be submitted to the QA/QC Team for advice and approval.
4. Construction methods to control erosion and sedimentation: Just as standard erosion control strategies are in place, specific BMPs to control sedimentation loading should be included in the erosion and sediment control strategy developed by the QA/QC Team.
5. During construction and after construction completion, the QA/QC Team should define a monitoring strategy to ensure post-construction BMPs are in place to minimize disruption to restoration activities due to storms and snow melt.
6. To meet state and federal requirements, a Stormwater NPDES permit must be provided. The permit will necessitate an Erosion Control Plan and a Stormwater Management Plan for construction. The QA/QC Team should develop this strategy for the Contractor.

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7. To eliminate the potential for petroleum leaks from construction equipment, the QA/QC Team should evaluate the use of vehicle diapers or other petroleum containment practices.

8. The QA/QC Team should evaluate whether any work should be allowed in the mapped wetlands area. This will affect the construction of the bridge for options 2 or 6, and the QA/QC Team should make specific recommendations for that area of construction. If there is any impact (direct or otherwise), mitigation measures should be defined and directed to fully restore the wetlands.

9. Along with this wetlands area impact, the QA/QC Team may support the recommendation to complete work within the riparian reserve area to be completed as an over-snow operation, or that work be completed toward the end of the dry season (end of summer) to minimize effects.

10. Whether there is complete vegetation clearing within the stream reaches should be clarified as a part of the construction design. This should be monitored by the QA/QC Team. If there is significant vegetation clearing, then mitigation measures to restore vegetation should be defined and implemented.

11. Any significant use of blasting is to be discouraged and should be referred to the QA/QC Team for its analysis and recommendation.

12. The lifts have a straight haul rope and are typically cleared to a width of 40 feet. As clearing can impact erosion, the width should be as narrow as practical to allow for maintenance and safety.

13. Erosion control methods should include silt fencing and fabric. These are only two of the BMPs available. The QA/QC Team should provide a detailed mitigation plan.

14. There may be areas to add seeding, mulching and re-vegetation to reduce erosion. The QA/QC Team should evaluate those opportunities.

B. The Forest Service and the MAA should be required to monitor creek impacts (erosion and sediment loading primarily) at the 2060 Road at the crossing of the middle fork of the east fork of Ashland Creek.

C. MAA must provide assurances to the City and FS that they will take corrective actions as recommended by the QA/QC Team.

II. FINANCIAL RISK *Financial commitments of the City and MAA for reclamation of the site, should the ski area ever be closed, need to be quantified and qualified in the final EIS.*

A. The EIS should address and quantify the reclamation costs for both the existing ski area and the selected alternative. The Forest Service should require from the city, as the permit

holder, written assurance that it has agreed with the ski area operator that sufficient assets exist to cover the quantified reclamation costs.

B. The EIS should specify the reclamation requirements or standards for the ski area.

II. FIRE RISK *The location, design and type of construction for additional ski area guest services buildings should take into consideration the need for fire protection features within these buildings to prevent the potential for building fires spreading to adjacent wildland resources.*

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CITY OF
ASHLAND

October 22, 2003

John C. Schuyler
U.S. Forest Service
645 Washington Street
Ashland, OR 97520

Dear Mr. Schuyler:

In a letter to you dated October 16, 2003, I transmitted the City of Ashland's comments regarding the Draft Environmental Impact Statement (DEIS) for the proposed expansion of the Mt. Ashland Ski Area. At the City Council meeting of October 21, 2003, the City Council approved additional comments regarding the DEIS.

Enclosed for your convenience are the comments previously submitted to you that were approved by the City Council at its meeting of October 7, 2003. Also enclosed are three documents that were approved by the City Council at its meeting of October 21, 2003. The titles of the three documents are as follows:

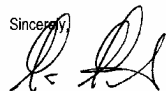
- Additional City of Ashland Comment for Phased Construction and Detailed Study in the Middle Fork
- A Resolution Requesting the Forest Service to Consider a Community-Based Alternative in the Final EIS for the Mt. Ashland Ski Area
- Amendments to DEIS Comments Submitted by the City of Ashland, Oregon on the US Forest Service Mt. Ashland Ski Area Expansion DEIS

You should give all of the documents equal consideration despite the fact that they have come to you in various formats.

Please note that the "Additional City of Ashland Comment for Phased Construction and Detailed Study in the Middle Fork" and the "Amendments to DEIS Comments Submitted by the City of Ashland, Oregon on the US Forest Service Mt. Ashland Ski Area Expansion DEIS" represent additions and amendments to the original comments submitted to the Forest Service.

If you have any questions regarding the city of Ashland's DEIS comments, please let me know.

Sincerely,



Gino Grimaldi
City Administrator

Enclosures

ADMINISTRATION DEPARTMENT
20 East Main Street
Ashland, Oregon 97520
www.ashland.or.us

phone: 541-488-6002
fax: 541-488-5311
tty: 800-735-2900



NOTE: Pages 2-5 of the second City of Ashland Letter (D03-3221) are not reproduced here as they are identical to pages 2-5 of the City's first letter above (D03-2168).

D03-3221
4/13

Additional City of Ashland Comment for Phased Construction and Detailed Study in the Middle Fork

Prepared by Kate Jackson, October 16, 2003

Concept

To supplement the QA/QC team's efforts on the Forest Service approved alternative, IF the expansion includes the Middle Fork.

To address broader concerns about water quality, quantity, forest health, wildlife habitat and landslide hazard impacts in the Middle Fork of the East Fork of Ashland Creek.

Assumptions

The City of Ashland (City Council) and the majority of commenters from the community want to see Ski Ashland improved and survive (even thrive) to serve the Rogue Valley as a viable economic and environmentally-sound, locally-owned business.

The Council has adopted staff recommendations for a QA/QC team that would advise on any proposed work during the construction of a project approved by the Forest Service. Most relevant to this supplemental proposal are Items 1.A.5, 1.A.8, 1.A.9 and 1.A.10.

Questions remain about impacts of new development (tree removal, surface exposure, human disturbance) both inside and outside the existing developed ski area, but particularly in the Middle Fork area.

There is a long history of the City trying to clarify and enhance its working relationship with the Forest Service in our watershed. It is the City's intent to encourage further consultations and cooperative projects with the Forest Service in the watershed.

The most recent city documents include: Memorandum of Understanding, May 1996; Ashland Watershed Stewardship Alliance Comment on Ashland Watershed Protection Project DEIS, November 19, 1999; letter to Linda Duffy from Ad Hoc Committee, Watershed Protection Project, September 18, 2000; and City of Ashland Public Works Department Memo to Council dated May 1, 2000 concerning "Comments on the DEIS Mt. Ashland Ski Area Expansion". Further, the City Forest Lands Commission Restoration Project Phase II established its Goals and Guiding Principles in February 2003. (Final report on council agenda Oct 21) Forest Service studies include the 1997 Level II Stream Survey of Ashland Creek, and the Mt. Ashland LSR Assessment.

The City embraces the Valdez Principles. Statements 1 and 2 should be applied to the decision to expand Mt. Ashland Ski Area. "Protection of the Biosphere: We will safeguard habitats in creeks, ponds, wetlands, natural areas..." "Sustainable Use of Natural Resources: We will make sustainable use of renewable natural resources, such as water, soils and forests. We will conserve nonrenewable

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natural resources through efficient use and careful planning. We will protect wildlife habitat, open spaces and wilderness, while preserving biodiversity.”

Proposal

Phasing of construction is already contemplated by MAA for the expansion project. This proposal requests that the Forest Service consider restricting activity in the Middle Fork until Phase Two but allows the installation of Chair LC-6 to proceed in Phase One. Data helpful to final decisions on development in the Middle Fork would be obtained from site-specific analysis during the interim.

If an alternative is approved that allows installation of Chair LC-6, then the following sequence and activities should be undertaken:

A. Ensure the base of the chair lift is outside the Englemann Spruce Grove to the east of the vegetation associated with the wetlands (what G. Badura calls the Upland-appearing timber stands with E. Spruce, soils with high water tables), while still ensuring access from the west. If the associated wetlands vegetation cannot be avoided, then the lift base should be as far east as possible and include design standards to minimize disturbance of the soils and the water regime in that location and to enhance restoration of disturbed areas with native vegetation.

B. Install Chair LC-6 per requirements of the upcoming Forest Service Record of Decision.

C. Install runs to the east of the new chair line only. Delay installation of runs and crossing in the Middle Fork, until Items D and E are completed, shared with the Forest Service and QA/QC team, and the QA/QC team and Forest Service approve the final design details.

D. The Middle Fork drainage has soil types, landslide hazard and hydrology that are different from the existing ski area. During the first phase of installation to the east, employ a multi-disciplinary scientific team to assess the specific, local, forest health impacts of development, the current status of the wetland/E. Spruce grove, and the cumulative effects of forest disturbance on wildlife and hydrology in the Middle Fork. This team should report to the FS (if it is not staffed by FS), and consult with the QA/QC team regarding suggestions for alteration of development plans for the Middle Fork.

E. Use the information and knowledge gained from mitigation and monitoring efforts during and after the east-side construction phase (staff recommendation #5) to refine installation plans in the Middle Fork drainage, including location of runs and crossing, installation methods, mitigation measures to employ, and other recommendations of the QA/QC team. Monitoring should study effects from year-round weather events, not just winter and spring runoff.

F. This phased installation could coincide with the MAA plan for Phase Two and begin four to five years into expansion. The QA/QC and multi-disciplinary teams are in the best position to determine the timeline.

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Assurance of Implementation

One reason Staff and Council request independent QA/QC and scientific teams is that the City of Ashland wants assurance that these efforts will actually take place. Due to funding shortages, the Forest Service has not been able to provide the desired monitoring in the past. The ski area should fund those efforts related to the ski area Watershed Protection Projects outlined by the Forest Service in Chapter II, page 51 of the DEIS, and to the expansion project QA/QC teams requested by the City.

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10/13

RESOLUTION NO. 2003-33

**A RESOLUTION REQUESTING THE FOREST SERVICE
TO CONSIDER A COMMUNITY-BASED ALTERNATIVE IN
THE FINAL EIS FOR THE MT. ASHLAND SKI AREA**

Recitals:

A. The citizens of Ashland have a demonstrated need, interest and commitment to responsible watershed stewardship that protects the municipal water supply,

B. The Forest Lands Commission prepared a 2003 City Forest Lands Restoration Project that acknowledges "forest ecosystems are complex and dynamic and that we cannot understand completely how to manage the interlocking ecological functions of a healthy watershed;" the project directs that management activities be based on thorough site evaluations by experts; that we will continue to draw from the experience of the city's own site-work over the past six years; and that monitoring protocols will be continued and broadened to allow for adaptive management; and

C. One of the goals adopted by the Ashland Watershed Stewardship Alliance in 1999 is to sustain and restore the watershed's capacity to absorb, store and distribute quality water by sustaining and restoring soil health, restoring native vegetation, especially grasses and forbs, re-establishing and maintaining sufficient and effective ground cover, and lowering stream sediment loads; and

D. The City of Ashland established a partnership with the US Forest Service through a Memorandum of Understanding in 1929 and has cooperated on management of the watershed for water values since then; and

E. A coalition of the Headwaters Environmental Center, ski area users and Ashland residents has drafted an alternative that modifies Alternative 3 in the Draft Environmental Impact Statement and which is known as the Community Alternative, the components of which are attached; and

F. The Council determines that the Community Alternative merits analysis by the Forest Service as an additional alternative in the final Environmental Impact Statement.

THE CITY OF ASHLAND RESOLVES AS FOLLOWS:

The Forest Service should analyze the Community Alternative as a separate alternative in the final Environmental Impact Statement for the Mt. Ashland Ski Area. This request is not intended to be an endorsement of the alternative itself.

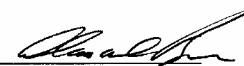
This resolution takes effect upon signing by the Mayor.

This resolution was read by title only in accordance with Ashland Municipal Code

§2.04.090 duly PASSED and ADOPTED this 21 day of October, 2003.


Barbara Christensen, City Recorder

SIGNED and APPROVED this 22 day of Oct, 2003.


Alan W. DeBoer, Mayor

Reviewed as to form:


Paul Nolte, City Attorney

003-3221
4/13

003-3221
12/13

Components of the Community Alternative:

New Terrain

Install the "Dream Ridge Lift" that runs along the ridge next to the Middle Branch area and provides lift access to the top of the Caliban run for beginner and intermediate level skiers as well as for wilderness backcountry skiers and snowboarders in the Middle Branch area.

Install the "North Ridge Lift" (from Alternative #5) and beginning terrain near the existing Sonnet run. This new lift would be located near other beginner terrain and the lodge, where beginners are more likely to use it.

Install a lift and clear additional terrain in the Poma area to provide additional race training terrain.

Install the LC-13 from the base of the Windsor lift to the top of the Caliban run to provide cross mountain access for beginner and intermediate skiers and snowboarders. Currently, beginners must navigate terrain that is significantly more challenging at the top of the Ariel lift in order to get to the beginner and intermediate terrain of the Dream and Caliban runs.

Extend the Caliban and Dream runs and create new intermediate level terrain on the ridge.

Alter the slope of the Sonnet run to remove the steep upper section for beginners.

Widen existing runs to alleviate congestion and increase usable terrain.

Diverse Recreational Experiences

Build a snow tubing facility and lift to offer lower cost winter recreation opportunities to the non-skiing and snowboarding public. We are advocating that this tubing facility be designed to take advantage of natural lanes in this area to reduce the impact to old growth trees and reduce the potential wind problems that tubers will face if the tubing facility is a large open clearcut.

Create the opportunity for wilderness, backcountry skiing in the Middle Branch that is accessible by lift.

Allow experimental glading on part of the existing ski area tree islands to increase the ability of users to ski through the trees.

Skier/Snowboarder Services

Enlarge and remodel the existing lodge to accommodate current use as well as anticipated future increases in skier visits.

Build ticket booths near the parking lot and a rental shop near the lodge to increase the efficiency of the customer service operations.

Replace the expansion of the main parking lot with a shuttle that runs from the base of the access road on busy weekends and holidays.

Build additional parking for the tubing facility and widen the road between the main parking lot and the back lot.

Skier/Snowboarder Safety

Provide an emergency egress route from the base of LC6 to the bottom of the Windsor chairlift to evacuate injured skiers.

Widen the Aisle 2 area to reduce congestion and increase skier safety

Phasing

Initiate the restoration projects identified in the DEIS before any additional work is done on the proposal.

Make upgrades to customer service (lodge, ticket buildings, etc.), add beginner terrain near the lodge, and widen Aisle 2 in the first phase.

Record of Decision

The Forest Service should analyze the Mt. Ashland Ski Area proposal in its entirety, but issue the decision for the proposed Mt. Ashland Ski Area expansion as two separate decisions. One decision will include the two most controversial aspects of the proposal – expansion into the Middle Branch area and expansion of the main parking lot. The other decision will include all other aspects of the expansion plan. This will have the effect of isolating the most controversial aspects of the plan while allowing the non-controversial aspects to proceed.

D03-3221
13/13

County Elected Officials

D03-956
1/1

**Amendments to DEIS Comments
Submitted by the City of Ashland, Oregon
on the US Forest Service
Mt Ashland Ski Area Expansion DEIS**

October 21, 2003

The following comments are offered as a supplement to Comments adopted by City Council October 7, 2003.

1. The QA/QC Team should consist of a minimum of 3 people
2. The soils and hydrology of Mt. Ashland and the proposed expansion are unique. Members of the QA/QC Team should have experience and knowledge of the hydrology and soils of the proposed expansion area.
3. To ensure the intent behind recommending the QA/QC team, the QA/QC team will be understood as having the authority to require the Mount Ashland Association (MAA) and its contractors to abide by the recommendations and direction of the team.
4. The purpose of the QA/QC team is to prevent increases in disturbance in water quality and water quantity of the City's water supply.
5. It is recommended that monitoring of water flows be added to the monitoring of sediment loading and erosion at the 2060 road crossing of the middle fork of the east fork of Ashland Creek.
6. The QA/QC team should monitor the construction design of plans for activity within the reaches of streams, and if there is significant vegetation clearing, the team should prescribe mitigation measures to restore vegetation prior to actual construction.
7. Due to the significant negative impact that a fire at the Mt. Ashland ski area could have on the city's watershed should a fire spread from ski facilities to the forest lands, it is recommend that the city of Ashland Fire Department review the fire protection plans for new facilities and that MAA be required to implement the recommendation of the Ashland Fire Department relating to fire protection.
8. There are a number of comments in the October 7, 2003 comments submitted to the Forest Service that were stated as issues for the QA/QC team to monitor. Items # 3, 4, 6, 7, 8, 9, and 11-14 are better characterized as recommendations of the city of Ashland.



Josephine County Board of Commissioners
Jim Brock · Harold L. Haugen · Jim Riddle

October 2, 2003

John Schuyler
Acting Ashland District Ranger
645 Washington Street
Ashland, OR 97520

Dear Mr. Schuyler,

The Josephine County Commissioners wish to express support for the Mt. Ashland Ski Area Expansion plan now being studied in the Draft Environmental Impact Statement (DEIS) as required through the National Environmental Protection Act (NEPA). The decision to move forward to approve ski area expansion is long overdue. We feel this project is critical to the economic future of our community and the Southern Oregon Region and urge you to approve Alternative 2, which is the only alternative that directly addresses the purpose and need for expansion. Alternative 2 will address the need for:

- A modest addition of beginner through intermediate ski/snowboard trails, optimizing terrain balance on Mt. Ashland and improving guest service facilities.
- Providing improvements, which address increased safety issues due to growing recreational demand and increased skier utilization of residents and guests of the Southern Oregon region.
- Ensuring the future economic viability of the ski area and enhancing recreational opportunities in the surrounding region.
- A well researched environmentally sound plan, which utilizes modern stewardship principles and wise use of our resources.

The Mt. Ashland Ski Area is a unique, recreational asset, which has served guests and residents of our region for the past 40 years. We feel the Mt. Ashland Association's (MAA) proposal of a modest addition of novice-intermediate terrain will benefit the area, environment and local economies. The ski area provides a positive environment for children and families. It also boosts the local and regional economy in the winter when the extensive tourist facilities are underutilized. They are a non-profit, community owned organization, which have demonstrated uncommon service and programs to our entire region.

Our community will benefit from the recreational, economic and social attributes Mt Ashland Ski Area expansion will provide. Not only does the ski area attract new businesses and families in our area, it greatly enhances the livability in the Southern Oregon region. It is critically important for the Forest Service to approve what was started over 20 years ago and render a solid, well-researched decision approving the Mt. Ashland Ski Area Expansion, Alternative 2 proposal.

We appreciate your concern and support for Oregon's rural economies and your efforts on our behalf and the citizens of Southern Oregon.

Sincerely,

Board of County Commissioners
Harold L. Haugen
Harold L. Haugen, Chair
Jim Riddle
Jim Riddle, Vice Chair

Cc: Scott Conroy, Forest Supervisor
Alan DeBoer, Mayor of Ashland

COURTHOUSE

500 N. W. Sixth Street, Grants Pass, Oregon 97526 Phone: (541) 474-5221 Fax: (541) 474-5105

"Josephine County is an affirmative Action / Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973."

003-3236
1/2

003-3236
2/2



"Sue Kupillas"
<KupillISC@jacksoncounty.org>

To: <comments-pacificnorthwest-rogueriver-ashland@fs.fed.us>

10/23/2003 08:52 AM

cc: Subject: DEIS- Mt. Ashland Expansion

Please accept this attached letter and the order from the Jackson County Board of Commissioners.

sck



Mt. Ashland expansion DEIS 2003.w

Scott D. Conroy
Rogue River National Forest

John Schuyler

Dear Mr. Schuyler;

I have reviewed the Draft Environmental Impact Statement for the Mt. Ashland Ski Area Expansion and examined the alternatives considered by the USFS and believe Alternative 2 would be the most desirable action.

The DEIS was exceptionally well done and does show a need for expansion. Alternative 2 would only affect the watershed less than 1% and a minimum number of trees will be removed. The slide areas have been considered and sufficient mitigation outlined.

Mt. Ashland is an area I have skied for 25 years in fact I learned to ski there. It is very difficult and today becomes very crowded with the mixed uses of snowboards and downhill skiers. Like many older skiers, I am now looking for kinder and gentler slopes for most of the day skiing. There are limited options today. Expansion would greatly improve the percentage of blue, intermediate runs. Since Jackson County has above average retirees, I believe my situation is not unique. Many of us agree with the expansion to improve our chances of participation and enjoyment for many more years.

I am involved with Economic Development. Management of companies we try to attract comes to this area because of the cultural and recreational activities we enjoy here. Having a ski area close is a luxury but desired by many companies looking at relocation. This provides us with incentives that can compete with other states and other regions.

Ashland has a seasonal economy, with the theater and university. Having recreation in the winter extends the seasonal employment for many of the college students, as well as other people in town. It is good for the economy.

I have attached a letter from the Jackson County Board of Commissioners in support of the expansion, favoring alternative 2. We had some discussion about supporting the decision of the Ashland City Council, but they have trouble coming to a conclusion about their support.

Sue Kupillas
Jackson County Board of Commissioners

003-3251
2/2

City Elected Officials

003-206
1/2

BOARD OF COMMISSIONERS
COUNTY OF JACKSON, STATE OF OREGON

VOL. 205 PAGE

IN THE MATTER OF SUPPORT OF)
ALTERNATIVE 2 EXPANSION) ORDER No. 323-03
OF MT. ASHLAND)

Whereas the Jackson County Board of Commissioners recognizes the environmental concerns have been met on the proposed expansion under Alternative 2 of the EIS; and

Whereas current available ski runs are 78% advanced/expert and only 11% beginner and novice ski runs; and

Whereas Jackson County and the region has a growing population of senior citizens needing the gentle beginner and novice runs; and

Whereas the advanced/expert runs are a safety hazard when runs are crowded and when used by inexperienced skiers. With growing populations using the area, more of the runs are crowded; and

Whereas the expanded area will balance distribution of skiers and snowboarders, offer beginner and intermediate runs, widen trails and allow access without having to use expert runs; and

Whereas Mt. Ashland Ski Area is a great economic boon to the region, providing much needed tourism and recreation during the season when the seasonal Shakespeare Theater is not operating.

Now, therefore, be it resolved the Jackson County Board of Commissioners supports the expansion of Mt. Ashland under Alternative 2 or the preferred alternative chosen by the Ashland City Council in the 2003 Environmental Impact Statement.

Dated this 30th day of September, 2003, at Medford, Oregon.

JACKSON COUNTY BOARD OF COMMISSIONERS


Jack Walker, Chairman


Sue Kupillas, Commissioner


Dave Gilmour, Commissioner



City of Central Point

Office of the Mayor
CITY MANAGERS OFFICE

September 15, 2003

City of Ashland Oregon
20 E. Main Street
Ashland, Oregon 97520

Re: Support of Mt. Ashland ski area expansion

Dear Ashland City Council:

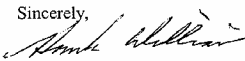
This letter is to express my support of the Mt. Ashland Ski Area expansion. I will not comment further on the environmental impacts or endangered plants of the ski area expansion since the environmental impact statement adequately addresses them and they will be minimal.

My comments will focus on the economic impacts to the area and safety. Numerous executives of firms that want to locate here are skiers and would not locate in the Rogue Valley if the area were not active. The same can be said for the doctors who the hospitals are trying to attract. The ski area is an important part of the livability that we all want to preserve.

The school children from Central Point schools are bussed to the ski area, which provides good activity for them in snow boarding and skiing. This keeps them busy and out of other trouble.

I personally give up skiing since Mt. Ashland lacks intermediate areas. I got tired of the "bunny hill" and took the lift to the top and on the way down injured my knee. The intermediate area that would be created would, however, reduce injury to others and is a safety factor. Also people from the Rogue Valley would not need to travel to Bend in the winter for skiing and auto accidents involved in that travel would be reduced.

Please approve the expansion of the Mt. Ashland Ski area.

Sincerely,

Hank Williams
Mayor

SEP 19 2003
10/10/11/12/13/14/15

Hank Williams
Mayor
Deanna Gregory
Deputy City Recorder

Rec'd
9/23/03

155 South Second Street • Central Point, OR 97502 • (541) 664-3321 • Fax (541) 664-6384

003-806
2/2

003-807
1/2



**Mayor's Statement in Support of the
Mt. Ashland Ski Area Expansion**

WHEREAS, the expansion of the Mt. Ashland Ski Area will provide economic development for the region and tourism and recreation for the entire valley; and

WHEREAS, all environmental issues in the EIS have determined the expansion will not harm the Ashland Watershed or the endangered plants; and

WHEREAS, the expanded area will develop more easy and intermediate runs, which will be much safer for the novice skier and the senior citizen skier; and

WHEREAS, the current area is at capacity, which creates safety problems with the mixed downhill uses, i.e. snowboarding and skiing and by developing more area we will be able to meet the capacity needs.

Be It Resolved, that the undersigned Southern Oregon Mayors do hereby support the expansion of the Mt. Ashland Ski Area.

IN WITNESS WHEREOF, WE
hereunto set our hand this
9th day of September 2003

Lindsay D. Berryman, Mayor of Medford

Hank Williams
HANK WILLIAMS, Mayor of
Central Point

OFFICE OF
THE CITY MAYOR
www.ci.medford.or.us

September 10, 2003

CITY OF MEDFORD
411 WEST 8TH STREET
MEDFORD, OREGON 97501

TELEPHONE (541) 774-2000
FAX: (541) 774-2522
E-mail: cnclmed@ci.medford.or.us

The Honorable Alan DeBoer and
City Council
20 E. Main St.
Ashland, OR 97520

Dear Mayor DeBoer and City Council:

On behalf of the City of Medford, we wish to express our support of the Mt. Ashland Ski Area Expansion. We feel the Mt. Ashland Ski Area is critical to the economic future of our community and the Southern Oregon Region.

The EIS determined the expansion will not harm the Ashland Watershed or the endangered plants. The Mt. Ashland Ski Area is a unique, recreational asset, which has served guests and residents of our region for the past 37 years. The ski area provides a positive environment for children and families. It also boosts the local and regional economy in the winter when the extensive tourist facilities are underutilized. They are a non-profit, community owned organization, which has demonstrated uncommon service and programs to our entire area.

The Medford City Council, as stated in Resolution No. 7066, "recognizes and acknowledges the importance of the Mt. Ashland Ski Area to the present and future economy of the City of Medford and to the quality of life enjoyed by the City's residents."

We support the expansion of the Mt. Ashland Ski Area, which will meet the capacity needs and provide for improved safety for all users.

Sincerely,

Lindsay D. Berryman
Lindsay D. Berryman
Mayor

cc: John Schuyler, Forest Service
Jeff Hansen, Mt. Ashland

Continuous Improvement – Customer Service

Rec'd
9/23/03

003-807
2/2

003-810
11

RESOLUTION NO. 2003-256

A RESOLUTION in support of the Mt. Ashland Ski Area expansion project.

WHEREAS, the expansion of the Mt. Ashland Ski Area will provide economic development for the region and tourism and recreation for the entire valley; and

WHEREAS, all environmental issues in the EIS have determined the expansion will not harm the Ashland Watershed or the endangered plants; and

WHEREAS, the expanded area will develop more easy and intermediate runs, which will be much safer for the novice skier and the senior citizen skier; and

WHEREAS, the current area is at capacity, which creates safety problems with the mixed downhill uses, i.e. snowboarding and skiing and by developing more area we will be able to meet the capacity needs; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MEDFORD, OREGON, that the City of Medford hereby supports the Mt. Ashland Ski Area expansion project

PASSED by the Council and signed by me in authentication of its passage this 18th day of September, 2003.

ATTEST: Heleuda Owens
ACTING City Recorder

Bob Adams
ACTING Mayor

**Mayor's Statement in Support of the
Mt. Ashland Ski Area Expansion**

WHEREAS, the expansion of the Mt. Ashland Ski Area will provide economic development for the region and tourism and recreation for the entire valley; and

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WHEREAS, the expanded area will develop more easy and intermediate runs, which will be much safer for the novice skier and the senior citizen skier; and

WHEREAS, the current area is at capacity, which creates safety problems with the mixed downhill uses, i.e. snowboarding and skiing and by developing more area we will be able to meet the capacity needs.

Be It Resolved, that the undersigned Southern Oregon Mayors do hereby support the expansion of the Mt. Ashland Ski Area.

IN WITNESS WHEREOF, WE
hereunto set our hand this
9th day of September 2003

Lindsay D. Berryman
Lindsay D. Berryman, Mayor of Medford

Tom Anderson
Tom Anderson, Mayor of Shady Cove

STATE OF OREGON)
COUNTY OF JACKSON)

I, Beverly Sandblast, City Recorder of the City of Medford, do hereby certify that I have prepared the foregoing copy of Resolution # 2003-256, have carefully compared the same with the original thereof on file in my office, and that it is correct, true and complete transcript there from and of the whole thereof.

Dated at Medford, Oregon, this 22 day of September, 2003.

Beverly Sandblast
City Recorder

Rec'd
9/23/03

003-808
1/a

003-808
2/2



510 West 1st Street • P.O. Box 666 • Phoenix, Oregon 97535 • (541) 535-1955
FAX (541) 535-5769

September 17, 2003

Mayor Lindsay Berryman
411 West 8th Street
Medford, OR 97504

RE: Mt. Ashland Ski Expansion

Dear Mayor Berryman,

On Monday, September 15, 2003 the City of Phoenix voted to support the Ski Ashland Expansion Project.

Although we have great respect and acknowledge the merit in both sides of this issue, it is our belief that the sixty five acre expansion will enhance the current Mt. Ashland Ski Area through the creation of an intermediate slope, provide greater economic development for Jackson County and still protect the integrity of the local environment.

Sincerely,

Mayor Larry Parducci
Phoenix City Council

RECEIVED
CITY MANAGERS OFFICE
SEP 22 2003
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Rec'd
9/23/03

**Mayor's Statement in Support of the
Mt. Ashland Ski Area Expansion**

WHEREAS, the expansion of the Mt. Ashland Ski Area will provide economic development for the region and tourism and recreation for the entire valley; and

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Be It Resolved, that the undersigned Southern Oregon Mayors do hereby support the expansion of the Mt. Ashland Ski Area.

IN WITNESS WHEREOF, WE
hereunto set our hand this
9th day of September 2003

Lindsay D. Berryman, Mayor of Medford

003-809
1/1

October 23, 2003

Cate Hartzell
881 East Main Street
Ashland, Oregon 97520

John Schuyler
Acting District Ranger
Ashland Ranger District
645 Washington Street
Ashland, Oregon 97520

**Mayor's Statement in Support of the
Mt. Ashland Ski Area Expansion**

WHEREAS, the expansion of the Mt. Ashland Ski Area will provide economic development for the region and tourism and recreation for the entire valley; and

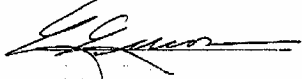
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WHEREAS, the current area is at capacity, which creates safety problems with the mixed downhill uses, i.e. snowboarding and skiing and by developing more area we will be able to meet the capacity needs.

Be It Resolved, that the undersigned Southern Oregon Mayors do hereby support the expansion of the Mt. Ashland Ski Area.

*IN WITNESS WHEREOF, WE
hereunto set our hand this
9th day of September 2003*



Leigh Lucas, Mayor
City of Rogue River

Dear Ranger Schuyler,

I appreciate your attendance at the meetings the City of Ashland has held relative to the Ashland Ski Expansion. It demonstrates a commitment to understand the context within which you are working, and I thank you for that.

Having done so, you have witnessed that the community continues to be divided on this matter. I am disappointed that the City Council has been unable to take stronger action to protect our precious resources and infrastructure. I assure you that I will continue to work towards a monitoring plan that engages the USFS, MAA, and community in answering the critical questions that remain, hopefully before the damage is enacted.

I want to make sure that I formally acknowledge the issue that has most occupied my attention recently. On October 7, 2003, I specifically requested from the USFS and our Public Works Director site-specific information on the Middle Fork of the East Fork (MFEF) that addresses the following questions:

- What percentage of the water supply received by the City of Ashland from the watershed does the wetlands in the MFEF represent? It is my understanding that a surface acreage calculation is insufficient for determining this, since there is (unquantified) subsurface storage in that area.
- What is the range of potential impact on the character and function of the wetlands in the MFEF from increased sediment loading and flows, increased volume and velocity of water related to proposed activity in the MFEF?
- What site-specific and temporally significant information do we have that explains the function of the wetlands in the MFEF?

These questions relate to my public inquiry about the absence of site-specific information that can confidently estimate that the City's water and infrastructure systems are safe from impacts of the proposed development. Note that 1997 Flood damage to public and private property was not confined to the City's water treatment plant.

Rec'd
9/23/03

D03-3192
2/3

On October 14, I discussed with Steve Johnson what information does exist, at that time, he confirmed with me that there is no site-specific information from the MFEF. Since I raised the matter at City Council's October 7 meeting, Steve decided to ask Mr. Brazier to collect a measurement from the MFEF.

Given the issues cited in the DEIS, the oversight represented in not having any recent or old measurements in such a significant area creates a question in my mind as to the ability of the DEIS to accomplish its purpose in a watershed that serves such a significant function to the City. I respectfully request that the USFS immediately begin monitoring and assessment of actual conditions in the MFEF, and that your office work cooperatively with the City to identify and consult with specialists who can frame a monitoring and assessment plan that will help us answer the questions I and others have raised about the MFEF hydrology and ecosystem function. This would include an identification of a responsible length of time that we would monitor the area before we determine how to protect ALL the water resource in the watershed.

I ask that you and decision makers on this project restrict development in the MFEF to no more encroachment than is represented in the Community Alternative that will be submitted today from the Headwaters and Users Group. If you decide not to analyze and select that Alternative (and I ask that you do analyze it), then I request that the USFS not give authority to MAA to conduct any construction or activity in that area, other than restoration. I place an uncompromising value on old growth that is in a healthy dynamic system, species biodiversity, wildlife and its habitat, and refugia (i.e. Roadless Areas) that will serve future generations.

NEPA states that the Federal Government has the responsibility to use all practicable means to:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historical, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice; and
5. Achieve a balance between population and resource use, which will permit high standards of living and a wide sharing of life's amenities."

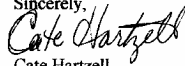
I ask that decision makers honor the public input generated in this process, even the non-technical comments. Federal courts recognize the importance of non-technical public input to an EIS. As there are conflicting opinions, I ask that you recognize that construction into the MFEF is mutually exclusive of protecting rare resources and habitat that exists there. We humans can ski elsewhere; the biological values there do not have that option.

There remains no plan or budget for addressing the commonly accepted sources of sediment (especially related to the 2060 Road) that compound higher elevation activity. That plan, along

with a plan for reducing fire risk in the watershed is also of vital importance to protecting our City's water supply and infrastructure.

I thank you and Scott Conroy for extending the comment period 30 days. It was vital to our community to have that extra time. We could have used more time. I ask that you provide more than the minimum of response time on the FEIS. Your agency is not in the business of dividing communities, however when a 1000-page DEIS on a project with a history of social controversy is offered for review in 30 days, and doesn't contain information essential to determining impact in one of the most controversial areas, your agency's action incites division.

I empathize with your task. Both you and Mr. Conroy are very new to this area and are coming in to make critical decisions that affect communities that are unfamiliar to you. While I recognize that is not uncommon in the USFS, it makes for a challenging job.

Sincerely,

Cate Hartzell
Ashland City Councilor

D03-3192
3/3

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