2.0 ALTERNATIVES

NEPA regulations require that all reasonable alternatives be considered to ensure that the Proposed Actions are well conceived and thoroughly evaluated (40 CFR 1502.14a). Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint, using common sense, rather than those that are simply desirable (Forty Most Asked Questions Concerning CEQ's NEPA Regulations, FSH 1909.16, 65.12 and printed in Federal Register vol. 46, no. 55, pp. 18026-18038).

This chapter identifies and compares a reasonable range of alternatives for The Summit at Snoqualmie MDP Proposal. A No Action Alternative and four Action Alternatives, which include the proponent's Proposed Action and the USFS tentatively Preferred Alternative, are included within this range of alternatives. These alternatives have been developed in accordance with CEQ regulations to provide the decision-maker and the public with a clear basis for choice (40 CFR 1502.14).

Chapter 2 also identifies and discloses: the process used to develop alternatives, alternatives considered and modifications to the MDP, alternatives considered in detail, mitigation, phasing, and comparison of alternatives.

2.1 PROCESS USED TO DEVELOP ALTERNATIVES

In August 1998, Ski Lifts, Inc. submitted the MDP to the Forest Service for acceptance. This MDP document represented desired development over the next 10-15 year period. The Forest Service accepted the MDP proposal and scoped it as the Proposed Action (see Section 1.5 - Scoping, Significant Issues, and Public Participation). In response to the public and IDT scoping comments, the Forest Service developed four Action Alternatives, in addition to the MDP proposal and the No Action Alternative.

During 2000 the project was placed on hold by the proponent. In 2001, the proponent re-evaluated the proposal, in light of the scoping comments and the alternatives to the MDP that had been developed. Ski Lifts Inc. modified eleven components of the MDP in order to address the scoping issues, and to reduce projected impacts to adjacent landowners, riparian areas, and dispersed recreation. Improvement to base mapping allowed for more refinements to the MPD during these revisions, as well. Finally, Ski Lifts Inc incorporated previous chairlift removal and replacement projects into the modifications of the MDP. All of these revisions to the proposal are described in Appendix A.

As a result of the proponent's modifications to their proposal, the Forest Service combined two of the four alternatives to the MDP proposal (then Alternatives 5 and 6), as disclosed in a newsletter in 2002. These two alternatives have been combined to reflect Alternative 5, as described in this EIS.

After detailed review of the analyses of the potential environmental consequences prepared for the DEIS, the Forest Supervisor has selected Alternative 5 as the agency's Preferred Alternative.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED AND MODIFICATIONS TO THE MDP

NEPA regulations require that this DEIS discuss the reasons for eliminating any alternatives explored, but not developed in detail (40 CFR 1502.14[a]). A detailed discussion of alternatives considered but eliminated from further analysis, and modifications to the Proposed Action, can be found in (see Appendix A) Alternatives Considered and Modifications to the Summit at Snoqualmie MDP.

In response to issues raised during the scoping process and the development of alternatives, numerous alternative MDP components were discussed and analyzed. These alternatives include modification to chairlift and trail clearing limits, elimination of trails, and relocation/elimination of buildings, parking lots, and utilities. Alternative MDP components were either eliminated upon further analysis (i.e., those determined not to reduce environmental impacts) or incorporated into the Proposed Action. A total of 12 alternative MDP components were eliminated from consideration. Over 23 modifications were made to the Proposed Action using this approach.

2.3 ALTERNATIVES CONSIDERED IN DETAIL

Four Action Alternatives and one No Action Alternative (Alternative 1) are analyzed in detail in this DEIS, including The Summit at Snoqualmie's Proposed Action (Alternative 2) and the agency's Preferred Alternative, which at this time is (Alternative 5).

Table 2.3-1 summarizes the range of alternatives considered in detail in this DEIS. Table 2.7-1, at the end of Chapter 2, provides a detailed comparison of proposed facilities by alternative. Table 2.7-2 presents a comparison of environmental consequences by alternative.

The intent of the Preferred Alternative in the DEIS is to provide the reader with a sense of which alternative the USFS would select at this stage, based upon available data, scoping issues, and the Purpose and Need for the proposal. The public, agency and Tribal comments received during the comment period, following release of the DEIS to the public will be a very important part of the decision process. Therefore, while the USFS has identified a Preferred Alternative, the final decision that will be incorporated into the ROD could include any one of the alternatives, or a combination of elements from several alternatives.

Table 2.3-1
The Summit MDP DEIS-Range of Alternatives

Master Plan Components	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
Alpine Ski Area Capacity for The Summit (CCC)[a,b]	7,920	10,710	9,990	9,360	10,710
Alpine Ski Area Capacity for Alpental (CCC)	1,880	2,920	2,620	2,920	2,920
Night Skiing Capacity for The Summit (CCC)	6,210	9,870	9,870	9,240	9,870
Night Skiing Capacity for Alpental (CCC)	1,550	2,170	2,170	2,170	2,170
FS SUP Area (acres)	1,834	1,886	1,851	1,851	1,886
Peak Nordic Skier Capacity	500	500	500	500	500
Peak Tubing Capacity	2,500	2,500	2,500	2,500	2,500
Total Number of Magic Carpets for The Summit	1	3	3	3	3
Total Number of Chairlifts for The Summit	16	18	17	16	18
Total Number of Surface Lifts for The Summit	3	3	3	3	3
Total Number of Magic Carpets for Alpental	0	1	1	1	1
Total Number of Chairlifts for Alpental	4	6	5	6	6
Total Number of Surface Lifts for Alpental	1	0	0	0	0
Number of Trails for The Summit	70	80	75	75	80
Number of Trails for Alpental	25	27	27	27	27
Formal Ski Terrain for The Summit (acres)	545	599	551	554	593
Formal Ski Terrain for Alpental (acres)	206	217	217	217	217
Formal Night Skiing Terrain for The Summit (acres)	420	544	543	544	545
Formal Night Skiing Terrain for Alpental (acres)	95	112	112	112	112
Food Service Seats for The Summit	1,386	4,234	4,234	4,234	4,234
Food Service Seats for Alpental	528	813	528	813	813
Roads (miles)	18.5	18.1	18.1	17.9	18.1
Parking – The Summit (acres)	39.6	49.4	49.4	49.4	49.4
Parking – Alpental (acres)	7.8	7.8	7.8	6.9	7.8
Total Parking (acres)	47.4	57.2	57.2	56.3	57.2
Forest Plan Amendment – Adjust SUP Boundary	No	Yes	Yes	Yes	Yes
Land Donation – 390 acres	No	No	Yes	No	Yes

a - A detailed description of the CCC for The Summit at Snoqualmie is contained in Section 2.3.1.1.
b - The two rope tows for the Tubing Center are included in the CCC.

2.3.1 Assumptions Common to All Alternatives

Assumptions and MDP elements that are common to all Action Alternatives are described below.

2.3.1.1 Capacity

The single most important parameter considered when planning guest support facilities at mountain resorts is the mountain's CCC. The CCC of a mountain resort is the number of skiers an entire resort can comfortably accommodate at any given time and still guarantee a pleasant recreation experience. A resort's CCC does not reflect the number of skiers on the mountain at one time. Rather, 70 to 85 percent of a mountain's total CCC will be active skiers, including those on the trails, riding lifts, and waiting in

lift lines. The remaining 15 to 30 percent will be using guest service facilities or milling in areas near these facilities.

The CCC is a calculation based upon uphill lift capacity, trail density and capacity, lift type, hours of operation, and other planning parameters. The CCC does not consider previous skier visits, nor does it predict future visitation of the resort. The CCC is a planning parameter by which other skier services can be designed. For example, the capacity of parking spaces, restaurant seats, etc. must be designed to accommodate the CCC for the resort to operate efficiently (i.e., no long lift lines, sufficient parking, etc.).

The night skiing CCC is the number of skiers that the night lift and trail system can support. Night skiing lifts/trails are a subset of the resort's total lifts and trails; therefore, the night skiing CCC is a subset of the total alpine ski area CCC. The CCC and night skiing CCC are not additive, and provide independent measures of the resort capacity during two different periods.

2.3.1.2 Skier Ability

As used in this DEIS, skier ability levels are defined based on the slope gradient, as shown in Table 2.3.1-1.

Table 2.3.1-1
Slope Gradient by Ability Level

Skier Ability Level	Acceptable Slope Gradient (percent)
Beginner	8 to 12
Novice	12 to 25 (short pitches of 30)
Low Intermediate	25 to 30 (short pitches of 35)
Intermediate	30 to 40 (short pitches of 45)
Advanced Intermediate	40 to 50 (short pitches of 55)
Expert	over 50 (maximum of 80)

Source: SE GROUP

2.3.1.3 Construction

The majority of effects to watershed, wildlife, visual and cultural resources would be related to clearing and/or grading for the development of ski trails, lifts, roads, and support facilities. Assumptions on the amount of clearing that would occur for specific activities proposed in the Action Alternatives are shown in Table 2.3.1-2 (for analysis purposes, clearing and/or grading extents should be considered worst-case; actual clearing would not exceed the stated limit and may be less).

Table 2.3.1-2
The Summit at Snoqualmie MDP/DEIS - Clearing Assumptions

MDP Component	Clearing Requirement[a]
Lifts	
Alignment Clearing	60-foot corridor
Terminal Ground Disturbance	0.5 acre
Tower Ground Disturbance	100 square feet
Roads	
Tread Width	16 feet
Ground Disturbance Width[b]	34 feet
Utility Lines[c]	
Water Lines	15-foot corridor
Wastewater Lines	50-foot corridor
Powerlines	15-foot corridor
Communications Lines	15-foot corridor
Propane Lines	15-foot corridor
Other Facilities[d]	
Buildings	50-foot corridor
Parking Lots	30-foot corridor

a - Limits of disturbance established for proposed development components, and analyzed in Chapter 4 using GIS.
b - Worst case estimate of clearing, grading, machinery operation, storage of spoils, etc.
c - Underground utilities would be grouped and/or placed in existing roads and ski trails to the maximum extent practicable.
d - The clearing requirements represent an assumed disturbance area surrounding the facility footprint.

A detailed breakdown of the location and extent of clearing and/or grading is provided in the description of alternatives (see Sections 2.3.2-Alternative 1 [No Action Alternative] through 2.3.6-Alternative 5) and in the Summary Comparison of Environmental Consequences (see Table 2.7-2). Treatment techniques include:

Full Clearing with Grading - All trees, shrubs, and herbaceous vegetation would be removed within the construction limits, stumps would be removed, and the surface would be graded and revegetated, where appropriate. Grading would occur at all locations where structures are proposed (e.g., lift towers, buildings) and along key trails where a smooth surface is necessary. Grading may include the use of explosives for the removal of bedrock or large boulders, or the use of heavy equipment (e.g., excavators, bulldozers, etc.) for earthmoving. The method of tree removal/disposal would be determined on a case-by-case basis and would include removal by lop and scatter, skidders (yarding over snow, where possible), and/or helicopter.

Full Clearing with No Grading - All trees and shrub/herbaceous vegetation would be removed within the construction limits. Trees would be cut flush to the ground and stumps would not be removed. The surface would not be graded. The method of tree removal would be determined on a case-by-case basis

and would include removal by lop and scatter, skidders (yarding over snow), and/or helicopter. Any soil disturbed would be restored by either excavator or hand.

Glading - Glading would involve the selective removal of trees within the ski trail boundary to connect natural openings. In areas where existing tree canopy closure is greater than 70 percent, clearing would not reduce the resulting canopy cover to less than 70 percent. Where existing canopy cover is less than 70 percent (prior to clearing), no canopy clearing would occur. Trees would be cut flush to the ground and stumps would not be removed. The ground surface would not be graded and the natural ground cover would be maintained. Tree removal in sparsely vegetated area (e.g., subalpine parkland) would be left in place and lopped and scattered. In densely vegetated stands, skidders or helicopters would be used for tree removal. Disturbance to the topsoil would be restored either with an excavator or by hand.

Blasting – Blasting would involve the use of explosives to remove or fragment bedrock, rock outcrops and/or large boulders from ski slopes. All vegetation and soil would be removed. Resulting debris would be scattered onsite or hauled to an approved location. Blasting would only occur under the direct supervision and permission of USFS personnel.

Standard construction techniques would be used for erecting lift terminal structures, with maintenance roads providing vehicular access to the drive terminal, unless indicated otherwise. Lift tower footings would be excavated by hand or by excavators, where accessible, without additional road construction (unless otherwise noted in the following sections). Concrete for footings and lift towers would be flown in by helicopter in situations where it could not be transported on the ground. Standard and site-specific BMPs and mitigation measures would be implemented (see Section 2.4-Mitigation).

For all proposed utility line corridors, ground surface conditions would be restored and revegetated. In vegetated areas (i.e., ski trails), utility line corridors would be revegetated as per Forest Plan best management practices/standards and guidelines. Utility corridors in roads and parking lots would not be revegetated.

2.3.2 Alternative 1 – No Action Alternative

As required by NEPA, a No Action Alternative is included in this DEIS as a benchmark against which the Action Alternatives can be compared (see Figures 2.3.2-1 - Alternative 1 Existing Conditions – The Summit, and 2.3.2-2 - Alternative 1 Existing Conditions – Alpental). The No Action Alternative also serves as a means of analyzing the effects of no future development within the Project Area.

Under Alternative 1, The Summit would continue to operate 20 lifts (16 chairlifts and 4 surface lifts) on approximately 545 acres of formal terrain while Alpental would have 5 lifts (4 chairlifts and 1 surface lift) serving approximately 206 acres of terrain. The Summit would have a CCC of 7,920 skiers and Alpental's CCC would be 1,880 skiers. This would give The Summit at Snoqualmie 25 operating lifts on approximately 751 acres of terrain and a CCC of 9,800 skiers.

2.3.2.1 Lifts

Under the No Action Alternative, The Summit would continue to operate 20 lifts (16 chairlifts and 4 surface lifts) and Alpental would continue to operate 5 lifts (4 chairlifts and 1 surface lift). Any future lift replacements would utilize an alignment and configuration similar to the original lift, and require project-specific approval from the USFS (including appropriate scoping, public involvement, analysis and documentation) or appropriate regulatory agency(s). Table 2.3.2-1 summarizes the specifications of the chairlift network at The Summit at Snoqualmie under Alternative 1.

Table 2.3.2-1
The Summit at Snoqualmie Lift Specifications Under Alternative 1[13]

Lift Name	Site Area	Vertical Length (feet)	Horizontal Length (feet)	Slope Length (feet)	CCC
Drei (Surface Lift)	Alpental	32	245	247	50
Armstrong Express	Alpental	1,232	3,854	4,066	650
Sessel	Alpental	496	1,486	1,572	590
St. Bernard	Alpental	208	778	809	260
Edelweiss	Alpental	1,071	2,603	2,854	330
Subtotal					**1,880**
Easy Rider	The Summit	285	1,044	1,085	310
Backside	The Summit	498	1,778	1,858	290
Easy Gold	The Summit	284	1,364	1,394	220
Julie's Chair	The Summit	284	1,438	1,468	360
Pacific Crest	The Summit	694	2,736	2,831	780
Little Thunder	The Summit	220	1,507	1,525	670
Mt. Hyak	The Summit	1,080	3,006	3,228	680

[13] Replacement of the existing *Mt. Hyak* chairlift at Summit East was approved in 2000 (Decision Notice and finding of No Significant Impact – Summit West Ski Area Ski Rental and Welcome Center, October 25, 2000). Replacement of the chairlift includes removal of the existing *Keechelus* chairlift. For analysis purposes in this DEIS, the absence of *Keechelus* and realignment of *Mt. Hyak* is considered an existing condition.

Table 2.3.2-1
The Summit at Snoqualmie Lift Specifications Under Alternative 1[13]

Lift Name	Site Area	Vertical Length (feet)	Horizontal Length (feet)	Slope Length (feet)	CCC
Gallery	The Summit	275	1,361	1,393	310
Triple 60	The Summit	677	2,111	2,250	550
Central Express	The Summit	936	3,766	3,909	930
Silver Fir	The Summit	1,021	3,830	3,992	710
Holiday	The Summit	253	1,342	1,367	330
Reggie's Chair	The Summit	247	1,311	1,337	260
Easy Street	The Summit	317	1,801	1,829	350
Wildside	The Summit	681	1,845	1,982	380
Bunny	The Summit	11	158	158	100
Dodge Ridge	The Summit	594	2,515	2,588	400
Magic Carpet I	The Summit	14	205	206	110
Magic Carpet II	The Summit	25	180	182	110
Rope Tow	The Summit	20	387	390	70
Subtotal					**7,920**
Total					**9,800**

2.3.2.2 Trails

The existing terrain at The Summit would be maintained under Alternative 1, including 70 named trails on approximately 545 acres, accommodating a CCC of 7,920 skiers. At Alpental, 25 trails would be spread over approximately 206 acres accommodating a CCC of 1,880 skiers. The existing trail network at The Summit at Snoqualmie accommodates the entire range of skier abilities from beginner to expert, comprised of approximately 12.2 acres of beginner terrain, 111 acres of novice terrain, 131.5 acres of low-intermediate terrain, 106 acres of intermediate terrain, 146.7 acres of advanced-intermediate terrain and 243.1 acres of expert terrain. Any future trail development/modification would require project-specific approval from the USFS (including appropriate scoping, public involvement, analysis and documentation) or appropriate regulatory agency(s). Table 2.3.2-2 summarizes The Summit at Snoqualmie's trail network under Alternative 1.

Table 2.3.2-2
The Summit at Snoqualmie Trail Specifications Under Alternative 1

Site	Trail No.	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
Alpental	1	Armstrong	953	3,385	149	9.94	Expert
Alpental	2	Armstrong	780	2,855	213	12.99	Expert
Alpental	3	Armstrong	748	2,377	208	10.32	Low Intermediate
Alpental	4	Armstrong	273	1,551	224	6.93	Novice
Alpental	5	Armstrong	459	1,320	181	5.02	Advanced
Alpental	6	Armstrong	423	1,455	152	4.74	Intermediate
Alpental	7	Armstrong	465	1,659	298	10.72	Intermediate
Alpental	8	Edelweiss	1,091	3,383	284	18.36	Expert
Alpental	9	Edelweiss	275	1,468	442	11.89	Expert
Alpental	10	Edelweiss	343	675	88	1.13	Expert
Alpental	11	Edelweiss	247	1,109	352	7.79	Low Intermediate
Alpental	12	Edelweiss	817	2,022	413	15.86	Advanced
Alpental	13	Edelweiss	444	925	134	2.48	Expert
Alpental	14	Edelweiss	311	1,184	175	4.28	Beginner
Alpental	15	Edelweiss	1,498	3,387	299	18.66	Expert
Alpental	16	Edelweiss	334	1,258	237	6.48	Expert
Alpental	17	Edelweiss	738	1,359	157	3.42	Low Intermediate
Alpental	18	Edelweiss	655	1,587	207	6.52	Novice
Alpental	19	Edelweiss	188	1,165	328	7.38	Advanced
Alpental	20	Edelweiss	1,101	3,395	143	9.95	Expert
Alpental	21	Edelweiss	379	1,266	133	3.64	Expert
Alpental	22	Sessel	135	901	473	9.16	Advanced
Alpental	23	Sessel	522	1,805	257	10.03	Expert
Alpental	25	St. Bernard	162	1,030	327	7.51	Advanced
Alpental	69	Drei	56	565	62	0.76	Novice
Subtotal						**205.96**	
The Summit	1	Wildside	681	2,197	329	15.40	Expert
The Summit	2	Easy Rider	290	1,230	265	7.17	Expert
The Summit	3	Easy Rider	289	1,240	262	7.18	Low Intermediate
The Summit	4	Little Thunder	232	1,696	324	12.38	Novice
The Summit	5	Wildside	508	1,678	198	7.14	Advanced
The Summit	6	Wildside	742	3,665	229	18.68	Intermediate
The Summit	7	Wildside	277	1,132	152	3.75	Intermediate
The Summit	8	Wildside	325	1,175	207	5.14	Expert
The Summit	9	Dodge Ridge	602	2,722	318	19.22	Expert
The Summit	10	Pacific Crest	697	2,986	325	21.48	Expert
The Summit	11	Pacific Crest	447	1,902	330	13.94	Low Intermediate
The Summit	12	Pacific Crest	424	1,510	222	7.27	Advanced

Table 2.3.2-2
The Summit at Snoqualmie Trail Specifications Under Alternative 1

Site	Trail No.	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
The Summit	13	Julie's Chair	285	1,612	340	12.30	Expert
The Summit	14	Bunny	16	233	187	0.38	Beginner
The Summit	15	Julie's Chair	55	415	163	1.53	Expert
The Summit	41	Triple 60	233	2,485	35	1.93	Advanced
The Summit	16	Wildside	16	233	187	0.91	Expert
The Summit	17	Silver Fir	1,022	5,104	159	18.03	Low Intermediate
The Summit	18	Silver Fir	293	2,186	85	4.11	Novice
The Summit	19	Silver Fir	23	661	70	1.05	Advanced
The Summit	20	Silver Fir	417	1,105	162	3.70	Expert
The Summit	21	Silver Fir	921	4,372	202	19.45	Expert
The Summit	22	Silver Fir	363	1,104	154	3.58	Advanced
The Summit	23	Silver Fir	423	1,399	131	3.93	Expert
The Summit	24	Silver Fir	511	1,563	149	4.94	Advanced
The Summit	25	Silver Fir	519	1,496	134	4.27	Advanced
The Summit	26	Central Express	880	4,092	210	18.82	Intermediate
The Summit	27	Easy Street	342	2,046	400	18.41	Novice
The Summit	28	Reggie's Chair	253	1,488	180	6.00	Novice
The Summit	29	Central Express	59	444	64	0.62	Novice
The Summit	30	Central Express	932	3,780	338	27.97	Advanced
The Summit	31	Central Express	918	4,304	442	42.06	Intermediate
The Summit	32	Triple 60	270	1,910	162	6.62	Novice
The Summit	33	Central Express	321	2,251	122	6.09	Novice
The Summit	34	Central Express	171	1,717	145	5.64	Novice
The Summit	35	Triple 60	304	613	112	1.35	Expert
The Summit	36	Triple 60	377	832	107	1.81	Expert
The Summit	37	Triple 60	467	1,150	72	1.71	Expert
The Summit	38	Triple 60	504	1,431	126	3.84	Expert
The Summit	39	Triple 60	679	2,325	181	8.88	Expert
The Summit	40	Triple 60	345	776	74	1.14	Expert
The Summit	42	Triple 60	459	1,231	324	8.26	Expert
The Summit	43	Gallery	340	1,722	247	9.42	Low Intermediate
The Summit	44	Holiday	265	1,570	281	9.93	Low Intermediate
The Summit	45	Holiday	227	1,384	280	8.72	Novice
The Summit	46	Silver Fir	173	2,944	113	7.50	Beginner
The Summit	49	Silver Fir	409	3,867	73	6.28	Low Intermediate
The Summit	50	Mt. Hyak	1,092	3,508	190	14.19	Advanced
The Summit	51	Mt. Hyak	265	651	102	1.36	Expert
The Summit	52	Backside	504	1,943	225	9.51	Novice
The Summit	53	Mt. Hyak	894	2,722	187	10.89	Advanced
The Summit	54	Mt. Hyak	215	1,820	213	8.72	Novice

Table 2.3.2-2
The Summit at Snoqualmie Trail Specifications Under Alternative 1

Site	Trail No.	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
The Summit	55	Mt. Hyak	528	4,527	121	12.23	Low Intermediate
The Summit	56	Mt. Hyak	204	1,460	88	2.87	Low Intermediate
The Summit	57	Mt. Hyak	49	280	48	0.30	Novice
The Summit	58	Mt. Hyak	879	2,595	238	13.23	Advanced
The Summit	59	Mt. Hyak	84	510	63	0.73	Novice
The Summit	60	Mt. Hyak	469	1,401	153	4.59	Advanced
The Summit	61	Mt. Hyak	135	901	473	3.01	Low Intermediate
The Summit	62	Mt. Hyak	354	1,479	167	5.36	Intermediate
The Summit	63	Mt. Hyak	345	1,855	156	6.48	Low Intermediate
The Summit	64	Mt. Hyak	254	2,153	124	5.70	Low Intermediate
The Summit	65	Mt. Hyak	239	603	147	1.85	Advanced
The Summit	66	Mt. Hyak	264	1,327	136	4.05	Low Intermediate
The Summit	67	Mt. Hyak	150	727	69	1.13	Novice
The Summit	68	Easy Gold	299	1,506	294	9.90	Low Intermediate
The Summit	69	Mt. Hyak	84	586	174	2.31	Novice
The Summit	70	Mt. Hyak	46	330	258	1.91	Novice
The Summit	71	Mt. Hyak	225	3,197	51	3.67	Novice
The Summit	72	Mt. Hyak	116	377	127	1.04	Low Intermediate
Subtotal						**544.94**	
Total						**750.90**	

2.3.2.3 Night Skiing

The existing night skiing terrain at The Summit, comprised of 54 trails on approximately 420 acres and accommodating a nighttime CCC of 6,210 skiers, would continue to operate under the No Action Alternative (see Figure 2.3.2-3 – Alternative 1 Existing Night Skiing – The Summit). Although all trails at Summit East are equipped for night skiing, they are not operated due to economic and operational considerations.

The existing night skiing terrain at Alpental is comprised of 12 trails on approximately 95 acres, accommodating a nighttime CCC of 1,550 skiers (see Figure 2.3.2-4 – Alternative 1 Existing Night Skiing - Alpental). Table 2.3.2-4 summarizes the night skiing terrain at The Summit at Snoqualmie under Alternative 1.

Table 2.3.2-3
The Summit at Snoqualmie Night Skiing Terrain Under Alternative 1

Site	Trail No.	Pod Name	Area (acres)	Skier Ability Level
Alpental	1	Armstrong	9.93	Expert
Alpental	2	Armstrong	12.97	Expert
Alpental	3	Armstrong	10.32	Low Intermediate
Alpental	4	Armstrong	6.93	Novice
Alpental	5	Armstrong	5.01	Advanced
Alpental	6	Armstrong	4.74	Intermediate
Alpental	7	Armstrong	10.72	Intermediate
Alpental	16	Edelweiss	6.48	Expert
Alpental	22	Sessel	9.15	Advanced
Alpental	23	Sessel	10.03	Expert
Alpental	25	St. Bernard	7.51	Advanced
Alpental	69	Unknown	0.76	Novice
Subtotal			**94.56**	
The Summit	1	Wildside	15.40	Expert
The Summit	2	Easy Rider	7.17	Expert
The Summit	3	Easy Rider	7.18	Low Intermediate
The Summit	4	Little Thunder	12.38	Novice
The Summit	5	Wildside	7.14	Advanced Intermediate
The Summit	6	Wildside	18.67	Intermediate
The Summit	7	Wildside	3.75	Intermediate
The Summit	8	Wildside	5.14	Expert
The Summit	9	Dodge Ridge	19.21	Expert
The Summit	10	Pacific Crest	21.47	Expert
The Summit	11	Pacific Crest	13.94	Low Intermediate
The Summit	12	Pacific Crest	7.27	Advanced Intermediate
The Summit	13	Julie’s Chair	12.29	Expert
The Summit	14	Bunny	0.38	Beginner
The Summit	15	Julie’s Chair	1.53	Expert
The Summit	41	Triple 60	0.91	Intermediate
The Summit	16	Wildside	27.96	Advanced Intermediate
The Summit	30	Central Express	42.05	Advanced Intermediate
The Summit	31	Central Express	6.62	Intermediate
The Summit	32	Triple 60	6.08	Novice
The Summit	33	Triple 60	5.64	Novice
The Summit	34	Triple 60	1.35	Novice
The Summit	35	Triple 60	1.81	Expert
The Summit	36	Triple 60	1.71	Expert
The Summit	37	Triple 60	3.84	Expert
The Summit	38	Gallery	8.88	Expert
The Summit	39	Holiday	1.14	Expert

Table 2.3.2-3
The Summit at Snoqualmie Night Skiing Terrain Under Alternative 1

Site	Trail No.	Pod Name	Area (acres)	Skier Ability Level
The Summit	40	Holiday	1.93	Expert
The Summit	42	Mt. Hyak	8.25	Expert
The Summit	43	Mt. Hyak	9.42	Low Intermediate
The Summit	44	Holiday	9.92	Low Intermediate
The Summit	45	Mt. Hyak	8.71	Novice
The Summit	50	Mt. Hyak	14.19	Advanced Intermediate
The Summit	51	Mt. Hyak	1.35	Expert
The Summit	52	Backside	9.51	Novice
The Summit	53	Mt. Hyak	10.88	Advanced Intermediate
The Summit	54	Mt. Hyak	8.72	Novice
The Summit	55	Mt. Hyak	12.22	Low Intermediate
The Summit	56	Mt. Hyak	2.87	Low Intermediate
The Summit	57	Mt. Hyak	0.30	Novice
The Summit	58	Mt. Hyak	13.23	Advanced Intermediate
The Summit	59	Mt. Hyak	0.73	Novice
The Summit	60	Mt. Hyak	4.59	Advanced Intermediate
The Summit	61	Mt. Hyak	3.01	Low Intermediate
The Summit	62	Mt. Hyak	5.36	Intermediate
The Summit	63	Mt. Hyak	6.47	Low Intermediate r
The Summit	64	Mt. Hyak	5.70	Low Intermediate
The Summit	65	Mt. Hyak	1.85	Advanced Intermediate
The Summit	66	Mt. Hyak	4.05	Low Intermediate
The Summit	67	Mt. Hyak	1.13	Novice
The Summit	68	Easy Gold	9.90	Low Intermediate
The Summit	69	Mt. Hyak	2.31	Novice
The Summit	70	Mt. Hyak	1.91	Novice
The Summit	72	Mt. Hyak	1.04	Low Intermediate
Subtotal			**420.42**	
Total			**514.98**	

2.3.2.4 Parking

No additional parking areas would be constructed at The Summit at Snoqualmie under Alternative 1. Any future parking development would require project-specific approval from the USFS or appropriate regulatory agency(s). The Summit would continue to provide approximately 39.6 acres of parking on 12 surface lots, and Alpental would provide approximately 7.8 acres of parking on 7 surface lots as shown in Table 2.3.2-4. In total, The Summit at Snoqualmie would provide parking capacity for approximately 12,346 people at one time, which would be lower than the total parking requirement, including the ski area CCC of 9,800, a capacity of 500 Nordic skiers, and 2,500 tubing area guests (a total of 12,800), not including those parking at the area but not purchasing ski area tickets.

Table 2.3.2-4
The Summit at Snoqualmie Parking Under Alternative 1

Parking Location	Area (acres)	Cars per Acre	Total Car Capacity	Total Capacity (people)
Alpental				
Lot 1	0.8	104	83	183
Lot 2	1.9	155	295	649
Lot 3	0.9	72	65	143
Lot 4	0.6	133	80	176
Lot 5	0.9	90	81	178
Lot 6	2.5	121	303	667
Lot 7	0.2	125	25	55
Subtotal	**7.8**	**119**	**932**	**2,050**
The Summit				
Summit West Lot 1	5.2	125	651	1,432
Summit West Lot 2	4.3	99	426	937
Summit West, First Western	1.8	106	190	418
Summit West, SR 906	2.3	130	300	660
Summit Central Lot 1	10.9	147	1,606	3,533
Summit Central Lot 2	4.2	96	405	891
Silver Fir Lot 1	2.7	109	295	649
Silver Fir Lot 2	1.4	125	175	385
Silver Fir Lot 3	0.6	132	172	378
Summit East Lot 1	1.8	83	150	330
Summit East Lot 2	2.6	75	195	429
Summit East Lot 3	1.1	105	115	253
Subtotal	**39.6**	**118**	**4,680**	**10,296**
Total	**47.4**	**118**	**5,612**	**12,346**

Source: SE GROUP GIS Data, (SE GROUP 5/27/04)

2.3.2.5 Support Facilities

Under the No Action Alternative, The Summit at Snoqualmie would operate with its current allocation of guest support facilities and ski school buildings, located within several buildings within the base areas and on-mountain at Alpental, Summit East, Summit Central, and Summit West, including Thunderbird Lodge. Any future development of guest support facilities/buildings would require project-specific approval from the USFS (including appropriate scoping, public involvement, analysis and documentation) or appropriate regulatory agency(s). Table 2.3.2-5 summarizes The Summit at Snoqualmie's guest service facilities under Alternative 1.

Table 2.3.2-5
The Summit at Snoqualmie Guest Services Under Alternative 1

Location	Building Size (square feet)	Restaurant Seats
Alpental		
Day Lodge	12,322	393
Children's Ski School	697[a]	N/A
Denny Mountain Lodge	8,366	135
Shot 10 Restrooms	955[a]	N/A
Ticket Booth	250[a]	N/A
Subtotal	**20,688**	**528**
The Summit		
Alpenhaus Lodge	22,140	377
Cascade Ski School	1,291[a]	N/A
Child Care Building	865[a]	N/A
Fiorini Ski School	147[a]	N/A
Learning Center/Kid's Club	4,486[a]	N/A
Mini Mountain Ski School	357[a]	N/A
Rokka Ski School	1,131[a]	N/A
Ski Masters Ski School	1,115[a]	N/A
Slide-In Lodge	15,750	300
Rental and Welcome Center	11,600	100
Thunderbird Lodge	3,090	0
Alpine West Ski School	1,296	N/A
Bellevue Ski School	2,700	N/A
Central Base Lodge	13,326	284
ISS Ski School	2,592	N/A
Mohan Ski School	1,003[a]	N/A
Powder Pigs Ski School	3,672	N/A
Rental Shop/Learning Center	7,202	75
Silver Fir Base Lodge	4,618	50
Skibacs Ski School	777[a]	N/A
Skico Ski School	961[a]	N/A
Summit Tubing Center	2,880	N/A
Webbski	6,000	N/A
Summit East Base Lodge	700	200
Subtotal	**97,566**	**1,386**
Total	**118,254**	**1,914**

a - These numbers are the square feet of the building footprint, not the actual building size

2.3.2.6 Ski Patrol and First Aid

Under the No Action Alternative, The Summit would continue to operate eleven ski patrol duty stations totaling 6,043 square feet. Alpental would have three ski patrol duty stations containing 1,516 square feet while East-Central-West would have eight ski patrol duty stations totaling 4,527 square feet. Table 2.3.2-6 summarizes The Summit at Snoqualmie's ski patrol duty stations under Alternative 1.

Table 2.3.2-6
The Summit at Snoqualmie Ski Patrol Duty Stations Under Alternative 1

Duty Station	Size (square feet)	Location
Alpental		
Alpental First Aid Station	810	Basement of Denny Mountain Lodge
Edelweiss Duty Station	630	Upper terminal of Edelweiss Chairlift
Armstrong Exp. Duty Station	76	Upper terminal of Debbie's Gold Chairlift
Subtotal	**1,516**	
The Summit		
Pacific Crest Duty Station	35	Upper terminal of Pacific Crest Chairlift
Summit West First Aid Facility	1,406	First Floor Ski Patrol Building Summit West
Summit West Duty Station	500	Adjacent to Upper Terminal of Wildside Chairlift
Central Express Duty Station	56	Upper terminal of Central Express Chairlift
Summit Central First Aid Facility	1,402	First Floor Ski Patrol Building Summit Central
Summit Nordic Center First Aid Facility	55	Basement of the Summit Nordic Center
Triple 60 Duty Station	86	Upper terminal of Triple 60 Chairlift
Keechelus Duty Station	437	Upper terminal of Keechelus Chairlift
Summit East First Aid Facility	550	First Floor First Aid Facility Summit East
Subtotal	**4,527**	
Total	**6,043**	

Source: Booth Creek Resorts and SE GROUP GIS Data (SE GROUP, 8/21/01).

2.3.2.7 Other Recreational Opportunities

Under Alternative 1, The Summit at Snoqualmie would continue to offer its existing recreation program, including the following:

Winter Tubing

Under Alternative 1, The Summit at Snoqualmie would continue to stage winter tubing ticket sales and tube rentals at the Summit Tubing Center, located east of the Summit Central base area between SR-906 and I-90. Any future winter tubing development would require project-specific approval from the USFS (including appropriate scoping, public involvement, analysis and documentation) or appropriate regulatory agency(s). The tubing facilities would continue to provide a capacity of 2,500 people.

Nordic Skiing

The Summit Nordic Center, located at Summit East, would continue to provide access to the existing Nordic trail network, as well as snowshoe and Nordic ski rental under Alternative 1. The trail network would continue to include approximately 43 kilometers of trails at The Summit at Snoqualmie, as shown in Table 2.3.2-7 and Figure 2.3.2-5 - Nordic Trail Network. The Nordic trails would continue to provide for a capacity of 500 Nordic skiers. Any future trail development would require project-specific approval from the USFS (including appropriate scoping, etc.) or appropriate regulatory agency(s).

Table 2.3.2-7
The Summit at Snoqualmie Nordic Trail Network
Under Alternative 1

Trail Name	Kilometers
Cold Creek	8.12
Creek Run	1.22
Cut Off	0.83
Dawn's Run	1.03
Decision Loop	0.37
Frog Legs	1.19
Gary Requa's Way	0.37
Hidden Valley	4.05
Kid's Teaching Area	0.18
Low Cross Over	0.99
Milwaukee Ridge	1.00
Nob Hill	0.78
Not Down There	0.22
Ollie's Slide	1.99
Power Surge	0.48
Ripsaw	4.46
Rockdale Bowl	1.36
Rockdale Loop	1.53
School's Out	0.44
Serpentine	0.49
Silver Streak	0.98
Skidaddle	0.91
Snow Train	0.79
Sunrise Outer Loop	3.04
Sunshine Inner Loop	2.07
White Rabbit	0.56
Windy Acres	3.38
Yellow Brick Road	0.31
Total Distance (kilometers)	**43.14**

Hiking

Booth Creek Resorts would continue to provide access to the existing network of hiking trails in and around The Summit at Snoqualmie, under Alternative 1. Booth Creek Resorts would continue to offer lift-served hiking via *Central Express* beginning in late June and ending in September.

Mountain Biking

Under the No Action Alternative, The Summit at Snoqualmie would continue to offer mountain bike transport on *Central Express*. The existing mountain bike trail network would continue to be used, with no improvements. Under Alternative 1, a Mountain Bike Operations Plan would be implemented to more effectively manage mountain bike use throughout The Summit at Snoqualmie. The Mountain Bike Operations Plan may include mountain bike use guidelines and restrictions, as well as signage implementation and overall operations management.

Scenic Rides

Under Alternative 1, *Central Express*, located at Summit Central, would continue to provide scenic chairlift rides and mountain bike transportation to Summit Central's upper elevations. Summer visitors would continue to use the chairlifts for picnicking, sightseeing, hiking and photography.

Alternative Forms of Recreation Within the Alpental Valley

In addition to those previously mentioned, alternative forms of recreation (e.g., nordic skiing, snowshoeing, ice climbing, rock climbing, fishing, hiking, primitive camping, road biking, and horseback riding) would continue to be available within the Alpental Valley under Alternative 1. Although Alpental and Booth Creek Resorts do not directly sponsor or manage recreation within the Alpental Valley, public access to these sites would continue to be available.

2.3.2.8 Domestic Water and Wastewater Treatment Facilities

Alpental's domestic water supply under Alternative 1 would continue to be provided by two wells with an estimated combined flow of approximately 620,640 gallons per day (gpd). Alpental's water allocation would remain at 112 acre-feet per year allocated to the Forest Service for Alpental. Water would continue to be stored in one 100,000-gallon concrete storage tank located in the northern portion of Parking Lot 6.

The Snoqualmie Pass Utility District (SPUD) would continue to supply domestic water to The Summit and provide storage in 2 water tanks (combined storage capacity of 465,000 gallons) at Summit West under Alternative 1.

SPUD would continue to service The Summit at Snoqualmie's sewer system. The plant's current average daily flow is 120,000 gpd and has a design capacity of 368,000 gallons. Although SPUD has adequate capacity to serve existing demand, SPUD has proposed additional spray fields/reservoirs to accommodate

higher daily flows as demand increases. Any future development of sewer facilities would require project specific approval from the appropriate regulatory agencies.

2.3.2.9 Other Utilities/Infrastructure

Utilities and roads under Alternative 1 are shown along with night skiing terrain on Figures 2.3.2-3 - Alternative 1 Existing Night Skiing – The Summit and 2.3.2-4 - Alternative 1 Existing Night Skiing – Alpental.

Power

Puget Sound Energy supplies electric power to The Summit at Snoqualmie's facilities and furnishes most of the high voltage power lines, as well as the requisite transformers and distribution lines. Representatives of Puget Sound Energy indicate that the existing power supply infrastructure has capacity to accommodate The Summit at Snoqualmie's future needs.

Propane

Propane is used at The Summit at Snoqualmie for heat. Table 2.3.2-8 lists tank capacities and locations.

Table 2.3.2-8
Existing Propane Tank Locations and Capacities

Tank Location	Tank Capacity (Gallons)
Alpental	
Shop	500
Lodge	300
Edelweiss Chairlift	10
The Summit	
Summit East Lodge	3,000
Shop	1,000
Summit East Ski Patrol	2,000
Easy Gold Chairlift	10
Sliver Fir Chairlift	300
Easy Street Chairlift	10
Reggie's Chairlift	10
Webbski Ski School	2,000
Central Lodge	3,000
Learning Center	500
Rental Building	1,500
Alpenhaus/Slide-In	5,000
Total	**19,140**

Communications

Under Alternative 1, the existing communications network at The Summit at Snoqualmie would remain in service. The primary communication link between base area and up-mountain facilities is provided by telephone service. In addition, the upper and lower chairlift terminal buildings of each chairlift are linked by low-voltage intercom systems.

Petroleum Fuel

Under Alternative 1, fuel would continue to be stored in 6 existing tanks. The location and capacities of these tanks is provided in Table 2.3.2-9.

Table 2.3.2-9
Petroleum Fuel Storage Tanks at The Summit at Snoqualmie Under Alternative 1

Location	Storage Capacity (gallons)	Type of Fuel	Type of Fuel Pump
Alpental			
Maintenance Facility[a]	1,500	Diesel	Mechanical
Maintenance Facility[a]	500	Gasoline	Mechanical
Subtotal	**2,000**		
The Summit			
Summit West Maintenance Facility[b]	4,000	Diesel	Mechanical
Summit West Maintenance Facility[b]	4,000	Gasoline	Mechanical
Summit Central Parking Lot 1[b]	4,500	Diesel	Mechanical
Summit Central Parking Lot 1[b]	4,500	Gasoline	Mechanical
Subtotal	**17,000**		
Total Capacity	**19,000**		

Source: Booth Creek Resorts
a - Aboveground storage tanks.
b - Underground storage tanks.

Roads

Under Alternative 1, The Summit at Snoqualmie would continue to operate its current network of approximately 18.5 miles of roads, including approximately 1.5 miles of paved roads and approximately 17 miles of native/dirt roads (see Table 2.3-1). Any future road construction or obliteration projects would require approval from the USFS (including appropriate scoping, etc.) or appropriate regulatory agency(s).

2.3.2.10 Maintenance Facilities

Under the No Action Alternative, The Summit at Snoqualmie would continue to operate several maintenance facilities throughout the four base areas (see Table 2.3.2-10).

Table 2.3.2-10
The Summit at Snoqualmie Maintenance Facilities Under Alternative 1

Maintenance Building	Square Feet
Alpental	
Electrical Facility	319[a]
Maintenance Facility	1,472
Lift Maintenance Facility	600
Storage Shed	363[a]
Subtotal	**2,754**
The Summit	
Summit West Maintenance Facility	6,000
Summit West Storage Sheds (combined)	753[a]
Summit Central Maintenance Facility	2,700
Summit Central Storage Sheds (combined)	864[a]
Summit East Maintenance Facility	2,000
Subtotal	**12,317**
Total	**15,071**

a - These numbers are the square feet of the building footprint, not the actual building size.

2.3.2.11 Restoration

Under Alternative 1, only previously approved restoration projects would occur. Additional restoration projects would require project-specific approval from the USFS, with appropriate scoping, public involvement, analysis and documentation.

2.3.3 Alternative 2 – Proposed Action

Alternative 2, as shown in Figures 2.3.3-1 - Alternative 2 Proposed Conditions – The Summit and 2.3.3-2 - Alternative 2 Proposed Conditions - Alpental, represents the Proposed Action. Alternative 2 includes the most of the components of the original 1998 Master Development Plan.

Under Alternative 2, The Summit's CCC would increase from 7,920 (as in the No Action Alternative) to 10,710 and Alpental's CCC would increase from 1,880 to 2,920. This is an increase of approximately 39 percent, or 3,830 skiers for the entire resort. The increased capacity would be achieved through the replacement of existing lifts, installation of new lifts, development of new ski terrain and construction of additional support facilities.

Forest Plan Amendment #27: Alternative 2 would include a non-significant (under NFMA) Forest Plan amendment, which would add a total of approximately 53 acres to the SUP area, including Hyak Creek, the egress area at the top of the *Silver Fir* chairlift (in Sections 16 and 17), and the cross-country hut at Grand Junction (approximately 500 feet west of Hyak Lake, occupying roughly 0.01 acre).[14] The expansion would incorporate Hyak Creek into the SUP area and provide for construction and use of the proposed crossover trails between Summit East and Summit Central, described below. The Forest Plan amendment would also reallocate a total of 433.01 acres of WNF lands from AMA (ST-1 - Scenic Travel) to AMA (RE-1 - Developed Recreation). These lands include 380 acres in the existing SUP area, 53 acres in the SUP adjustment, and 0.01 acre at the existing cross-country warming hut.

2.3.3.1 Lifts

Under Alternative 2, The Summit would operate 22 lifts (18 chairlifts and 4 surface lifts); while Alpental would operate seven lifts (5 chairlifts, 1 gondola, and 1 magic carpet). At full build-out, five of The Summit at Snoqualmie's existing chairlifts would remain in their current state: *Armstrong Express*, *Central Express*, *Edelweiss*, *Pacific Crest*, and *Mt. Hyak*[15]. Ten chairlifts would be realigned under the Proposed Action and 14 new lifts would be constructed.

Alpental

Pulse Gondola

The proposed *Pulse Gondola* would provide out-of-base access to the summit at Alpental. The lower terminal would be constructed adjacent to the proposed Visitor Service Building in the base area. The upper terminal would be constructed adjacent to the proposed Mountaintop Restaurant. The proposed

[14] Prior to the acquisition of the ski area by Ski Lifts, Inc., Ski Acres and Hyak ski areas operated under separate SUPs that provided separate operations. The SUP areas were separated by Hyak Creek, which was not included in either permit area. With the purchase of Hyak and Ski Acres by Ski Lifts, Inc., the ski area operations were no longer separate. This expansion would "clean up" the SUP area along Hyak Creek.

[15] Replacement of the existing *Mt. Hyak* chairlift at Summit East was approved under a Categorical Exclusion (CE) in 2002. Replacement of the chairlift includes removal of the existing *Keechelus* chairlift. For analysis purposes in this DEIS, the absence of *Keechelus* and realignment of *Mt. Hyak* is considered an existing condition.

Pulse Gondola would cover a distance of approximately 1 mile with a ride time of approximately 8 minutes.

Internationale

Under Alternative 2, the proposed Internationale chairlift would access expert terrain in the northwest portion of the SUP area. The lower terminal of *Internationale* would be located approximately 1,000 feet southeast of the existing upper terminal of *Sessel*. The upper terminal would be sited approximately 1,500 feet north of the existing upper terminal of the *Edelweiss* chairlift at 4,960 feet elevation. The proposed chairlift would accommodate a CCC of 440 expert level skiers with a ride time of approximately 8 minutes.

St. Bernard

The existing *St. Bernard* chairlift would be realigned along the natural fall line of the hill. The upper terminal would be relocated approximately 250 feet east and downhill from its existing location. The proposed chairlift would accommodate a CCC of 290 novice level skiers with a ride time of approximately 3 minutes.

Sessel

Under Alternative 2, the *Sessel* chairlift would be realigned and lengthened to take advantage of the majority of intermediate terrain at Alpental. The upper terminal would be located approximately 450 feet up-mountain from the existing location, within an existing opening. The proposed lower terminal would be located approximately 250 feet north of the existing location. The proposed *Sessel* chairlift would accommodate a CCC of 790 intermediate level skiers with a ride time of approximately 6 minutes.

Magic Carpet

Under Alternative 2, a *Magic Carpet* would be installed adjacent to the proposed *St. Bernard* chairlift, along the current alignment of the existing *Drei* tow (to be removed). The *Magic Carpet* would provide access to beginner terrain at Alpental.

The Summit

Surface Lift II

The proposed *Surface Lift II* tow would be constructed adjacent to Summit West Lot 1. The proposed lower terminal would be constructed just north of the existing Slide-In Lodge. The proposed upper terminal would be constructed to provide access to the proposed *Baby Double* chairlift. The proposed tow would accommodate a CCC of 100 with a ride time of approximately 3 minutes.

Baby Double

Under Alternative 2, the proposed *Baby Double* chairlift would be constructed at the northernmost extent of Summit West. The proposed lower terminal would be located approximately 50 feet north of the proposed upper terminal of *Surface Lift II* and the proposed upper terminal would be located approximately 1,050 feet up the hill from the lower terminal. The proposed chairlift would accommodate a CCC of 260 with a ride time of approximately 3 minutes.

Magic Carpet

Under Alternative 2, a *Magic Carpet* would be installed adjacent to the proposed *Surface Lift II* tow. The *Magic Carpet* would allow first-time beginner skiing at Summit West.

Northside

The proposed *Northside* chairlift would provide round-trip access to expert terrain, north of the existing *Pacific Crest* chairlift. The proposed lower terminal would be accessed via the proposed *Baby Double* chairlift or by skiing down from the existing *Pacific Crest* chairlift. The upper terminal would be located approximately 500 feet north of the existing upper terminal of the *Pacific Crest* chairlift. The proposed chairlift would accommodate a CCC of 170 with a ride time of approximately 4 minutes.

Little Thunder

The existing *Little Thunder* chairlift would be realigned and shortened to better utilize beginner slope gradients lower on the hill. The proposed lower terminal would be located approximately 250 feet north of the existing lower terminal, closer to base area facilities. The upper terminal would be located approximately 750 feet downslope from its existing location. The proposed chairlift would accommodate a CCC of 670 with a ride time of approximately 3 minutes. The proposed realignment of the *Little Thunder* chairlift would be in conjunction with the replacement and realignment of the *Dodge Ridge* chairlift.

Julie's Chair

The existing *Julie's Chair* chairlift would be realigned approximately 200 feet south of its existing alignment. The upper terminal would be located approximately 250 upslope and south of the current location.

Dodge Ridge

Under Alternative 2, the existing *Dodge Ridge* chairlift would be replaced and realigned along the natural fall line of the hill. The proposed upper terminal would be located approximately 50 feet northwest of the existing location. The proposed lower terminal would be located approximately 1,400 feet south of its existing location. The proposed chairlift would accommodate a CCC of 390 with a ride time of

approximately 7 minutes. The proposed realignment of the *Dodge Ridge* chairlift would be in conjunction with the proposed realignment of the *Little Thunder* chairlift.

Surface Lift I

Surface Lift I would be constructed alongside the proposed *Little Thunder* chairlift to provide a cohesive first-time beginner learning area at Summit West. The proposed tow would accommodate a CCC of 100 with a ride time of approximately 2 minutes.

Wildside

Under Alternative 2, the *Wildside* chairlift would be replaced and realigned with the lower terminal located approximately 300 feet north of the existing terminal. The upper terminal would be relocated approximately 50 feet south of its existing location. The proposed chair would accommodate a CCC of 590 skiers with a ride time of approximately 5 minutes.

Holiday

Under Alternative 2, the existing *Holiday* chairlift would be replaced and realigned. The proposed lower terminal would be located closer to the proposed base area facilities. The proposed chair would accommodate a CCC of 540 skiers with a ride time of approximately 4 minutes.

Triple 60

The proposed *Triple 60* chairlift would be constructed along the same alignment as the existing lift with the lower terminal located further downslope, adjacent to the proposed base lodge. The proposed chair would accommodate a CCC of 750 skiers and would have a ride time of approximately 3 minutes.

Ski School

The proposed *Ski School* chairlift would be constructed to provide out-of-base access to appropriate beginner terrain at Summit Central. The lower terminal would be constructed within 250 feet of the proposed base lodge. The upper terminal would be constructed approximately 1,250 feet upslope from the proposed lower terminal and would provide access to much of the beginner terrain proximate to the base area. The proposed chair would accommodate a CCC of 680 skiers and would have a ride time of approximately 4 minutes.

Magic Carpet

Under Alternative 2, a *Magic Carpet* would be installed in between the proposed lower terminals of the *Triple 60* and *Ski School* chairlifts, along the current alignment of the existing tow. The *Magic Carpet* would allow first-time beginner skiing at Summit Central.

Easy Street

The existing *Easy Street* chairlift would be replaced and realigned to provide direct out-of-base access to beginner terrain from *Silver Fir*. As such, the proposed lower terminal would be constructed adjacent to the *Silver Fir* base area facilities. The proposed chair would accommodate a CCC of 660 skiers and would have a ride time of approximately 6 minutes.

Silver Fir

Under Alternative 2, the existing *Silver Fir* chairlift is a fixed-grip triple chairlift would be replaced with a detachable quad in order to increase capacity to a CCC of 930 skiers. The proposed chair would have a ride time of approximately 4 minutes.

Mill Creek

The existing *Backside* chairlift would be replaced and realigned so that the new upper terminal would be located approximately 150 feet south from its current location and the new lower terminal would be located approximately 150 feet northwest from its current location. This proposed chairlift would then be renamed *Mill Creek* under all Action Alternatives. The proposed *Mill Creek* chairlift would be top-driven and accommodate a CCC of 340 skiers.

Easy Gold

The existing upper terminal of the *Easy Gold* chairlift would be relocated approximately 300 feet downslope from its existing location in order to avoid conflicts with users of *Trails 60A* and *65*. The CCC would remain at a capacity of 230 skiers.

Creek Run

The proposed *Creek Run* chairlift would be constructed to access existing and proposed intermediate terrain, particularly the proposed crossover trail (*Trail 71*) connecting Summit East and Central, in the northernmost extent of Summit East. The proposed lower terminal would be located northwest of the Summit East base area facilities at approximately 2,900 feet elevation. The proposed upper terminal would be located approximately 1,750 feet southeast of Hyak Lake at approximately 3,520 feet elevation. The proposed *Creek Run* chairlift would accommodate a CCC of 720 skiers and would have a ride time of approximately 8 minutes.

The proposed *Creek Run* chairlift would be constructed within Section 16.

Rampart

The proposed *Rampart* chairlift would be constructed to take advantage of existing terrain at Summit East. The chair would be aligned along the natural fall line of the hill in order to provide for more continuous fall line skiing. The lower terminal would be constructed adjacent to the proposed lower

terminal for the *Creek Run* chairlift. The upper terminal would be constructed approximately 750 feet northwest of the existing upper terminal for the *Mt. Hyak* chairlift. The proposed lift would accommodate a CCC of 630 skiers and would have a ride time of approximately 7 minutes.

The proposed *Rampart* chairlift would be constructed within Section 16.

Table 2.3.3-1 summarizes The Summit at Snoqualmie lift network at full build-out under Alternative 2.

Table 2.3.3-1
The Summit at Snoqualmie Lift Specifications Under Alternative 2

Name	Site Area	Lift Type	Vertical Length	Slope Length	CCC	Status
Armstrong Express	Alpental	Det quad	1,232	4,066	650	existing
Edelweiss	Alpental	Fixed double	1,071	2,854	330	existing
Internationale	Alpental	Det quad	1,345	3,808	440	proposed
Pulse Gondola	Alpental	Gondola	2,252	5,133	300	proposed
St. Bernard	Alpental	Fixed double	179	1,010	290	modified
Sessel	Alpental	Fixed quad	834	2,512	790	modified
Magic Carpet	Alpental	Surface	32	247	120	proposed
Subtotal					**2,920**	
Baby Double	Summit West	Fixed double	194	1,060	260	existing
Central Express	Summit Central	Det quad	936	3,909	930	modified
Creek Run	Summit East	Fixed quad	693	3,655	720	modified
Dodge Ridge	Summit West	Det quad	569	2,424	390	modified
Easy Gold	Summit East	Fixed double	195	1,018	230	proposed
Easy Street	Summit Central	Fixed quad	430	2,550	660	modified
Holiday	Summit Central	Fixed quad	249	1,324	540	existing
Julie's Chair	Summit West	Fixed quad	367	1,786	370	proposed
Little Thunder	Summit West	Fixed quad	109	1,254	670	modified
Magic Carpet I	Summit Central	Surface	19	206	80	modified
Magic Carpet II	Summit West	Surface	25	182	110	existing
Mill Creek	Summit East	Fixed triple	529	1,834	340	proposed
Mt. Hyak	Summit East	Det quad	1,080	3,228	680	proposed
Northside	Summit West	Fixed double	450	1,487	170	modified
Pacific Crest	Summit West	Fixed quad	694	2,831	780	modified
Rampart	Summit East	Fixed quad	737	2,944	630	proposed
Silver Fir	Summit Central	Det quad	1,020	4,003	930	proposed
Ski School	Summit Central	Fixed quad	214	1,272	680	proposed
Surface Lift I	Summit West	Surface lift	32	571	100	existing

Table 2.3.3-1
The Summit at Snoqualmie Lift Specifications Under Alternative 2

Name	Site Area	Lift Type	Vertical Length	Slope Length	CCC	Status
Surface Lift II	Summit West	Surface lift	47	570	100	proposed
Triple 60	Summit Central	Det quad	698	2,346	750	proposed
Wildside	Summit West	Det quad	709	2,187	590	modified
Subtotal					**10,710**	
Total					**13,630**	

2.3.3.2 Trails

Alternative 2 (see Figures 2.3.3-1 and 2.3.3-2) includes improvements to the existing trail network and the addition of new trails, particularly at Summit East.

Alpental

Armstrong Express Pod

Under Alternative 2, approximately 2.8 acres of grading and 0.4 acre of blasting is proposed along *Trails 3* and *7* (existing ski trails) within the *Armstrong Express* pod to smooth undulations in the existing terrain.

Edelweiss Pod

No terrain modification or trail clearing in the *Edelweiss* pod is proposed under Alternative 2.

Internationale Pod

Under Alternative 2, a portion of *Trail 20* would be widened. At approximate elevation 4,200 feet, an existing 15 foot wide opening through rock and vegetation would be blasted to approximately 30 feet wide.

Sessel Pod

Under Alternative 2, a 45 foot wide opening would be cleared between *Trails 21* and *16*. The new trail would be labeled *Trail 21A*. Approximately 0.3 acre of full clearing with no grading would be required to create this clearing (proposed *Trail 21A*).

St. Bernard Pod

Under Alternative 2, the realignment and extension of the *St. Bernard* chair lift would include no proposed terrain modifications or trail changes except for lift towers and terminals.

The Summit

Wildside Pod

Under Alternative 2, the proposed realignment of the *Wildside* chairlift would include approximately 0.5 acre of full clearing with grading and approximately 0.4 acre of full clearing with no grading to accommodate the proposed lift alignment and lower lift terminal. Additional clearing is proposed to provide access to the lower terminal of the *Wildside* chairlift from *Trails 1* and *2*.

Dodge Ridge Pod

Approximately 1.0 acre of full clearing with grading would be required to realign the *Dodge Ridge* chairlift. Additional terrain modification proposed in conjunction with the realignment of the *Dodge Ridge* chairlift includes reforestation of approximately 4.1 acres adjacent to *Trails 9* and *9A* within the proposed *Dodge Ridge* pod.

Little Thunder Pod

Approximately 7.9 acres of full clearing with grading is proposed around the realignment of the *Little Thunder* chairlift to provide more level terrain for beginner skiers. In addition, approximately 1.3 acres of reforestation or revegetation would occur alongside the *Little Thunder* chairlift in order to provide a buffer between beginner and intermediate terrain.

Surface Lift I Pod

Under Alternative 2, approximately 0.03 acre of full clearing with grading is proposed for construction of the proposed *Surface Lift I* surface lift. No terrain modification is proposed for trails within the proposed *Surface Lift I* pod.

Pacific Crest Pod

No terrain modification or trail clearing is proposed within the existing *Pacific Crest* pod. Approximately 2.2 acres of reforestation is proposed adjacent to *Trail 10* within the *Pacific Crest* pod.

Julie's Chair Pod

Under Alternative 2, approximately 1.0 acres of full clearing with grading is proposed for construction of the proposed *Julie's Chair* chairlift. No terrain modification is proposed for trails associated with the proposed/realigned *Julie's Chair* pod. Additional terrain modification includes approximately 1.2 acres of reforestation adjacent to *Trail 13* within the *Julie's Chair* pod.

Surface Lift II Pod

Under Alternative 2, approximately 0.03 acre of full clearing with grading is proposed for construction of the proposed *Surface Lift II* surface lift. No terrain modification is proposed for trails within the proposed *Surface Lift II* pod.

Northside Pod

Under Alternative 2, approximately 1.3 acres of full clearing with grading and 1.2 acres of full clearing with no grading is proposed for construction of the proposed *Northside* chairlift. No additional terrain modification is proposed for trails within the proposed *Northside* pod.

Baby Double Pod

Under Alternative 2, approximately 1.1 acres of full clearing with grading and 3.8 acres of full clearing with no grading is proposed for construction of the proposed *Baby Double* chairlift and associated terrain. Additional terrain modification includes approximately 0.2 acre of reforestation adjacent to *Trail 13B* within the *Baby Double* pod.

Holiday Pod

Approximately 1.0 acres of full clearing with grading is proposed for construction of the proposed *Holiday* chairlift under Alternative 2. Additional terrain modification includes approximately 1.8 acres of reforestation adjacent to *Trails 43, 44,* and *45* within the *Holiday* pod.

Triple 60 Pod

Under Alternative 2, the proposed realignment of the *Triple 60* chairlift would provide access to *Trail 41*. No additional terrain modification is proposed for trails within the proposed/realigned *Triple 60* pod. Approximately 1.6 acres of reforestation is proposed adjacent to *Trails 33* and *40* within the *Triple 60* pod.

Ski School Pod

Approximately 1.0 acres of full clearing with grading is proposed for construction of the *Ski School* chairlift that is proposed under Alternative 2. No terrain modification or trail clearing is proposed for trails within the proposed/realigned *Ski School* pod. Approximately 1.2 acres of reforestation is proposed adjacent to *Trails 34* and *46* within the *Ski School* pod.

Central Express Pod

Under Alternative 2, approximately 6.7 acres of full clearing with grading is proposed along *Trail 26* within the existing *Central Express* pod. In addition, approximately 6.4 acres of reforestation is proposed adjacent to *Trails 30* and *31*.

Easy Street Pod

Approximately 1.9 acres of full clearing with no grading near the bottom terminal of the proposed *Easy Street* chairlift is proposed in conjunction with realignment of the *Easy Street* chairlift. Approximately 0.9 acre of grading would be required for lift terminal construction. Proposed clearing would provide access to the bottom terminal from *Trail 27*.

Silver Fir Pod

The proposed upper terminal of the *Silver Fir* chairlift would provide access to *Trail 49* (Central-to-East Crossover). *Trail 49* would be constructed to an average width of 109 feet, with the upper portion of the trail cleared to approximately one groomer width (~ 25 feet) at the *Silver Fir* egress and south along Hyak Lake and to the powerline (see Figure 2.3.3-1). *Trail 49* would include approximately 2.7 acres of full clearing with no grading. The proposed alignment would require an SUP boundary expansion of approximately 35.6 acres in order to construct a trail with appropriate slope gradients for both skiers and snowboarders to traverse between Summit Central and Summit East. The proposed alignment would utilize existing cleared areas within Section 16, particularly clearing for the power, to descend into the proposed *Creek Run* pod.

Under Alternative 2, approximately 0.7 acre of full clearing with no grading is proposed where *Trails 23, 24,* and *25* merge. In addition, approximately 0.7 acre of full clearing with grading is proposed below the merge area, adjacent to *Trail 18A* in order to reduce undulations in the existing terrain.

Approximately 1.1 acres of full clearing with no grading is proposed between the *Silver Fir* and *Central Express* pods in order to create an opening that would connect the two pods. Under the Proposed Action, *Trail 19* would begin at the upper terminal of the *Silver Fir* chairlift, descend into the *Central Express* pod, and wind back around (utilizing the proposed opening) into the *Silver Fir* pod.

Tubing Pod

No terrain modification or trail clearing is proposed within the *Tubing* pod.

Mill Creek Pod

Approximately 1.0 acres of full clearing with grading is proposed for construction of the *Mill Creek* chairlift that is proposed under Alternative 2. Under Alternative 2, four new trails would be cleared within the *Mill Creek* pod. *Trails 52A, 52B, 52C,* and *52D* would include approximately 2.8 acres of full clearing with grading and 8.9 acres of full clearing with no grading. Proposed trails would be constructed to an average width of approximately 130 feet.

Easy Gold Pod

No terrain modification or clearing for trails within the *Easy Gold* pod is proposed under Alternative 2.

Creek Run Pod

Under Alternative 2, six ski trails would be cleared, including *Trail 71* (East-to-Central Crossover), within the proposed *Creek Run* pod. *Trail 55B* would be constructed to an average width of 146 feet and would include approximately 2.9 acres of glading (see Section 2.3.1.3 for a description of glading) within Section 16. *Trail 55* would utilize existing trail openings mid-trail, but would require additional clearing to continue to the upper and lower terminals of the proposed *Creek Run* chairlift. *Trail 55* would be constructed to an average width of 118 feet and would require approximately 2.0 acres of full clearing with no grading downslope of the existing clearing, and 2.9 acres of glading from the proposed upper terminal of the *Creek Run* chairlift to the existing clearings.

A wood/steel bridge would be constructed to allow proposed *Trail 55B* to cross Stream A. This bridge would be approximately 120 feet x 120 feet.

Proposed *Trail 55A* would be constructed to an average width of 123 feet. Similar to *Trails 55* and *55B*, *Trail 55A* would be gladed. However, because *Trail 55A* would be planned as the primary route to *Trail 71* (East-to-Central Crossover), a 25-foot fully cleared path would be created down the center of the proposed trail in order to provide safe access to skiers of all abilities. Beyond the 25-foot full clearance width, trail clearing would be gladed. Accordingly, approximately 2.6 acres of full clearing with no grading, 0.2 acre of full clearing with grading and 3.8 acres of glading would be for the construction of *Trail 55A* under Alternative 2.

Ski Lifts, Inc.would construct a snow bridge each year in order to allow *Trail 55A* to cross Stream A.

The proposed upper terminal of the *Creek Run* chairlift would provide access to *Trail 71* (East-to-Central Crossover). *Trail 71* would be constructed at a grade of approximately 8 percent and would be accessed via *Trail 55A*. The proposed crossover would intersect the existing power line clearing in Section 16 at elevation 3,100 feet and descend through the clearing. At approximate elevation 2,850 feet the traverse would continue towards Central through a previously uncleared area. The proposed trail would be constructed to an average width of approximately 16 feet and would include approximately 0.8 acre of full clearing with no grading within Section 16. The proposed trail would terminate at the lower terminal of the *Silver Fir* chairlift.

A wood/steel bridge would be constructed to allow proposed *Trail 71* to cross Hyak Creek. This bridge would be approximately 25 feet wide by 75 feet long. Booth Creek Resort proposes to construct a snow bridge each year in order to allow *Trail 71* to cross an additional stream south of the proposed Hyak Creek crossing.

In conjunction with proposed *Trail 71*, the existing East-to-Central Crossover trail would be abandoned and revegetated. Approximately 2.3 acres of the existing East-to-Central Crossover trail would be reforested. A 12-inch tread width would remain for mountain bike use during the summer months.

Trails 66 and *67* would be constructed to an average width of 130 and 140 feet, respectively. Similar to *Trail 55, Trails 66* and *67* would utilize the existing trail network at East. Approximately 9.6 acres of full clearing with no grading would be required to extend the existing trail network to the proposed upper and lower terminals of the *Creek Run* chairlift.

Under Alternative 2, clearing for trails associated with the proposed *Creek Run* pod would include approximately 15.0 acres of full clearing with no grading and 9.6 acres of glading within Section 16.

Rampart Pod

Proposed trails within the *Rampart* pod would utilize existing openings where possible. Approximately 1.4 acres of full clearing with no grading and 0.4 acre of full clearing with grading would be necessary to construct the upper terminal of the chairlift and provide appropriate egress area to the 5 trails accessed via the proposed *Rampart* chairlift. In addition, approximately 3.7 acres of full clearing with grading and 4.8 acres of full clearing with no grading would be required to extend existing *Trails 60* and *61* to the proposed lower terminal of the *Rampart* chairlift.

Under Alternative 2, approximately 1.7 acres of reforestation would occur within the *Rampart* pod.

Mt. Hyak

Proposed reforestation would modify the trail layout of trails accessed from the existing *Mt. Hyak* chairlift. (2.0 acres)

Table 2.3.3-2 provides a summary of the terrain specifications for The Summit at Snoqualmie under Alternative 2.

Table 2.3.3-2
The Summit at Snoqualmie Terrain Specifications Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop	Slope Length	Average Width	Area	Skier Ability Level
			(feet)	(feet)	(feet)	(acres)	
1	Alpental	Armstrong	957	3,396	148	9.94	Expert
2	Alpental	Armstrong	780	2,856	153	12.99	Expert
3	Alpental	Armstrong	541	1,506	353	11.10	Advanced
4	Alpental	Armstrong	189	1,699	113	4.09	Advanced
5	Alpental	Armstrong	600	1,586	207	6.72	Expert
6	Alpental	Armstrong	548	1,693	153	5.40	Expert
7	Alpental	Armstrong	465	1,659	298	10.72	Intermediate
8	Alpental	Edelweiss	1,091	3,384	284	18.36	Expert
9	Alpental	Edelweiss	275	1,468	442	11.88	Expert
10	Alpental	Edelweiss	343	675	88	1.13	Expert
11	Alpental	Edelweiss	259	1,110	352	7.79	Low Intermediate
12	Alpental	Edelweiss	817	2,021	413	15.85	Expert

Table 2.3.3-2
The Summit at Snoqualmie Terrain Specifications Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop	Slope Length	Average Width	Area	Skier Ability Level
			(feet)	(feet)	(feet)	(acres)	
13	Alpental	Edelweiss	444	925	134	2.48	Expert
14	Alpental	Edelweiss	285	1,067	194	4.28	Expert
15	Alpental	Edelweiss	1,498	3,379	300	18.65	Expert
16	Alpental	Edelweiss	332	1,253	155	4.26	Low Intermediate
17	Alpental	Edelweiss	742	1,345	159	3.42	Expert
18	Alpental	Edelweiss	655	1,587	207	6.51	Expert
19	Alpental	Edelweiss	126	1,073	272	5.52	Intermediate
20	Alpental	Internationale	1,253	3,986	191	15.88	Expert
20A	Alpental	Internationale	398	1,845	113	9.29	Advanced
21	Alpental	Sessel	267	760	115	1.86	Advanced
21A	Alpental	Sessel	21	213	47	0.22	Beginner
22	Alpental	Sessel	472	1,565	235	7.88	Advanced
23	Alpental	Sessel	790	2,722	231	13.59	Intermediate
24	Alpental	St. Bernard	53	381	70	0.57	Novice
25	Alpental	St. Bernard	197	1,119	275	6.87	Low Intermediate
Subtotal						**217.25**	
1	The Summit	Wildside	712	2,309	264	13.03	Expert
2	The Summit	Wildside	344	1,435	243	7.61	Low Intermediate
3	The Summit	Wildside	412	1,817	313	12.60	Low Intermediate
4	The Summit	Little Thunder	115	1,366	220	6.79	Novice
4A	The Summit	Surface Lift I	38	689	303	4.77	Beginner
5	The Summit	Wildside	404	1,221	149	3.84	Advanced
7	The Summit	Wildside	313	1,253	160	4.38	Advanced
8	The Summit	Wildside	332	1,271	215	5.81	Expert
9	The Summit	Dodge Ridge	582	2,596	205	11.82	Low Intermediate
9A	The Summit	Dodge Ridge	588	2,634	159	9.33	Low Intermediate
10	The Summit	Pacific Crest	693	2,985	309	20.45	Intermediate
11	The Summit	Julie's Chair	712	2,309	264	12.15	Expert
12	The Summit	Northside	445	1,658	152	5.49	Advanced
12A	The Summit	Northside	443	1,498	111	3.56	Advanced
12B	The Summit	Northside	315	1,157	132	3.33	Intermediate
13	The Summit	Julie's Chair	372	1,957	281	12.28	Low Intermediate
13B	The Summit	Baby Double	204	1,187	388	10.34	Novice
14	The Summit	Magic Carpet I	23	323	98	0.72	Beginner
15	The Summit	Surface Lift II	49	642	214	3.13	Beginner
16	The Summit	Wildside	139	1,515	187	0.91	Advanced
17	The Summit	Silver Fir	1,021	5,084	155	17.51	Advanced
18	The Summit	Silver Fir	275	2,044	89	4.06	Novice
18A	The Summit	Silver Fir	107	488	207	2.26	Low Intermediate
19	The Summit	Silver Fir	594	2,378	154	7.93	Intermediate

Table 2.3.3-2
The Summit at Snoqualmie Terrain Specifications Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
20	The Summit	Silver Fir	419	1,117	160	3.70	Expert
21	The Summit	Silver Fir	573	3,258	189	13.83	Low Intermediate
22	The Summit	Silver Fir	588	1,804	207	7.84	Expert
23	The Summit	Silver Fir	329	909	112	2.12	Expert
24	The Summit	Silver Fir	510	1,505	164	5.23	Advanced
25	The Summit	Silver Fir	315	858	112	2.03	Advanced
26	The Summit	Central Express	626	3,073	296	20.08	Intermediate
27	The Summit	Easy Street	444	2,680	365	22.05	Novice
29	The Summit	Central Express	77	513	64	0.72	Low Intermediate
30	The Summit	Central Express	875	3,413	323	23.97	Expert
31	The Summit	Central Express	951	4,394	310	30.10	Intermediate
32	The Summit	Triple 60	263	1,920	161	6.62	Low Intermediate
33	The Summit	Triple 60	322	2,348	116	6.04	Novice
34	The Summit	Ski School	214	1,696	144	5.52	Novice
35	The Summit	Triple 60	308	635	108	1.35	Expert
36	The Summit	Triple 60	382	844	105	1.81	Expert
37	The Summit	Triple 60	468	1,157	71	1.71	Expert
38	The Summit	Triple 60	508	1,448	124	3.84	Expert
39	The Summit	Triple 60	702	2,436	182	9.36	Expert
40	The Summit	Triple 60	604	1,896	101	4.09	Expert
41	The Summit	Triple 60	233	2,485	35	1.93	Intermediate
42	The Summit	Triple 60	547	1,615	259	8.70	Expert
43	The Summit	Holiday	255	1,630	177	6.50	Novice
44	The Summit	Holiday	253	1,470	129	4.27	Low Intermediate
45	The Summit	Holiday	233	1,359	215	6.59	Novice
46	The Summit	Ski School	218	1,442	335	10.90	Novice
49	The Summit	Silver Fir	931	6,728	109	16.23	Low Intermediate
51	The Summit	Mt. Hyak	361	959	127	2.56	Expert
51A	The Summit	Mt. Hyak	1,090	3,470	155	11.53	Expert
51B	The Summit	Mt. Hyak	1,026	2,998	192	12.35	Expert
51C	The Summit	Mt. Hyak	262	781	259	4.40	Intermediate
51E	The Summit	Mt. Hyak	230	591	117	1.39	Advanced
52	The Summit	Mill Creek	181	1,050	187	4.43	Novice
52A	The Summit	Mill Creek	434	2,452	165	9.02	Novice
52B	The Summit	Mill Creek	479	2,065	126	5.75	Low Intermediate
52C	The Summit	Mill Creek	479	1,830	101	4.02	Advanced
52D	The Summit	Mill Creek	502	2,070	256	11.53	Intermediate
52E	The Summit	Mill Creek	197	976	100	2.14	Advanced
54	The Summit	Rampart	202	1,342	200	6.08	Novice
55	The Summit	Creek Run	580	3,038	118	8.02	Novice

Table 2.3.3-2
The Summit at Snoqualmie Terrain Specifications Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop	Slope Length	Average Width	Area	Skier Ability Level
			(feet)	(feet)	(feet)	(acres)	
55A	The Summit	Creek Run	385	2,511	123	6.91	Low Intermediate
55B	The Summit	Creek Run	207	954	146	3.12	Low Intermediate
56	The Summit	Rampart	204	1,072	151	3.63	Low Intermediate
58	The Summit	Rampart	754	2,018	120	5.14	Advanced
59	The Summit	Rampart	939	2,926	215	13.59	Advanced
60	The Summit	Rampart	658	2,373	191	9.85	Intermediate
60A	The Summit	Rampart	215	694	249	3.71	Intermediate
60B	The Summit	Rampart	137	440	132	1.26	Low Intermediate
61	The Summit	Rampart	599	3,005	154	10.31	Low Intermediate
62	The Summit	Rampart	156	1,213	108	2.89	Novice
63	The Summit	Rampart	392	2,085	153	7.15	Low Intermediate
65	The Summit	Rampart	283	738	172	2.63	Advanced
66	The Summit	Creek Run	703	4,138	127	11.84	Novice
67A	The Summit	Creek Run	189	1,034	137	3.20	Low Intermediate
67B	The Summit	Creek Run	181	878	92	1.80	Novice
68	The Summit	Easy Gold	316	1,544	388	13.39	Low Intermediate
71	The Summit	Silver Fir	254	2,250	15	4.31	Novice
Subtotal						**599.18**	
Total						**816.43**	

Table 2.3.3-3 provides a summary of trail construction and ground disturbance activities under Alternative 2.

Table 2.3.3-3
The Summit at Snoqualmie Trail Construction and Ground Disturbance Under Alternative 2

Trail #	Full Clearing w/ Grading	Full Clearing w/ No Grading	Glading	Blasting	Pod
	(acres)	(acres)	(acres)	(acres)	
1	0.10	0.21			Armstrong
2	0.16	0.16			Wildside
12A		0.02			Northside
13B	0.19	2.96			Julie's chair
16	0.01				Wildside
18	0.75				Silver Fir
19		1.14			Silver Fir
20				0.75	Silver Fir
21		0.26			Sessel

Table 2.3.3-3
The Summit at Snoqualmie Trail Construction and Ground Disturbance
Under Alternative 2

Trail #	Full Clearing w/ Grading (acres)	Full Clearing w/ No Grading (acres)	Glading (acres)	Blasting (acres)	Pod
21A		0.22			Sessel
23		0.70			Sessel
24		6.67			Silver Fir
26	6.67				Central Express
27	0.40	1.48			Easy Street
3				0.35	Wildside
4	6.59				Little Thunder
40	0.09	0.22			Triple 60
49	0.14	5.26			Silver Fir
52A	0.94	1.63			Mill Creek
52B	1.09	3.04			Mill Creek
52C	0.45	1.11			Mill Creek
52D	0.18	0.64			Mill Creek
52E		2.20			Mill Creek
54	0.07	0.76			Rampart
55	0.00	2.05	2.86		Creek Run
55A	0.21	2.59	3.84		Creek Run
55B	0.01	0.32	2.86		Creek Run
56	0.23	0.68			Rampart
59	0.17	0.06			Rampart
60	2.98	1.51			Rampart
61	0.69	3.24			Rampart
66	0.59	6.03			Creek Run
67		2.96			Creek Run
7		2.84			Wildside
71	0.01	0.78			Silver Fir
Lifts	0.53	5.27			
Total	**23.25**	**57.01**	**9.56**	**1.1**	

2.3.3.3 Night Skiing

The night skiing terrain at The Summit under Alternative 2 would include lighting 22 new trails on approximately 140 acres of additional terrain (see Figure 2.3.3-3, Alternative 2 Proposed Night Skiing - The Summit). Under Alternative 2 at The Summit, night skiing would be expanded to include all the runs

in the *Mill Creek*, *Silver Fir*, and *Easy Street* pods. The *Rampart* pod would include existing night lighting (at Summit East) and expanded night terrain near the bottom of the *Rampart* lift. All new night lighting installation would include low-glare, directional lights.

At Alpental, night skiing would be expanded to include the runs along the northern edge of the *Internationale* pod, lighting 3 new trails on approximately 17 acres (see Figure 2.3.3-4, Alternative 2 Proposed Night Skiing – Alpental). Table 2.3.3-4 summarizes the night skiing at The Summit at Snoqualmie that is proposed under Alternative 2.

Table 2.3.3-4
The Summit at Snoqualmie Night Skiing Terrain Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop	Slope Length	Average Width	Area	Skier Ability Level
			(feet)	(feet)	(feet)	(acres)	
1	Alpental	Armstrong	957	3,396	148	9.93	Expert
2	Alpental	Armstrong	780	2,856	153	12.99	Expert
3	Alpental	Armstrong	541	1,506	353	11.09	Advanced
4	Alpental	Armstrong	189	1,699	113	4.09	Advanced
5	Alpental	Armstrong	600	1,586	207	6.72	Expert
6	Alpental	Armstrong	548	1,693	153	5.40	Expert
7	Alpental	Armstrong	465	1,659	298	10.72	Intermediate
16	Alpental	Edelweiss	332	1,253	155	4.26	Low Intermediate
20	Alpental	Internationale	1,253	3,986	191	15.88	Expert
21	Alpental	Sessel	267	760	115	1.86	Advanced
21A	Alpental	Sessel	21	213	47	0.22	Beginner
22	Alpental	Sessel	472	1,565	235	7.88	Advanced
23	Alpental	Sessel	790	2,722	231	13.59	Intermediate
24	Alpental	St. Bernard	53	381	70	0.57	Novice
25	Alpental	St. Bernard	197	1,119	275	6.87	Low Intermediate
	Subtotal					**112.07**	
1	The Summit	Wildside	712	2,309	264	13.03	Expert
2	The Summit	Wildside	344	1,435	243	7.61	Low Intermediate
3	The Summit	Wildside	412	1,817	313	12.60	Low Intermediate
4	The Summit	Little Thunder	115	1,366	220	6.79	Novice
4A	The Summit	Surface Lift I	38	689	303	4.77	Beginner
5	The Summit	Wildside	404	1,221	149	3.84	Advanced
7	The Summit	Wildside	313	1,253	160	4.38	Advanced
8	The Summit	Wildside	332	1,271	215	5.81	Expert
9	The Summit	Dodge Ridge	582	2,596	205	11.82	Low Intermediate
9A	The Summit	Dodge Ridge	588	2,634	159	9.33	Low Intermediate
10	The Summit	Pacific Crest	693	2,985	309	20.45	Intermediate
11	The Summit	Julie's Chair	712	2,309	264	12.15	Expert
12	The Summit	Northside	445	1,658	152	5.49	Advanced
12A	The Summit	Northside	443	1,498	111	3.56	Advanced

Table 2.3.3-4
The Summit at Snoqualmie Night Skiing Terrain Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
12B	The Summit	Northside	315	1,157	132	3.33	Intermediate
13	The Summit	Julie's Chair	372	1,957	281	12.28	Low Intermediate
13B	The Summit	Baby Double	204	1,187	388	10.34	Novice
14	The Summit	Magic Carpet I	23	323	98	0.72	Beginner
15	The Summit	Surface Lift II	49	642	214	3.13	Beginner
16	The Summit	Wildside	139	1,515	187	0.91	Advanced
17	The Summit	Silver Fir	1,021	5,084	155	17.51	Advanced
18	The Summit	Silver Fir	275	2,044	89	4.06	Novice
18A	The Summit	Silver Fir	107	488	207	2.26	Low Intermediate
19	The Summit	Silver Fir	594	2,378	154	7.93	Intermediate
20	The Summit	Silver Fir	419	1,117	160	3.70	Expert
21	The Summit	Silver Fir	573	3,258	189	13.82	Low Intermediate
22	The Summit	Silver Fir	588	1,804	207	7.84	Expert
23	The Summit	Silver Fir	329	909	112	2.12	Expert
24	The Summit	Silver Fir	510	1,505	164	5.23	Advanced
25	The Summit	Silver Fir	315	858	112	2.03	Advanced
26	The Summit	Central Express	626	3,073	296	20.08	Intermediate
27	The Summit	Easy Street	444	2,680	365	22.05	Novice
29	The Summit	Central Express	77	513	64	0.72	Low Intermediate
30	The Summit	Central Express	875	3,413	323	23.97	Expert
31	The Summit	Central Express	951	4,394	310	30.10	Intermediate
32	The Summit	Triple 60	263	1,920	161	6.62	Low Intermediate
33	The Summit	Triple 60	322	2,348	116	6.04	Novice
34	The Summit	Ski School	214	1,696	144	5.52	Novice
35	The Summit	Triple 60	308	635	108	1.35	Expert
36	The Summit	Triple 60	382	844	105	1.81	Expert
37	The Summit	Triple 60	468	1,157	71	1.71	Expert
38	The Summit	Triple 60	508	1,448	124	3.84	Expert
39	The Summit	Triple 60	702	2,436	182	9.36	Expert
40	The Summit	Triple 60	604	1,896	101	4.09	Expert
41	The Summit	Triple 60	233	2,485	35	1.93	Intermediate
42	The Summit	Triple 60	547	1,615	259	8.70	Expert
43	The Summit	Holiday	255	1,630	177	6.50	Novice
44	The Summit	Holiday	253	1,470	129	4.27	Low Intermediate
45	The Summit	Holiday	233	1,359	215	6.59	Novice
46	The Summit	Ski School	218	1,442	335	10.90	Novice
51	The Summit	Mt. Hyak	361	959	127	2.56	Expert
51A	The Summit	Mt. Hyak	1,090	3,470	155	11.53	Expert
51B	The Summit	Mt. Hyak	1,026	2,998	192	12.35	Expert
51C	The Summit	Mt. Hyak	262	781	259	4.40	Intermediate

Table 2.3.3-4
The Summit at Snoqualmie Night Skiing Terrain Under Alternative 2

Trail #	Site	Pod Name	Vertical Drop (feet)	Slope Length (feet)	Average Width (feet)	Area (acres)	Skier Ability Level
51E	The Summit	Mt. Hyak	230	591	117	1.39	Advanced
52	The Summit	Mill Creek	181	1,050	187	4.43	Novice
52A	The Summit	Mill Creek	434	2,452	165	9.02	Novice
52B	The Summit	Mill Creek	479	2,065	126	5.75	Low Intermediate
52C	The Summit	Mill Creek	479	1,830	101	4.02	Advanced
52D	The Summit	Rampart	502	2,070	256	11.53	Intermediate
52E	The Summit	Mill Creek	197	976	100	2.14	Advanced
54	The Summit	Rampart	202	1,342	200	6.08	Novice
56	The Summit	Rampart	204	1,072	151	3.63	Low Intermediate
58	The Summit	Rampart	754	2,018	120	5.14	Advanced
59	The Summit	Rampart	939	2,926	215	13.59	Advanced
60	The Summit	Rampart	658	2,373	191	9.85	Intermediate
60A	The Summit	Rampart	215	694	249	3.71	Intermediate
60B	The Summit	Rampart	137	440	132	1.26	Low Intermediate
61	The Summit	Rampart	599	3,005	154	10.31	Low Intermediate
62	The Summit	Rampart	156	1,213	108	2.89	Novice
63	The Summit	Rampart	392	2,085	153	7.15	Low Intermediate
65	The Summit	Rampart	283	738	172	2.63	Advanced
68	The Summit	Easy Gold	316	1,544	388	13.39	Low Intermediate
	Subtotal					**543.74**	
	Total					**655.81**	

2.3.3.4 Parking

Under Alternative 2, The Summit at Snoqualmie would provide approximately 57.2 acres of parking at 23 parking lots and along State Route 906 at Summit West, Parking lots on NFSL, which include Alpental lots 3, 4, 5, 6, and 7, Summit West lots 1, 2, and the maintenance shop lot area, and approximately half of Silver Fir lot 1 (the portion located on NFSL) would be paved under Alternative 2.

Stormwater management for the paved parking lots would include oil/water separators, the use of a magnesium chloride deicer instead of sand, and sediment detention areas.

- Parking Lot 1 at Summit West would be regraded and paved to provide an additional 2.8 acres of parking space. Stormwater retention would be installed subsurface.
- Parking Lot 2 at Summit West would be paved and would include stormwater management.
- Parking Lot 1 at Silver Fir would be paved and would include stormwater management.
- Parking Lot 2 at Silver Fir would be expanded from 1.4 acres to approximately 3.6 acres.

- Parking Lot 3 at Silver Fir would be expanded from 0.6 acre to approximately 1.3 acres.
- Parking Lot 4 at Silver Fir would be constructed approximately 200 feet north of the existing Parking Lot 3 and would provide approximately 4.7 acres of additional parking, particularly for tubing.
- Parking Lots 3, 4, 5, 6, and 7 at Alpental would be paved and would include stormwater management.

Parking for Alternative 2 is summarized below in Table 2.3.3-5.

Table 2.3.3-5
The Summit at Snoqualmie Parking Lots Under Alternative 2

Parking Lot	Status	Area (acres)	Cars per Acre	Total Car Capacity	Total Capacity (people)
Alpental					
Lot 1	Existing	0.8	104	83	183
Lot 2	Existing	1.9	155	295	649
Lot 3[a]	Proposed	0.9	72	65	143
Lot 4[a]	Proposed	0.6	133	80	176
Lot 5[a]	Proposed	0.9	90	81	178
Lot 6[a]	Proposed	2.5	121	303	667
Lot 7[a]	Proposed	0.2	125	25	55
Subtotal		**7.8**		**932**	**2,050**
The Summit					
Summit West Lot 1b	Proposed	8.0	118	944	2,077
Summit West Lot 2a	Proposed	4.3	99	426	937
First Western	Existing	1.8	105	190	418
SR 906	Existing	2.3	130	300	660
Summit Central Lot 1	Existing	10.9	147	1,606	3,533
Summit Central Lot 2	Existing	4.2	96	405	891
Silver Fir Lot 1a	Proposed	2.7	109	295	649
Silver Fir Lot 2c	Proposed	3.6	118	425	935
Silver Fir Lot 3c	Proposed	1.3	132	172	378
Silver Fir Lot 4d	Proposed	4.8	118	566	1,245
Summit East Lot 1	Existing	1.8	83	150	330
Summit East Lot 2	Existing	2.6	75	195	429
Summit East Lot 3	Existing	1.1	105	115	253
Subtotal		**49.4**		**5,789**	**12,736**
Total		**57.2**		**6,721**	**14,786**

Source: The Summit at Snoqualmie management, SE GROUP GIS DATA 5/27/04
a - Proposed paving of the existing parking lot and installation of stormwater facilities.
b - Proposed expansion of existing parking lot, paving and installation of stormwater facilities.
c - Proposed expansion of existing parking.
d - Proposed new parking lot.

In total, The Summit at Snoqualmie would provide parking capacity for approximately 14,786 people at one time, which would be lower than the total parking requirement, including the CCC of 13,630 at the

ski area facilities, a capacity of 500 Nordic skiers, and 2,500 tubing area guests (a total of 16,630), not including those parking at the area but not purchasing ski area ticket.

2.3.3.5 Support Facilities

Under Alternative 2, The Summit would increase the size of guest service facilities from the existing 97,566 square feet to 174,720 square feet and this would correspond with the proposed increase in mountain capacity, with restaurant seating increasing from 1,386 to 4,234. At Alpental, the size of guest services would increase from the existing 20,688 square feet to 38,188 square feet with restaurant seating increasing from 528 to 813.

Proposed development would include construction of a guest services building at Alpental, expansion of existing base area facilities at Summit West, construction of a new base lodge at Summit Central, expansion of the existing facilities at Silver Fir, creation of a mountaintop restaurant at Summit East, and renovation to several out-buildings, primarily ski school buildings. The new guest support facilities would be designed and sited to relieve base area congestion and to spread guests throughout the resort.

Alpental

Approximately 17,500 square feet of guest service facilities would be constructed at Alpental under Alternative 2. The proposed 14,000-square foot visitor service building would be constructed in Alpental's base area in a previously undeveloped area. The building would be constructed adjacent to the existing bottom terminal of the *Armstrong Express* chairlift and would house arrival services such as ticketing, ski school sales, retail, lockers, and public lockers.

A 3,500-square foot mountaintop restaurant would be constructed at Alpental, located at the proposed upper terminal of the *Pulse Gondola*. The proposed ADA-accessible facility would include space for ski patrol and retail, as well as 285 restaurant seats. The proposed facility would be open for skiing and year-round dining. Direct access to the proposed mountaintop restaurant would be provided via the proposed *Pulse Gondola*. In conjunction with the construction of the mountaintop restaurant, an ADA-accessible interpretive trail would be constructed within a 100 foot radius of the proposed restaurant.

With implementation of the mountaintop restaurant, the support facilities at Alpental would increase from 20,688 square feet to 38,188 square feet and the seating capacity would increase from 528 to 813 seats.

Summit West

The Proposed Action includes expansion of the existing Slide-In Lodge, including its consolidation with the existing Alpenhaus Lodge. Consolidation of the two lodges would include construction of approximately 42,390 square feet of guest service space (food and beverage) between the two existing lodges. The existing Slide-In Lodge would be expanded to the east by approximately 1,500 square feet. In

all, expansion of existing base area facilities at Summit West (including the Alpenhaus and Slide-In Lodges) would create approximately 15,740 square feet of additional guest service space.

Also under Alternative 2, the existing Thunderbird Lodge would be renovated to include approximately 70 restaurant seats. The proposed renovation would be completed on the existing foundation and footprint. The proposed renovation would serve guests in the *Wildside* and *Dodge Ridge* pods.

Summit Central

Under Alternative 2, the existing Central Base Lodge and rental shop/learning center would be removed and a new 60,000-square foot facility would be constructed. The proposed Summit Central Base Lodge would be constructed downslope from the existing day lodge and would include approximately 1,700 restaurant seats.

Under Alternative 2, all guest service facilities at Summit Central would be consolidated in this proposed facility. In addition, the existing Mohan, Skico, and Skibacs ski schools as well as the existing base lodge would be removed. The Summit at Snoqualmie does not propose any relocation of these facilities or creation of new facilities in their absence.

Silver Fir

Under Alternative 2, the Silver Fir Base Lodge would be expanded from 4,618 square feet to approximately 19,818 square feet. The proposed lodge would provide most guest service functions including lift ticket sales, lockers, restrooms, and retail space. In addition, 440 additional restaurant seats (approximately 490 seats total) would be provided. The proposed facility would serve guests in the *Rampart*, Creek Run, *Easy Street*, and *Silver Fir* pods.

Summit East

The proposed mountaintop restaurant at Summit East would be constructed adjacent to the upper terminal of the Mt. Hyak chairlift. The 5,000-square foot facility would provide 250 restaurant seats.

Table 2.3.3-6 provides a summary of the proposed building sizes and footprints, as well as restaurant seating and capacities under Alternative 2. Guest services would be consolidated with Summit Central.

Table 2.3.3-6
The Summit at Snoqualmie Guest Services Under Alternative 2

Facility Name	Location	Building Size (square feet)	Building Footprint (square feet)	Restaurant Seats	Status
Alpenhaus/Slide in Lodge	Summit	42,390	15,740	0	Renovated
Thunderbird Lodge	Summit	34,300	3,400	70	Renovated
Summit Central Base Lodge	Summit	60,000	30,000	1,700	Proposed
Silver Fir Base Lodge	Summit	19,818	1,000	440	Renovated
Mountain Top Restaurant	Summit	5,000	3,800	250	Proposed
Visitor Service Building	Alpental	14,000	3,500	0	Renovated
Mountain Top Restaurant	Alpental	3,500	1,500	285	Proposed
Total		**179,008**	**58,940**		

Source: The Summit at Snoqualmie management, SE GROUP

2.3.3.6 Ski Patrol and First Aid

Under Alternative 2, ski patrol would operate out of 13 duty stations/first aid facilities, totaling 7,469 square feet. At Alpental, 400 square feet of space in the proposed mountain top restaurant would be dedicated to ski patrol space and a new 375-square foot ski patrol bump station would be constructed adjacent to the upper terminal of the *Armstrong Express* chairlift as well. These new stations would increase ski patrol/first aid space at Alpental from 1,516 square feet to 1,705 square feet. The Summit would increase ski patrol/first aid space from approximately 4,527 square feet to approximately 5,764 square feet. The increase in ski patrol/first aid space would be accomplished through the renovation and/or removal of existing facilities as well as construction of new facilities. In total, The Summit at Snoqualmie would renovate two existing duty stations, expand two existing stations, remove three existing stations, and construct four proposed duty stations. Table 2.3.3-7 provides a summary of The Summit at Snoqualmie's proposed ski patrol duty stations under all Action Alternatives.

Table 2.3.3-7
The Summit at Snoqualmie Ski Patrol Duty Stations Under Alternative 2

Duty Station	Size (square feet)	Location	Status
Alpental			
Armstrong Express Bump Shack	375	Adjacent to Armstrong Express	Proposed
Edelweiss Duty Station	400	Upper Terminal of Edelweiss Lift	Proposed
Internationale Duty Station	500	Upper Terminal of Internationale Lift	Proposed
Alpental First Aid Station	430	Denny Mountain Lodge	Renovated
Subtotal	**1,705**		
The Summit			
Pacific Crest Duty Station	500	Upper Terminal of Pacific Crest Lift	Expanded
Summit West Duty Station	500	Adjacent to upper terminal of Wildside chairlift	Existing
Summit West First Aid Facility	1,406	Base Area of Summit West	Existing
Central Express Duty Station	56	Upper Terminal of Central Express Lift	Existing
Summit Nordic Center First Aid Facility	600	Silver Fir Base Area	Expanded
Summit Central First Aid Facility	1,402	First Floor Ski Patrol Building in Summit Central	Renovated
Summit East Duty Station	500	Upper Terminal of Mt. Hyak Lift	Proposed
Creek Run Duty Station	250	Upper Terminal of Creek Run Lift	Proposed
Summit East First Aid Facility	550	Base Area of Summit East	Existing
Subtotal	**5,764**		
Total	**7,469**		

Source: SE GROUP

2.3.3.7 Other Recreational Opportunities

Under Alternative 2, The Summit at Snoqualmie would continue to offer its existing recreational opportunities during the winter, as well as the summer, spring, and fall seasons. In addition, with construction of the proposed *Pulse Gondola*, The Summit at Snoqualmie would provide year-round ADA-accessible access to the summit of Alpental for activities such as scenic observation, photography, picnicking, walking, corporate retreats/conferences (in the restaurant area), and on-mountain dining.

In conjunction with proposed *Trail 41* (East-to-Central crossover), existing *Trail 71* would be revegetated, allowing a 12-inch tread width for mountain bike use.

2.3.3.8 Domestic Water and Wastewater Treatment Facilities

Domestic Water Supply and Storage

Alpental

Alpental's existing water supply is provided by two wells with an estimated combined flow of approximately 620,640 gpd. Water is currently stored in one 100,000-gallon concrete storage tank. It is anticipated that Alpental's domestic water demand at full build-out would be approximately 34,500 gpd. As such, it is anticipated that Alpental's existing water supply would adequately accommodate the demand for water at full build-out.

Under Alternative 2, water and sewer lines would be extended from the base area to the proposed mountaintop restaurant at Alpental. The first extension would extend from a potable water pump station and sewer connection at an existing manhole in the base area to the upper terminal of the *Armstrong Express* chairlift. The first section of utility extensions would be installed subsurface (trench dimensions – 1' x 2'6"). The second section of utility extension would be installed in an aboveground utilidor (including both sewer and potable water piping) and would terminate at a proposed water pump and tank, which would be constructed adjacent to the proposed mountaintop restaurant. Utility extensions would be installed and supplied to the proposed ski patrol bump shack at the upper terminal of the *Armstrong Express* chairlift.

The Summit

At Summit East under Alternative 2, the proposed water and sewer lines would be extended from a proposed potable water pump station and sewer connection, which would be located along an access part way up the mountain near the bottom terminals of the *Rampart* and *Creek Run* chairlifts. Utilities already exist to serve homes in this area. The utility extensions would be installed subsurface (trench dimensions – 1' x 2'6") and would terminate at a proposed water pump and tank, which would be constructed adjacent to the proposed mountaintop restaurant at the upper terminal of the *Mt. Hyak* chairlift.

At Summit West under Alternative 2, water and sewer lines would be extended from an existing water pumping station and sewer connection adjacent to the existing maintenance building. The utility extensions would be installed subsurface (trench dimensions – 1' x 2'6") and would terminate at a proposed water pump and tank, which would be constructed adjacent to the proposed mountaintop restaurant at the upper terminal of the *Wildside* chairlift.

2.3.3.9 Other Utilities/Infrastructure

Utilities and roads under Alternative 2 are shown along with night skiing terrain on Figures 2.3.3-3 - Alternative 2 Proposed Night Skiing – The Summit and 2.3.3-4 - Alternative 2 Proposed Night Skiing – Alpental.

As proposed, all utilities at The Summit at Snoqualmie would be installed subsurface, with the exception of communication lines along chairlifts and those previously discussed (particularly Alpental). As described in Section 2.3.3.8 – Domestic Water and Wastewater Treatment Facilities, utility lines (i.e., water, sewer, power, communication) would be grouped in the same trench, where possible, or in parallel trenches where required (e.g., vertical/horizontal spacing is required for sewer/water lines).

Power Supply

Puget Sound Energy (PSE) supplies electrical power to The Summit and Alpental and furnishes most of the high voltage power lines, as well as the requisite transformers and distribution lines. PSE has indicated that the power supply infrastructure has ample capacity to fully accommodate The Summit at Snoqualmie (Sno.engineering, 1998).

Power Distribution

Alpental

The proposed *Internationale, St. Bernard,* and *Sessel* chairlifts would be equipped with bottom drive terminals. These lift installations would include underground power line extensions from the existing network of power lines.

The proposed *Pulse Gondola* would be equipped with a bottom drive terminal. This lift installation would include underground power line extensions from the existing network of power lines.

Power would be supplied to the proposed mountaintop restaurant as discussed for water and sewer utility lines. Power and communication lines would be extended to the proposed bump shack at the upper terminal of the *Armstrong Express* chairlift. The proposed visitor services building would require power line extensions from the existing network of power lines. Utility lines would be installed subsurface and would be grouped in the same trench, where possible, or in parallel trenches where required (e.g., vertical/horizontal spacing is required for sewer/water lines).

Summit West

The proposed *Surface Lift I* and *II*, *Baby Double, Northside, Julie's Chair, Little Thunder, Dodge Ridge,* and *Wildside* chairlifts would be equipped with bottom drive terminals. These lift installations would include underground power line extensions from the existing network of power lines.

Power would be supplied to the proposed maintenance facility as discussed for water and sewer utility lines. Utility lines would be installed subsurface along the existing road from the maintenance lot parking area and would be grouped in the same trench, where possible, or in parallel trenches where required (e.g., vertical/horizontal spacing is required for sewer/water lines.

Summit Central

The proposed *Holiday*, *Triple 60*, *Ski School*, *Easy Street*, and *Silver Fir* chairlifts would be equipped with bottom drive terminals. These lift installations would include underground power line extensions from the existing network of power lines.

Power would be supplied to the Silver Fir base area from the existing network of power lines. Utility lines would be installed subsurface, as previously discussed for Alpental under Domestic Water Supply and Storage.

Summit East

The proposed *Mill Creek* chairlift would be equipped with a bottom drive terminal. The lift installations would include underground power line extensions from the existing network of power lines.

The proposed *Rampart* and *Creek Run* chairlifts would be equipped with bottom drive terminals. These lift installations would include underground power line extensions from the existing network of power lines. Utilities would be installed within the proposed road leading to the bottom terminals of *Rampart* and *Creek Run* chairlifts.

Power would be supplied to the proposed mountaintop restaurant as discussed for water and sewer utility lines. Utility lines would be installed subsurface and would be grouped in the same trench, where possible, or in parallel trenches where required (e.g., vertical/horizontal spacing is required for sewer/water lines).

Propane

Under the Proposed Action five additional 10-gallon propane tanks would be utilized, located at the upper terminals of the proposed *Internationale*, *Northside*, *Creek Run* and *Rampart* chairlifts, as well as the proposed ski patrol bump shack at the upper terminal of the *Armstrong Express* chairlift.

Communications

Under Alternative 2, communications would continue to be provided via telephone service connecting all base area and on-mountain facilities. The addition of communications lines along proposed or upgraded chairlifts would include aerial installation. All other proposed communication lines would be buried.

Petroleum Fuel

Under Alternative 2, Alpental's existing aboveground fuel storage tank, comprised of two tanks (500-gallon gasoline and 1,500-gallon diesel), would be relocated alongside the existing maintenance road, across from the proposed maintenance facility.

The existing fuel station at Summit West would be removed for the construction of the proposed maintenance facility. A new fueling station would be constructed adjacent to the proposed maintenance facility at Summit West. The existing fuel station at Summit Central would remain.

Roads

The following changes to the existing road network would occur under Alternative 2:

- Construction of approximately 500 feet of permanent road (native surface) leading from the existing upper terminal of the *Pacific Crest* chairlift to the proposed upper terminal of the *Northside* chairlift.
- Construction of approximately 600 feet of permanent road (native surface) would provide access from an existing road to the proposed upper terminal of the *Rampart* chairlift. Another 405 feet of permanent road (native surface) would be constructed to provide access from existing road to the bottom terminals of the proposed *Creek Run* and *Rampart* chairlifts.
- Existing Road M-5 (approximately 1,560 feet - native surface) would be abandoned and revegetated.
- Alpental Road from the Alpental base area at Parking Lot 3 to Parking Lot 6 would be paved.

Figures 2.3.3-3 - Alternative 2 Proposed Night Skiing – The Summit, and 2.3.3-4 - Alternative 2 Proposed Night Skiing – Alpental show The Summit at Snoqualmie's road network under Alternative 2. See Table 2.3.3-8 below for a summary of The Summit at Snoqualmie's road network under Alternative 2.

Table 2.3.3-8
The Summit at Snoqualmie Road Network Under Alternative 2

Category	Alt 1	Alt 2
Proposed Roads (miles)	0	0.23
Existing Roads to be Removed/Restored (miles)	0	0.56
Road Length by Surface Type (miles)		
Paved	1.5	1.9
Native	17	16.2
Total Road Network (miles)	**18.5**	**18.1**

Source: SE GROUP and Jones & Stokes

2.3.3.10 Maintenance Facilities

Under Alternative 2, the existing maintenance facility at Alpental would be replaced by a 2,400-square foot facility to provide for approximately 1,000 additional square feet (see Table 2.3.3-9). The proposed structure would be constructed to meet King County code to withstand avalanche impact (see Section 4.1 – Climate and Snow for more avalanche information). The proposed facility would be constructed alongside the existing maintenance road across from the proposed fuel storage tanks, approximately 800 feet north of Alpental Road.

Under Alternative 2, a 12,000-square foot facility would be constructed adjacent to the existing maintenance facility at Summit West. The existing maintenance facility at Summit Central would remain but the existing maintenance office at Summit Central (adjacent to the existing bottom terminal of the *Gallery* chairlift) would be removed.

Table 2.3.3-9
The Summit at Snoqualmie Maintenance Facilities Under Alternative 2

Maintenance Building	Square Feet
Alpental	
Electrical Facility	319
Lift Maintenance Facility	600
Maintenance Facility	2,400
Storage Shed	363
Subtotal	**3,682**
The Summit	
Summit West Maintenance Facility	6,000
Summit West Maintenance Facility	12,000
Summit West Storage Sheds (combined)	1,690
Summit Central Storage Sheds (combined)	1,437
Subtotal	**21,127**
Total	**24,809**

2.3.3.11 Restoration

Under Alternative 2, The Summit at Snoqualmie would implement portions of the Watershed Condition Assessment Report (Jones & Stokes Associates, 2001) in order to restore disturbed areas and maintain or improve the health of the aquatic and riparian ecosystems within the Upper South Fork Snoqualmie and Coal Creek watersheds. Specific watershed restoration projects would include the following:

- H-2 – Slope stabilization adjacent to Road M-5 at Summit East (work would be performed in conjunction with the deactivation of Road M-5).
- H-10 – Slope stabilization adjacent to Roads TR-17, TR-17-1, TR-17-3 and TR-17-4 at Summit East.
- K-6 – Slope stabilization along roads nears the bottom terminal of the *Silver Fir* chairlift at Summit Central.
- S-46 – Slope stabilization adjacent to Road C near Beaver Lake at Summit West.
- K-46 – Slope stabilization at Summit Central near the upper terminal of the *Central Express* chairlift.

In addition to the projects identified above, the Summit at Snoqualmie would also implement the following restoration actions under Alterative 2:

- Deactivate and restore two road segments (Road M-5 at Summit East and Road C at Summit West).

- Develop tree islands with Pacific Silver Fir saplings on previously cleared slopes at Summit East, Summit Central, and Summit West.
- Remove existing lift terminals, lift towers and lift structures, according to the MDP. Revegetate previously disturbed areas.
- Restore stream channel and associated riparian area near the existing tubing center.
- Remove culverted segment and restore associated riparian area along Beaver Lake Creek at Summit West.
- Restore Wetlands 207 (Summit West) and 142 (Summit Central). Restoration would be performed in conjunction with planting of tree islands.
- Implement the Stormwater Management Plan to address water quality and quantity issues resulting from operations of native surface parking lots and sanding for traction.
- In conjunction with proposed *Trail 71*, the existing East-to-Central Crossover trail would be abandoned and revegetated (see Figure 2.3.3-1). Approximately 2.3 acres of the existing East-to-Central Crossover trail would be reforested. A 12-inch tread width would remain for mountain bike use during the summer months.

These restoration projects would be closely linked to proposed development projects. Detailed discussion of these restoration projects proposed under Alternative 2 can be found in Section 5.1 of the Summit at Snoqualmie MDP – Implementation, Operation, Restoration and Monitoring Plan (SE Group, 2004, Appendix F) and the Draft Conceptual Stormwater Management Plan (Golder Associates, 2004, Appendix G).

The Summit at Snoqualmie MDP – Implementation, Operation, Restoration and Monitoring Plan identifies and elaborates on potential restoration opportunities and provides monitoring guidelines to ensure that restoration projects would be implemented under USFS review, throughout the life of the approved MDP. The plan would provide guidance for the construction and operations of roads, utilities, ski area facilities, and stream crossing culverts. It would also be used to determine the success of restoration projects, BMPs, and other mitigation that would be implemented during the construction of various MDP components. In conjunction with the Draft Conceptual Stormwater Management Plan, the Summit at Snoqualmie MDP – Implementation, Operation, Restoration and Monitoring Plan would aid in assessing the cumulative effects of the MDP as well as other human-induced and natural disturbances within the Upper South Fork Snoqualmie and Coal Creek watersheds. Accordingly, USFS approval to begin project development of MDP projects would consider the success of previous restoration and mitigation projects, as determined through the monitoring program.

2.3.4 Alternative 3 – Reduced Section 16 Development

Alternative 3 represents reduced development in Section 16 and addresses concerns to late-successional habitat, and wildlife connectivity, Riparian Reserves and impacts to Nordic/backcountry skiers, compared to Alternative 2.

Alternative 3 is shown in Figures 2.3.4-1 - Alternative 3 Proposed Conditions - The Summit, and 2.3.4-2 - Alternative 3 Proposed Conditions – Alpental. The major differences between Alternatives 2 and 3 are:

- No *Creek Run* chairlift or trails would be developed at Summit East (see Section 16).
- SUP expansion would include only Hyak Creek (Summit East-Central) and the warming hut.
- No *Pulse Gondola* would be constructed at Alpental.
- No Summit Restaurant would be constructed at Alpental.
- Land Donation (390 acres in Mill Creek Watershed, Section 21, T. 22 N., R.11 E.).

Under Alternative 3, The Summit's CCC would increase from 7,920 to 9,990 skiers and Alpental's CCC would increase from 1,880 to 2,620 skiers, for a total increase of approximately 28 percent, or 2,730 skiers for The Summit at Snoqualmie.

Forest Plan Amendment #27: Alternative 3 would include a non-significant (under NFMA) Forest Plan amendment, which would add a total of 17 acres to the SUP area, including Hyak Creek and re-allocate these acres to AMA(RE-1). In addition, the cross-country hut at Grand Junction (approximately 500 feet west of Hyak Lake, occupying roughly 0.01 acre), would be incorporated into the SUP[16]. The expansion would incorporate Hyak Creek into the SUP area and provide for construction and use of the proposed crossover trails between Summit East and Summit Central, described below. The Forest Plan amendment would also reallocate a total of 397.01 acres of WNF lands from AMA (ST-1 - Scenic Travel) to AMA (RE-1- Developed Recreation). These lands include 380 acres in the existing SUP area, 17 acres in the SUP adjustment, and 0.01 acre at the existing cross-country warming hut.

In order to offset impacts to Section 16 (proposed *Rampart* chairlift and associated trails), Alternative 3, Booth Creek would donate 390 acres of private land to the Federal Government for inclusion in the WNF, allocated to Adaptive Management Area (as the donated acres are surrounded by SPAMA). The land donation would include lands within Section 21, T. 22 N., R.11 E. Approximately 440 acres would be purchased by Booth Creek from Plum Creek Timber (see Figure 2.3.4-3, Existing and Proposed Land donation). Of the 440 acres, approximately 50 acres would be retained as a Booth Creek in-holding (comprising existing development and proposed expansion associated with the *Mill Creek* chairlift and

[16] Prior to the acquisition of the ski area by Ski Lifts, Inc., Ski Acres and Hyak ski areas operated under separate SUPs that provided separate operations. The SUP areas were separated by Hyak Creek, which was not included in either permit area. With the purchase of Hyak and Ski Acres by Ski Lifts, Inc., the ski area operations were no longer separate. This expansion would "clean up" the SUP area along Hyak Creek.

trails). The remaining 390 acres would be donated to the Forest Service to be managed for Late-Successional Habitat (LSH).[17] No development in Section 16 would occur until the land has been transferred to Federal Government ownership.

2.3.4.1 Lifts

Under Alternative 3, the lifts at The Summit at Snoqualmie would be as described for Alternative 2, except the *Creek Run* chairlift would not be built at Summit East and the *Pulse Gondola* would not be built at Alpental. Accordingly, the number of lifts at The Summit would operate is 21 (17 chairlifts and 4 surface lifts) and Alpental would operate 6 lifts (5 chairlifts and 1 surface lift) for a total of 27 lifts at The Summit at Snoqualmie.

2.3.4.2 Trails

The Summit at Snoqualmie trail network under Alternative 3 would be as described for Alternative 2, except the proposed trails in the *Creek Run* pod (*Trails 55A* and *55B*) would be omitted and existing *Trails 55, 66*, and *67* would be revegetated to reduce fragmentation within Section 16. In all, approximately 26.13 acres of clearing and approximately 15.61 acres of reforestation within Section 16 would occur under Alternative 3.

Proposed *Trail 71* (East to Central Crossover) would originate at the beginning of existing *Trail 63*. Two wood/steel bridges would be constructed to allow proposed *Trail 71* to cross Stream A and Hyak Creek. The proposed bridge over Stream A would be approximately 15 feet wide by approximately 115 feet long. The bridge over Hyak Creek would be approximately 25 feet wide by 75 feet long. Booth Creek Resort proposes to construct a snow bridge each year in order to allow *Trail 71* to cross an additional stream south of the proposed Hyak Creek crossing.

2.3.4.3 Night Skiing

Under Alternative 3, night skiing would be as described under Alternative 2, except the *Creek Run* pod would not be constructed. As noted above, existing *Trails 55, 66,* and *67* and night skiing on these trails would also be eliminated. Night skiing under Alternative 3 at The Summit at Snoqualmie would include 655 acres on 92 trails. Figures 2.3.4-4 - Alternative 3 Proposed Night Skiing – Summit, and 2.3.4-5 - Alternative 3 Proposed Night Skiing - Alpental.

2.3.4.4 Parking

Parking under Alternative 3 would be as described under Alternative 2.

[17] This land donation would be acceptable to the US Government despite the fact that the mineral rights would not be transferred to the US. In a March 10, 2005 letter to Kimberly Bown, Director of Lands in Forest Service Region 6, Gregory Smith, Acting Director of Lands for the Forest Service Washington Office, indicated that outstanding interests (i.e., not owning the mineral rights) would not interfere with the purpose for which the land would be contributed to the Department of Agriculture (i.e., preservation of connectivity for old growth dependent species.

2.3.4.5 Support Facilities

The location and development of support facilities under Alternative 3 would be as described for Alternative 2 except the proposed mountaintop restaurant at Alpental would not be developed. At Alpental, the support facilities under Alternative 3 would increase from 20,688 square feet to 34,688, and the restaurant seating would remain at 528.

2.3.4.6 Ski Patrol and First Aid

Ski Patrol and First Aid duty stations under Alternative 3 would be as described under Alternative 2 with the following exceptions:

- the existing *Edelweiss Duty Station* (Alpental) would not be relocated/rebuilt,
- the proposed *Creek Run Duty Station* (Summit East) would not be developed, and
- the proposed ski patrol bump shack at the upper terminal of the *Armstrong Express* chairlift would only have power and communications, not water and sewer as in Alternative 2.

Consequently, Ski Patrol at The Summit would operate out of eight duty stations/first aid facilities at approximately 5,514 square feet) under Alternative 3 and ski patrol at Alpental would operate out of three duty stations.

2.3.4.7 Other Recreational Opportunities

Other recreational opportunities under Alternative 3 would include the revegetation of *Trail 71* to include a mountain bike trail, as described under Alternative 2. With no development of a pulse gondola or mountain top restaurant, none of the recreational opportunities associated with the Alpental summit would be included in Alternative 3.

2.3.4.8 Domestic Water and Wastewater Treatment Facilities

Domestic water and wastewater treatment facilities under Alternative 3 would be as described under Alternative 2, with the following exceptions: no utility lines (power, water, and sewer) would be extended to the upper terminal of the existing Edelweiss chairlift (Alpental). Furthermore, the proposed ski patrol bump shack at the upper terminal of the *Armstrong Express* chairlift at Alpental would only have power and communications, not water and sewer as in Alternative 2.

2.3.4.9 Other Utilities/Infrastructure

Utilities and roads under Alternative 3 are shown on Figures 2.3.4-4 - Alternative 3 Proposed Night Skiing – The Summit, and 2.3.4-5 - Alternative 3 Proposed Night Skiing – Alpental.

The utilities/infrastructure under Alternative 3 would be as described for Alternative 2 with the following exceptions: no utility lines (power, water, and sewer) would be extended from the upper of the *Armstrong*

Express chairlift to the upper terminal of the existing Edelweiss chairlift (Alpental), and no power/communication lines would be supplied to the *Creek Run* chairlift (as proposed in Alternative 2) at The Summit, as the chairlift would not be constructed under Alternative 3.

2.3.4.10 Maintenance Facilities

Maintenance facilities under Alternative 3 would be as described under Alternative 2.

2.3.4.11 Restoration

Restoration under Alternative 3 would be similar to that described for Alternative 2. In addition to those projects, Alternative 3 would also include revegetation of existing trails 55, 66, and 67 at Summit East in order to reduce fragmentation in Section 16. Existing wetlands within the trail boundaries would be restored in conjunction with the planting of tree islands. Furthermore, additional restoration projects identified in Appendix F would be included in Alternative 3.

2.3.5 Alternative 4 – No Section 16 Development

Alternative 4 represents no development in Section 16 and addresses concerns to late-successional habitat, and wildlife connectivity and Riparian Reserves. In addition, Alternative 4 addresses concerns over effects to Nordic Pass backcountry skiers.

Alternative 4, as shown in Figures 2.3.5-1 - Alternative 4 Proposed Conditions – The Summit, and 2.3.5-2 - Alternative 4 Proposed Conditions – Alpental, modifies the Proposed Action by removing the *Creek Run* and *Rampart* chairlifts and associated trails. As such, the land donation discussed for Alternative 3 would not occur under Alternative 4.

The major differences between Alternatives 2 and 4 are:

- No *Creek Run* or *Rampart* chairlift or trails would be developed at Summit East (see Section 16),
- SUP expansion would include only Hyak Creek (Summit East-Central),
- No new development would take place in Section 16, and
- Parking lots 4,5 and 6 at Alpental would be reduced in size, and Parking Lot 7 would be eliminated to allow for 0.9 acre of riparian restoration along the SF Snoqualmie River.

Under Alternative 4, The Summit's CCC would increase from 7,920 to 9,360 skiers and Alpental's CCC would increase from 1,880 to 2,920 for an increase of approximately 24 percent, or 2,400 skiers for The Summit at Snoqualmie.

Forest Plan Amendment #27: Alternative 4 would include a non-significant (under NFMA) Forest Plan amendment, which would add a total of 17 acres to the SUP area, including Hyak Creek and re-allocate these acres to AMA(RE-1). In addition, the cross-country hut at Grand Junction (approximately 500 feet west of Hyak Lake, occupying roughly 0.01 acre), would be incorporated into the SUP[18]. The expansion would incorporate Hyak Creek into the SUP area and provide for construction and use of the proposed crossover trails between Summit East and Summit Central, described below. The Forest Plan amendment would also reallocate a total of 397.01 acres of WNF lands from AMA (ST-1 - Scenic Travel) to AMA (RE-1- Developed Recreation). These lands include 380 acres in the existing SUP area, 17 acres in the SUP adjustment, and 0.01 acre at the existing cross-country warming hut.

2.3.5.1 Lifts

Under Alternative 4, the lifts at The Summit at Snoqualmie would be as described for Alternative 2, except no new lifts would be developed in Section 16 at Summit East. The Summit would operate 20 lifts

[18] Prior to the acquisition of the ski area by Ski Lifts, Inc., Ski Acres and Hyak ski areas operated under separate SUPs that provided separate operations. The SUP areas were separated by Hyak Creek, which was not included in either permit area. With the purchase of Hyak and Ski Acres by Ski Lifts, Inc., the ski area operations were no longer separate. This expansion would "clean up" the SUP area along Hyak Creek.

(16 chairlifts and 4 surface lifts) and Alpental would operate 7 lifts (6 chairlifts and 1 surface lift). Accordingly, The Summit at Snoqualmie would operate 27 lifts total.

2.3.5.2 Trails

The Summit at Snoqualmie trail network under Alternative 4 would be as described for Alternative 2 except that no new ski trails would be developed in Section 16 at Summit East, and all of the existing trails in Section 16 would be maintained. The existing crossover trail between Summit East and Summit Central would continue to be used.

2.3.5.3 Night Skiing

Under Alternative 4, night skiing would be as described for Alternative 3, except that the *Rampart* pod would not be developed. In addition, no new lighting would be provided in the *Silver Fir* pod. As a result, The Summit at Snoqualmie would provide night lighting on 45 trails totaling 593 acres of terrain.

2.3.5.4 Parking

Parking under Alternative 4 would be as described for The Summit areas under Alternative 2. At Alpental, Parking Lots 4, 5, and 6 would be reduced in size in order to accommodate the realignment of Alpental Road for Riparian Reserve restoration along the S.F. Snoqualmie River. Additionally, Parking Lot 7 would be abandoned and revegetated to provide for similar riparian restoration. As a result parking at Alpental would be reduced by approximately 0.9 acre compared to Alternative 1 and the other Action Alternatives (see Figure 2.3.5-3, Alpental Road Relocation).

Under Alternative 4, The Summit at Snoqualmie would provide approximately 56.3 acres of parking on 20 surface lots and along State Route 906 at Summit West. Parking under Alternative 4 is summarized in Table 2.3.5-1.

Table 2.3.5-1
The Summit at Snoqualmie Parking Lots Under Alternative 4

Parking Lot	Status	Area (acres)	Cars per Acre	Total Car Capacity	Total Capacity (people)
Alpental					
Lot 1	Existing	0.8	104	83	183
Lot 2	Existing	1.9	155	295	649
Lot 3a	Proposed	0.9	72	65	143
Lot 4b	Proposed	0.5	119	60	132
Lot 5b	Proposed	0.9	90	81	178
Lot 6b	Proposed	1.9	119	226	497
Subtotal		**6.9**		**810**	**1,782**
The Summit (same as Alternative 2 – see Table 2.3.3-5)					
Subtotal		**49.4**		**5,789**	**12,736**
Total		**56.3**		**6,599**	**14,518**

Source: The Summit at Snoqualmie management, SE Group GIS DATA 5/27/04
[a] This number is not included in the subtotals or totals due to Lot 7 being decommissioned and revegetated.

Parking at Alpental would provide for 1,782 people at one time, with a ski area CCC of 2,920. In total, The Summit at Snoqualmie would provide parking capacity for approximately 14,518 people at one time, which would be lower than the total parking requirement, including the CCC of 12,280 at the ski area facilities, a capacity of 500 Nordic skiers, and 2,500 tubing area guests (a total of 15,280), not including those parking at the area but not purchasing ski area ticket.

2.3.5.5 Support Facilities

The location and development of support facilities under Alternative 4 would be as described for Alternative 2.

2.3.5.6 Ski Patrol and First Aid

Ski Patrol and First Aid duty stations under Alternative 4 would be as described under Alternative 2 except the Creek Run Duty Station would not be developed. Consequently, Ski Patrol at The Summit would operate out of eight duty stations/first aid facilities totaling approximately 5,514 square feet under Alternative 4. Ski Patrol at Alpental would operate out of four duty stations/first aid facilities.

2.3.5.7 Other Recreational Opportunities

Other recreational opportunities under Alternative 4 would be as described under Alternative 2.

2.3.5.8 Domestic Water and Wastewater Treatment Facilities

Domestic water and wastewater treatment facilities under Alternative 4 would be as described under Alternative 2

2.3.5.9 Other Utilities/Infrastructure

Utilities and roads under Alternative 4 are shown with night skiing terrain on Figures 2.3.5-4 - Alternative 4 Proposed Night Skiing – The Summit, and 2.3.5-5 - Alternative 4 Proposed Night Skiing – Alpental. No new roads would be constructed to the upper terminal of *Rampart* or lower terminals of the *Creek Run* and *Rampart* chairlifts. The northern segment of the existing Alpental Road (adjacent to Parking Lots 4, 5, 6, and 7) would be realigned approximately 100 feet west of the Upper South Fork of the Snoqualmie River.

Under Alternative 4, utilities/infrastructure would be as described for Alternative 2 except that power and communication lines would not be supplied to the *Creek Run* and *Rampart* pods, as discussed for Alternative 2.

2.3.5.10 Maintenance Facilities

Maintenance facilities under Alternative 4 would be as described under Alternative 2.

2.3.5.11 Restoration

The restoration program under Alternative 4 would be as described under Alternative 2, with the following exceptions: Approximately 2.87 acres of Riparian Reserve would be restored as a result of the realignment of the existing Alpental Road outside of Riparian Reserves west of the Upper South Fork of the Snoqualmie River; and *Trail 71* between Summit East and Summit Central would not be revegetated (see Figure 2.3.5-1). Furthermore, additional restoration projects identified in Appendix F would be included in Alternative 4.

2.3.6 Alternative 5 – Mitigated Proposed Action

Alternative 5 represents a reduced version of the Proposed Action, and addresses concerns to late-successional habitat, and wildlife connectivity and Riparian Reserves.

Alternative 5, as shown in Figures 2.3.6-1 - Alternative 5 Proposed Conditions – The Summit, and 2.3.6-2 - Alternative 4 Proposed Conditions – Alpental, modifies the Proposed Action by reducing development in Section 16, while still developing the *Rampart* and *Creek Run* chairlifts. A land donation discussed for Alternative 3 and Forest Plan Amendment #27, discussed for Alternative 2, would also occur under Alternative 5.

The major differences between Alternatives 2 and 5 are:

- *Trails 55, 55A,* and *55B* and all trail clearing within the proposed *Creek Run* pod north of the lift line would be 100 percent gladed (as compared to the full clearing and glading combination discussed for Alternative 2)

Under Alternative 5, The Summit's CCC would increase from 7,920 to 10,710 skiers and Alpental's CCC would increase from 1,880 to 2,920 skiers for an increase of approximately 38 percent, or 3,750 skiers for The Summit at Snoqualmie.

2.3.6.1 Lifts

Under Alternative 5, the lifts at The Summit at Snoqualmie would be as described for Alternative 2.

2.3.6.2 Trails

The Summit at Snoqualmie trail network under Alternative 5 would be as described for Alternative 2, except *Trails 55, 55A,* and *55B* would be gladed (as compared to full clearing under Alternative 2). Proposed *Trails 60* and *61* would have reduced trail widths (90 – 120 feet, as compared to Alternative 2 with widths of 154 – 249 feet) and *Trail 49* (Central to East Crossover) would follow a different alignment than in Alternative 2, resulting in less clearing (less than 50 feet wide as opposed to 109 feet in Alternative 2).

Four bridge crossings associated with proposed *Trails 55A, 55B* and *71* would be constructed, as described for Alternative 3.

Existing *Trail 71* would be abandoned and revegetated, allowing a tread width of 12 inches for mountain bike use, as discussed for Alternative 2.

2.3.6.3 Night Skiing

Night skiing under Alternative 5 would be as described under Alternative 2, except proposed *Trails 60* and *61* would have reduced trails widths, as described above.

2.3.6.4 Parking

Parking under Alternative 5 would be as described under Alternative 2.

2.3.6.5 Support Facilities

The location and development of support facilities under Alternative 5 would be as described for Alternative 2.

2.3.6.6 Ski Patrol and First Aid

Ski Patrol and First Aid duty stations under Alternative 5 would be as described under Alternative 2.

2.3.6.7 Other Recreational Opportunities

Other recreation opportunities under Alternative 5 would be as described under Alternative 2.

2.3.6.8 Domestic Water and Wastewater Treatment Facilities

Domestic water and wastewater treatment facilities under Alternative 5 would be as described under Alternative 2.

2.3.6.9 Other Utilities/Infrastructure

Utilities and roads under Alternative 5 are shown along with night skiing terrain on Figures 2.3.6-3 - Alternative 5 Proposed Night Skiing – The Summit, and 2.3.3-4 - Alternative 2 Proposed Night Skiing – Alpental.

The utilities/infrastructure under Alternative 5 would be as described for Alternative 2.

2.3.6.10 Maintenance Facilities

The Summit at Snoqualmie's maintenance facilities under Alternative 5 would be as described under Alternative 2.

2.3.6.11 Restoration

The restoration program under Alternative 5 would be as described for Alternative 2, with the addition of approximately 0.98 acres of additional reforestation within Section 16 as a result of the trail modification (East to Central Crossover) under Alternative 5 as compared to Alternative 2. Furthermore, additional restoration projects identified in Appendix F would be included in Alternative 5.

2.4 MITIGATION

NEPA and CEQ regulations require identification of all relevant, reasonable mitigation measures that could reduce the impacts of the project, even if those measures are outside the jurisdiction of the USFS.

Mitigation measures would be applied to National Forest System lands affected by implementation of the project. Local governments and state and federal agencies may require additional mitigation measures as conditions of permits. Any such measures would be automatically incorporated as required measures. Required USFS mitigation measures would be implemented under terms of the SUP.

Table 2.4-1 presents the construction techniques for the proposed lifts and trails. Mitigation measures intended to avoid, minimize, rectify, and reduce or eliminate potential negative impacts associated with the proposed projects are summarized in Table 2.4-2. These mitigation measures are an integral part of each of the Action Alternatives. They are listed here separately to avoid repeating them in each alternative description.

The effectiveness of each measure is rated at high, moderate, or low to provide a qualitative assessment of expected effectiveness that the implemented practice would have in preventing or reducing impacts on resources. These mitigation measures are considered in the effects discussions of Chapter 3.

Effectiveness ratings of High, Moderate or Low are based on the following criteria: a) literature and research; b) administrative studies (local or within similar ecosystem); c) experience (judgment of qualified personnel by education and/or experience); d) fact (obvious by reasoned, logical response). The definition of each rating is provided below.

- High: Practice is highly effective (greater than 90 percent), meets one or more of the rating criteria above, and documentation is available.
- Moderate: Documentation shows that the practice is 75 percent to 90 percent effective; or logic indicates that the practice is highly effective, but there is no documentation. Implementation and effectiveness of this practice needs to be monitored and the practice would be modified if necessary to achieve the mitigation objective.
- Low: Effectiveness is unknown or unverified, and there is little or no documentation; or applied logic is uncertain and practice is estimated to be less than 60 percent effective. This practice is speculative and needs both effectiveness and validation monitoring.

Also listed in the table are Management Requirements that are not intended to mitigate impacts to resources, but which would be implemented as a requirement of law, regulation, or policy, and Other Management Provisions that would be implemented to protect resources during construction, operations, and maintenance of the ski area facilities, but which are not intended to mitigate effects to resources.

Table 2.4-1
Lift and Trail Construction Techniques

Ski Area Lifts	Lift Terminals	Lift Alignment and Trails
Alpental-Sessel	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the site via existing roads and ski trails where possible.	• Towers would be constructed off-site and airlifted in. • Merchantable trees would be felled by hand and removed by mechanical methods where possible. Skidding over snow would occur where mechanical removal (processor/forwarder) is not practical. Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance. • If lift tower placement in wetlands cannot be avoided, placement would include hand excavation and placement of spoils outside wetlands. Other lift tower footings would excavated by a trackhoe or spider backhoe.
Internationale	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the site via existing roads and ski trails where possible, or by helicopter where no roads or ski trails are accessible.	• Towers constructed off-site and airlifted in. • Clearing for the lift line would be required. Merchantable trees would be felled by hand and removed by mechanical methods where possible. Skidding over snow would occur where mechanical removal (processor/forwarder) is not practical. Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance. • Blasting of rocks would occur at approximately 4,200 feet elevation to widen a proposed ski trail. • Lift tower footings would excavated by a trackhoe or spider backhoe.
Pulse Gondola	• Constructed off-site and pieces would be flown in by helicopter and assembled on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the lower terminal via existing roads and ski trails where possible. Equipment for the upper terminal would be flown in.	• Towers constructed off-site and airlifted in. • Merchantable trees would be felled by hand and removed by mechanical methods where possible. Skidding over snow would occur where mechanical removal (processor/forwarder) is not practical. Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance.

Table 2.4-1
Lift and Trail Construction Techniques

Ski Area Lifts	Lift Terminals	Lift Alignment and Trails
		• Lift tower footings would excavated by a trackhoe or spider backhoe.
Summit West - all lifts	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the site via existing roads and ski trails where possible.	• Towers constructed off-site and airlifted in. • Merchantable trees would be felled by hand and removed by mechanical methods where possible. Skidding over snow would occur where mechanical removal (processor/forwarder) is not practical. Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance. • Lift tower footings would excavated by a trackhoe or spider backhoe.
Summit Central - all lifts	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the site via existing roads and ski trails where possible.	• Towers constructed off-site and airlifted in. • Trees would be removed by mechanical methods where possible. Skidding over snow would occur where mechanical removal (processor/forwarder) is not practical. Felled trees would be would be lopped and scattered. Excess slash would be chipped or scattered, or burned in accordance with USFS regulations. • Lift tower footings would excavated by a trackhoe or spider backhoe.
Summit East - Easy Gold - Mill Creek	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the site via existing roads and ski trails where possible.	• Towers constructed off-site and airlifted in. • Merchantable trees would be felled by hand and removed by mechanical methods (i.e., processor forwarder operating on a slash bed). Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance. • Lift tower footings would excavated by a trackhoe or spider backhoe.
- Creek Run - Rampart	• Constructed on-site. • Grading for lift terminals would be limited by maximum disturbance limits (see Table 2.3.1-2). • Excavation for lift terminals would be done by machine. Equipment would access the bottom terminal areas via	• Towers constructed off-site and airlifted in. • In cleared ski trails, merchantable trees would be felled by hand and removed by mechanical methods (i.e., processor forwarder operating on a slash bed). Skidding over snow would occur where

Table 2.4-1
Lift and Trail Construction Techniques

Ski Area Lifts	Lift Terminals	Lift Alignment and Trails
	existing roads. An excavator would access the construction site by ski trail (after leaving the road surface). No trucks or other vehicles would access the bottom terminal sites (i.e., no roads would be built). At the lower terminal, the nearby wetland area would be fenced off to prevent equipment access into the wetland. The top terminals would be accessed via existing roads (in the vicinity of the top terminal sites) and ski trails (access directly to the top termional sites). Concrete would be flown to th top terminal of the Creek Run lift.	mechanical removal is not practical. Non-merchantable trees would be lopped and scattered. Excess slash would be chipped, scattered, or burned in accordance with USFS guidance. • Gladed areas would be evaluated to determine the existing canopy closure. Areas with less than 70% closure would not receive any treatment that would reduce canopy closure. Areas with greater than 70% closure would receive treatments allowing for canopy closure to be reduced to 70%. Felled trees in gladed areas would be lopped and scattered and relocated to serve as downed woody material. • Lift tower footings would excavated by a trackhoe or spider backhoe.

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

Mitigation Measures	
MM1	Manage the mature forest in Section 16 beyond ski trails to maintain large woody debris, maintain 70% canopy where it exists, and maintain forest habitat conditions. *This Mitigation Measure would have a **moderate** effectiveness rating (Courtney et al. 2004).*
MM2	Under Alternatives 3 and 5 the Summit at Snoqualmie would donate approximately 390 acres of private land in the Mill Creek watershed for inclusion in the MBSNF. The land would then be managed for Late-Successional Habitat. The land donation would offset proposed impacts occurring within Riparian Reserves and Section 16 (*Creek Run* and *Rampart* pods). *This Mitigation Measure would have a **high** effectiveness rating (USFS,2000).*
Management Requirements	
Watershed Resources	
MR1	Field-certified, weed-free straw will be applied to a depth of 3 inches on all disturbed sites that have no other erosion control mulch prescription. Applications will be made prior to heavy rainstorms during construction and after construction is complete to protect water quality
MR2	Excess soil material from construction sites will be transported to a suitable upland site, as specified in the project-specific Stormwater Pollution Prevention Plan (SWPPP) and approved by the USFS, so that it is stored outside of stream or ditch corridors, wetlands and Riparian Buffers.
MR3	Erosion control filter fabric will be placed underneath culvert outfalls, building drainages, and rock apron drainages to prevent downslope gully erosion.
MR4	Felling and yarding of trees will occur while snow still blankets and protects the soil surface to minimize erosion.
MR5	Project-specific SWPPPs will specify the use of sediment traps above ditches, waterbars, and culvert outlets to trap sediment and prevent sediment deposition in streams. Sediment traps will be maintained and cleaned periodically (see Appendix F).

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

MR6	In order to help maintain bank stability, native shrubs and herbaceous vegetation will be planted to achieve 80 percent cover in 5 yeas in all areas within 10 meters of the stream (see Appendix F).
MR7	All Management Requirements/Constraints and Mitigation Measures listed in the Hydraulic Project Approval (HPA) MOA with the WDFW will be implemented for each project involving an HPA. Any in-channel construction will be completed during periods specified in the HPA from the WDFW.
MR8	When the use of culverts cannot be avoided, they will be designed to accommodate 100-year flows, with considerations for debris, fish passage (if applicable) and passage of low-mobility, riparian-dependent species (e.g., bottomless arch culverts, if applicable). Culverts will periodically be inspected for debris jams and cleaned as necessary. Hydraulic permits will be obtained for all activities in stream channels. All channel modification proposals will be included in a project-specific SWPPP, which will be reviewed and approved by the USFS prior to construction. Documentation of alternatives considered will be required for the USFS to consider a proposal.
MR9	Project-specific SWPPPs will specify that road crossings and utility line trenched crossings of streams will be avoided where possible. Unavoidable stream crossings will be oriented perpendicular to the stream channel. If construction equipment must cross a channel, it will be limited to a one-time crossing; crossing will occur in an area that minimizes disturbance to the stream bed and banks and a temporary platform will be created to cross the channel if necessary. The USFS and the WDFW will approve all stream crossing locations and proposed methods of crossing prior to construction.
MR10	New and existing stream crossings will be monitored according to the MDP Implementation Plan (Appendix F) to verify that erosion is not initiated.
MR11	The final location and spacing of water bars and other cross-slope drainage structures and maintenance proposals for sediment control structures will be determined in cooperation with the USFS and specified in project-specific SWPPPs. Spacing and general locations of culverts will be planned by adhering to the guidelines contained in the current memorandum of understanding between the Washington Department of Ecology and the National Forests in Washington State. Where necessary, water bars will be lined with erosion control fabric, sod, and/or mulch to prevent failures prior to the establishment of vegetation. Field-certified, weed-free straw mulch will be applied. Any existing water bars disturbed during construction will be repaired.
MR12	If flooding or weather results in water quality not meeting current State standards for surface water quality, operations will stop until the conditions improve and the site stabilization has been approved by USFS personnel. Work stoppage procedures will be established in project-specific SWPPPs.
MR13	Watershed processes will be monitored according to the Implementation, Operations, Restoration and Monitoring Plan (Appendix F).
MR14	A Spill Prevention and Response Plan will be developed and approved by the Forest Service as part of SWPPPs. Petroleum products will not be discharged into drainages or bodies of water. No fuels will be stored within Riparian Buffers. All petroleum products will be secured in self-contained safety cans.
MR15	A Stormwater Pollution Prevention Plan (SWPPP) will be developed and approved by the Forest Service and then implemented for all proposed projects before any construction begins.
MR16	Water quality monitoring for parameters (e.g., turbidity, pH, temperature, etc.) before, during, and after completion of the individual projects will be performed to ensure that the BMPs in the SWPPP are followed and effective.
MR17	Clearing limits and trees proposed for removal during lift line and road construction will be reviewed and approved by the USFS prior to ground disturbance.
MR18	Erosion control fabric will be installed on disturbed areas of steep slopes around waterways as specified in project-specific SWPPPS and approved by the USFS and The Summit at Snoqualmie.
MR19	Hay bales and silt fences will be placed immediately upslope of clearing and regrade areas to reduce the amount of surface water entering a newly disturbed area. Water bars will be constructed within the newly disturbed areas to minimize downslope water movement through the sites, and direct water away from stream channels and wetlands.

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

Fisheries	
MR20	Follow USFS and WDFW Memorandum of understanding (USFS and WDFW, 1997) for all projects in waters on National Forest lands in the State of Washington.
MR21	Follow WDFW streambank protection guidelines for stream crossing structures (WDFW, 2003).
Vegetation	
MR22	During construction of trails in Section 16 (Summit East – Creek Run and Rampart pods), a USFS botanist, or equivalent specialist, will assist construction crews with layout of ski trails to avoid, where possible, rootwads with *S. pennata* present.
MR23	A 5-year monitoring plan will be established to record condition and abundance of the known locations of *S. pennata* within the Study Area in Section 16.
MR24	A 5-year monitoring plan will be established to record condition and abundance of the known locations of *G. douglasiana* after construction around the sensitive plant site is complete.
MR25	Place construction fence and silt fence at edge of clearing area for ski trail by the new lift terminal to restrict movement of machines and work crews in the wetland supporting *G. douglasiana* near the proposed bottom terminal of the Wildside lift.
MR26	If any new populations of special-status plant species are encountered during the construction process, work shall be suspended in that area until the MBSNF botanist is consulted.
MR27	Under the Implementation, Operations, Restoration and Monitoring Plan (Appendix F), tree removal would be selective (field-fitted in cooperation with a USFS botanist or equivalent specialist) during construction and trail clearing to maintain 70% cover where it currently exists and to field-fit around a *S. pennata* location.
MR28	Applicable best management practices (BMPs) will be implemented during construction of all MDP projects to minimize the introduction and establishment of noxious weeds as directed by Executive Order 13112 (1999) and USFS regional policy (USFS, 2004a). Forest level guidance for BMPs can be found in the *Okanogan & Wenatchee National Forests Weed Management and Prevention Strategy & Best Management Practices* (USFS, 2003a) and the MBSNF *Prevention Strategies and Best Management Practices* (Forest Plan Amendment #14, added to Forestwide Standards and Guidelines) (USDA, 1999a).
MR29	An Erosion Control Plan will be included in the SWPPP for construction documents for proposed projects. The plan will include revegetation techniques and will be approved by the USFS before any ground disturbance occurs. Techniques will include redressing disturbed areas with salvaged topsoil, applying a mulch (straw or other material approved by the USFS) over the area to be revegetated, applying seed mixes as outlined in other mitigation measures, and using fertilizer where appropriate to ensure growth of germinated seeds.
MR30	The Implementation, Operations, Restoration and Monitoring Plan (Appendix F) for the Study Area will be used as guidance for maintaining vegetation on ski trails during operation of facilities.
MR31	Cut trees will be stockpiled in the nearest large, open clearing such as adjacent ski trails, parking lots, and other artificially cleared areas, as specified in the project-specific SWPPP and approved by the USFS. Wetlands and sensitive plant locations will not be used to store cut logs or slash. Slash piles will also be created in the openings. Large slash piles will be burned during appropriate periods under USFS guidance to ensure appropriate seasonal fire policies are being followed.
MR32	Trail clearing techniques will include feathering, scalloping, and possibly crown topping at the trail edge to reduce the potential for windthrow. Tree removal techniques will be specified in a project-specific SWPPP, which will be approved by a USFS botanist or equivalent specialist prior to implementation.
MR33	During the engineering design phase for chairlift construction, towers will be designed to be placed outside of sensitive plant populations if engineering design allows.
MR34	Project-specific SWPPPs will specify that silt fences and hay bales from USFS-approved sources will be installed around wetlands adjacent to construction areas.

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

Wildlife	
MR35	Project activities generating noise above ambient forest levels or otherwise creating disturbances will not occur within occupied ungulate winter habitat (from December 1 to April 15) or within ungulate calving, fawning, or kidding habitat (from April 15 to June 15) as directed by the MBSNF Forest Plan or as determined at specific sites by a wildlife biologist.
MR36	Implement an erosion control plan, reviewed and approved by the Forest Service, as recommended in the Washington Department of Ecology Stormwater Management Manuals for all projects on privately owned land.
Heritage Resources	
MR37	If the Milwaukee Road High Line grade is determined to be eligible for the National Register of Historic Places, no grading or excavating for lifts or trails will be allowed within the limits of the grade.
MR38	If the Milwaukee Road High Line grade is determined to be eligible for the National Register of Historic Places, utility trenching across the grade will be restored to the original topographic contours of the grade.
MR39	Construction activity, including vegetation removal and equipment staging, for the Creek Run lift and associated trails will be excluded within 50m of the boundaries of site 06-05-05-00064, which is recommended eligible for the National Register of Historic Places.
MR40	If site 06-05-05-00087 could be disturbed by utility trenching or other activities, testing of the site will take place to determine if it is eligible to the National Register of Historic Places. If the site is determined eligible and cannot be avoided, data recovery excavations will take place in areas that could be disturbed.
MR41	If any previously unidentified heritage resources are identified or encountered at any time during the implementation of the MDP, efforts shall be made to protect the resource until the Forest Archaeologist is notified and the USFS fulfills its consultation requirements.
Other Management Provisions	
Climate and Snow	
OMP1	For all structures and facilities located within and adjacent to avalanche slide paths, the Summit at Snoqualmie will hire qualified avalanche zoning experts to perform site-specific avalanche dynamics studies before the site location and design is finalized.
Geology and Soils	
OMP2	Manage stormwater runoff at construction/grading sites to limit stormwater/soil exposure sediment loss (see Appendix G).
OMP3	Replant all disturbed areas as rapidly as possible minimizing the length of time that there are bare soils associated with construction, clearing, and grading (see Appendix F).
OMP4	Use site specific vegetation maintenance measures to increase success rate of restoration plantings (see Appendix F).
OMP5	Maintain all new and existing roads and culverts to prevent erosion and mass wasting associated with culvert and water bar failure (see Appendix F). Protect all culvert and waterbar outlets and all culvert inlets from erosion.
OMP6	New road construction would utilize best design practices to minimize erosion and slope failures (see Appendix F).
Watershed Resources	
OMP7	In areas where clearing and grading are proposed adjacent to streams or wetlands, additional structural erosion control measures will be implemented as necessary above and beyond SWPPP requirements.
OMP8	Project-specific SWPPPs will specify that supplies and materials needed to complete erosion control measures will be onsite prior to initiating soil-disturbing activities.
OMP9	Crossings will be installed in intermittent channels when the channels are naturally dewatered or after diverting flow around the construction site.

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

OMP10	Bridge crossings will be installed above the Ordinary High Water Level in the least impactful area (i.e., narrowest spot), and also won't be built in the floodplain so there is minimized erosion impacts to adjacent wetlands and floodplains.
OMP11	Full clearing will be avoided when clearing for ski trails in Riparian Buffers. Partial clearing and flush cutting (instead of stump removal) will be practiced where practical.
OMP12	No LWD will be removed from Riparian Buffers. LWD may be removed from stream channels to protect crossing structures. LWD removed from stream channels will be placed in the adjacent Riparian Buffers.
OMP13	Approved MDP projects in Riparian Buffers will be confined within construction limits designated during project design. Compliance monitoring will be conducted by the USFS and if lack of compliance is found, additional mitigation may be required at USFS discretion.
OMP14	If grading, excavation, or soil movement is to be performed within a stream or wetland, a qualified construction monitor will be onsite to ensure that all applicable BMPs are followed. A field meeting with the construction manager, USFS, and biologist will occur before construction to select required BMPs and discuss any additional methods to minimize impacts.
OMP15	No access corridors, staging areas, spoils piles, or other construction-related materials will be sited within native plant communities in Riparian Buffers, except where such communities are due to be removed as part of the project under construction.
OMP16	Wetland impacts will be minimized by maintaining the existing contours and drainage patterns in wetlands that intersect proposed ski trails.
OMP17	The number of vehicle trips across project sites will be limited to the minimum necessary. Existing/proposed roads will be used to convey construction equipment and materials to individual project sites.
OMP18	Existing and future sources of coarse organic debris will be preserved whenever possible to enhance organic matter, nutrients, and surface roughness in soils. Where possible felled trees or snags will be buried near their origin to maintain long-term sources of organic matter, consistent with other mitigation measures. When grading ski trails, coarse organic debris will be collected and stockpiled along with topsoil. Organic debris will be redistributed and stabilized by partial burial when re-dressing the site with topsoil.
OMP19	Trees (including live trees and snags) will be felled within Riparian Buffers only (1) to construct approved MDP projects or (2) to maintain safety. For approved MDP projects, the specific trees to be felled will be designated during the design process and the USFS consulted for approval that the design does minimize tree removal. Where possible, trees will be felled so that the fallen tree may be left in place on the ground. Where possible, trees will be topped rather than felled. If felled trees more than 15cm DBH must be removed from Riparian Reserves then they will be placed elsewhere in the SUP area to enhance terrestrial or aquatic habitat or soil organic matter with Riparian Reserves, unless it is determined that sufficient CWD exists in RRs by the USFS.
OMP20	Plant material and topsoil will be salvaged for use in revegetation in Riparian Reserves.
Fisheries	
OMP21	Oil, fuel, or hydraulic fluid, and sediments are a contamination source for Beaver Lake Creek near Summit West maintenance shop. Develop method(s) to contain oils and sediments to prohibit pollutants entering stream.
OMP22	Stormwater management facilities will be installed per the Stormwater Management Plan (Appendix G) in all proposed parking lots and parking lots proposed for paving on National Forest lands.
OMP23	Use best management practices for erosion and sedimentation control on all clearing and grading projects such as silt fencing, mulching, erosion control matting, diversion of surface flow. For examples see: Ecology (2003).
OMP24	Replant cleared and graded areas with native species consistent with proposed uses as quickly as possible after clearing and grading has been completed (see Appendix F).

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

Vegetation	
OMP25	Maintain existing conditions at known sites of special status plant species outside of proposed ski trails.
OMP26	During construction of trails in Section 16 (Summit East – Creek Run and Rampart pods), use selective tree removal during construction and gladed trail clearing to maintain 70% overstory canopy cover where it currently exists.
OMP27	Do not use sensitive plant locations for staging areas or storage areas during construction.
OMP28	Flag known special status plant species locations near construction areas to avoid disturbance.
OMP29	Monitor the wetland where *G. douglasiana* occurs during construction of the Wildside chairlift to ensure materials, equipment, and work crews do no encroach in the wetland.
OMP30	Construction equipment will utilize existing roads or be lifted to steep slope sites by helicopter.
OMP31	Disturbed sites will be revegetated with native plants or USFS approved nonnative grass or forb species (see Appendix F). Native/USFS approved nonnative species will also be used to revegetate ground disturbance areas associated with buildings, roads, and ski terminal perimeters.
OMP32	Pinned logs will be used to help stabilize soil for planting sites on road cuts. Decommissioned roadbeds will be revegetated with native grass and forb species or USFS approved erosion control seed mixes.
OMP33	During trenching for utility installation, the upper 6- to 12-inch sod layer will be removed in a separate lift so it can be reapplied on salvaged topsoil. Construction mats and low-pressure tires will be used when driving across wet soils to dig the trench and install utility lines.
OMP34	Trees will be felled away from special-status plant populations. Ground disturbance will be minimized during removal of logs and slash. Understory vegetation will be left in areas that are cleared but not regraded.
OMP35	Large trees will be retained where possible. Small trees and shrub vegetation will be retained along edges of ski trails where possible to create a feathered edge of vegetation. Where possible, trees will be removed over a sufficient snowpack.
OMP36	Where feasible, vegetation disturbance will be minimized by bringing construction materials and equipment to the project site over a sufficient snowpack. Helicopters and existing access roads will be used to minimize disturbance during construction.
OMP37	Construction contractors will be notified of sensitive avoidance areas during pre-construction field meetings. Onsite biological monitors will ensure avoidance areas are being maintained during construction
OMP38	Wetlands and locations of special-status plant species will not be used for construction staging areas. Where feasible, vegetation disturbance will be minimized by bringing construction materials and equipment to the project site during snowpack. Helicopters and existing access roads will be used to minimize disturbance during construction.
Wildlife	
OMP39	To reduce potential impacts to mature forest, avoid clearing buffer areas of parking lots, roads, and buildings within mature forest habitat to the extent feasible and design utility trenching such that overstory trees do not have to be removed.
OMP40	Removal of snags and down woody material will be restricted to that necessary to meet safety standards. Where possible, snags will be topped instead of removed. Large down woody material will be left where felled whenever feasible.
OMP41	To avoid impacts to nesting spotted owls in areas adjacent to the Study Area, all helicopter access and egress routes will be planned such that they avoid passing over known and historic nest sites outside of the SUP area at an altitude of less than 250 feet above the canopy.
OMP42	In areas where additional night lighting is proposed, directional lighting designed to reduce ambient reflection or night glare will be used to reduce potential impacts to nocturnal animals.
OMP43	To minimize potential impacts to nesting birds, including woodpeckers and other primary cavity excavators, olive sided flycatchers, and neotropical migratory birds potentially occurring in the Study Area,

Table 2.4-2
Mitigation Measure, Management Requirements, and Other Management Provisions Proposed Under the Action Alternatives

	habitat disturbing activities associated with construction and maintenance will occur only between the dates of August 1 and March 15 and while snow is present on the ground, unless otherwise agreed to with Forest Service personnel and based on conditions.
OMP44	Where new culverts are installed or old culverts replaced, bottomless arch culverts or bridges will be used where feasible to maintain habitat connectivity for low-mobility, riparian-dependent species.
OMP45	A public education program will be implemented by Booth Creek Resorts in cooperation with the Forest Service to encourage observation of wildlife and to discourage harassment and feeding of wildlife. Special emphasis will be placed on avoiding disturbance to mountain goats during the kidding season and to elk during the calving season.
OMP46	All food and garbage associated with development and operation of the ski area will be controlled by using bear proof containers.
OMP47	Small slash piles will be left in place for wildlife use.
Air Quality	
OMP48	During construction under dry conditions, water will be applied to work roads and exposed soils to minimize dust and PM_{10} emissions. Prompt revegetation including seeding, mulching, straw matting, etc. will be implemented to reduce or eliminate long-term emissions per the Implementation, Operations, Restoration and Monitoring Plan (Appendix F).
OMP49	Chipping, lopping, scattering, and light broadcast burning of wood material will be implemented wherever practical. Pile burning will only be used where necessary. Any slash burning will be carried out under USFS guidelines and state permitting procedures, with appropriate fire control measures.
OMP50	Burning permits will be obtained for all burning. Burn piles will be ignited under good-to-excellent ventilation conditions. Operations will be suspended under adverse dispersion conditions, or during weekends from July 1 to Labor Day.
OMP51	Construction will be phased over an extended period (10 years) to minimize air quality impacts occurring at single time.
Heritage Resources	
OMP52	Grading or excavating for lifts and trails will not be allowed within the PCT corridor. Utility crossings over the PCT will be restored to pre-construction conditions.
Recreation	
OMP53	Temporary signage will be posted at PCT trailheads to warn users of construction activities, and if necessary, alternative routes will be provided.
Utilities	
OMP54	Limit the amount of open trench exposed; complete installation as quickly as feasible; compact trench fill to retard potential for erosion; revegetate or provide other means of retarding potential for erosion. If a segment of trench is located in an area where flows may concentrate, install water bars or other means to divert or disperse water away from the trenched site.
Standard Operating Procedures	
OMP55	Construction documents will be prepared and stamped by a professional engineer, as necessary, and approved by the USFS.
OMP56	For each project, a SWPPP will be prepared with a list of site specific mitigation measures (including those from this table and others as deemed appropriate). This plan will be approved by the USFS prior to implementation of any project.
OMP57	Construction will not begin until authorized by the USFS and approved by all applicable Federal, State, and local agencies.
OMP58	In addition to the Implementation, Operation, and Restoration Monitoring Plan, The Summit at Snoqualmie will provide routine environmental (and other) monitoring of construction sites to insure that all permit conditions and mitigation measures are met.

2.5 MONITORING

Monitoring of all construction activities will be carried out according to the Summit at Snoqualmie MDP – Implementation, Operation, Restoration and Monitoring Plan (see Appendix F) This document is intended to demonstrate that monitoring of impacts would be based upon and consistent with monitoring guidelines presented in the Forest Plan, as Amended. The objectives of the plan are to monitor the implementation of mitigation, effectiveness of management practices, and validation of the impact analysis. The plan includes monitoring at the project scale and the watershed scale.

2.6 PHASING

Alternatives 2 through 5 were developed to provide a framework for the development and operation of The Summit at Snoqualmie over a 10-year period, beginning after a Record of Decision. Under all Action Alternatives, The Summit at Snoqualmie would propose projects on an annual basis, based upon the schedule shown in Table 2.6-1.

For purposes of analysis, the phasing presented in Tables 2.6-1 and 2.6-2 assumes that both mitigation and monitoring are ongoing, and that environmental systems are functioning as stated in this DEIS. The actual approval of projects on an annual basis would hinge upon review by the USFS or appropriate specialists and approval by the authorized officer, commensurate with the success of mitigation measures as determined by monitoring (see Section 2.6–Monitoring).

Table 2.6-1
MDP Phasing by Alternative

Master Plan Components	Phase of Implementation				
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
Lift Upgrades					
18 - Sessel (C-4)	-	2	2	2	2
19 - St. Bernard (C-2)	-	2	2	2	2
A - Pulse Gondola	-	3	-	3	3
B - Internationale (C-4)	-	2	1	2	2
1 - Easy Street (C-4)	-	3	3	3	3
5 - Triple 60 (DC-4)	-	3	3	3	3
7 - Holiday (C-4)	-	3	3	3	3
8 - Wildside (C-4)	-	2	2	1	2
12 - Dodge Ridge (C-4)	-	2	2	1	2
15 - Julie's (C-4)	-	2	2	2	2
16 - Surf. Lift I (S)	-	1	1	1	1
17 - Surf. Lift II (S)	-	2	2	2	2
20 - Lil' Thunder (C-4)	-	2	1	1	2
21 - Silver Fir (DC-4)	-	1	1	1	1
22b - Mill Creek (C-2)	-	1	1	1	1
A - Ski School (C-4)	-	2	2	1	2
B - Surf. Lift I (S)	-	-	-	-	-
C - Surf. Lift II (S)	-	-	-	-	-
D - Rampart (C-4)	-	1	1	-	1
E - Creek Run (C-4)	-	1	-	-	1
X - Northside – (C-2)	-	3	3	3	3
Support Facilities					
East Mt. Top Restaurant	-	2	2	2	2
Silver Fir Lodge	-	2	2	2	2
Central Lodge	-	3	3	2	3
T-Bird Lodge	-	3	3	3	3
Maintenance Shop West	-	3	3	3	3
Alpenhaus / Slide In Exp.	-	3	3	3	3
Alpental Maintenance Shop	-	2	2	2	2
Guest Services Alpental	-	3	3	3	3
Alpental Mountain-Top Lodge	-	3	3	3	3

Table 2.6-1
MDP Phasing by Alternative

Master Plan Components	Phase of Implementation				
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
Parking (build, pave, stormwater)					
New West Lot Expansion & Paving	-	1	1	1	1
Central Lot Expansion	-	1	1	1	1
Alpental Lot Restoration	-	-	-	2	-
Alpental Lot Paving	-	3	1	2	2
Existing West Lot Paving	-	3	3	3	3
Existing Central Lot Paving	-	3	3	3	3
Silver Fir Lot Paving	-	1	1	1	1
Trails					
West-Central Crossover	-	1	1	1	1
Central-East Crossover	-	1	1	-	1
Revegetation					
East Crossover Revegetation	-	1	1	-	1
Creek Run Revegetation	-	-	1	-	-

Table 2.6-2
Phasing by Alternative
Restoration Projects Not Included in Alternative 2

Site Code[a]	Description of Problem Area	Phase of Implementation
A-3	Bare soils, minor rill development	2
A-4	Bare soils, minor rill development	2
A-5	Bare soils, minor rill development	2
A-6	Bare soils, minor rill development	3
A-9	Bare soils, minor rill development	2
A-15	Cutslope erosion, or unvegetated cutslope	2/3
S-1	Trail cutslopes, surfaces, or ditch erosion	3
S-2	Small gullies on cleared ski slopes	1/2
S-5	Severe gullying	1/2
S-6	Bare soils, minor rill development	1/2
S-8	Small gullies on cleared ski slopes	1/2
S-9	Small gullies on cleared ski slopes	1/2
S-12	Small gullies on cleared ski slopes	1/2
S-15	Bare soils, minor rill development	1/2
S-16	Bare soils, minor rill development	1/2
S-30	Cutslope erosion, or unvegetated cutslope	3

Table 2.6-2
Phasing by Alternative
Restoration Projects Not Included in Alternative 2

Site Code[a]	Description of Problem Area	Phase of Implementation
S-33	Cutslope erosion, or unvegetated cutslope	3
S-34	Cutslope erosion, or unvegetated cutslope	3
K-1	Trail cutslopes, surfaces, or ditch erosion	1
K-3	Small gullies on cleared ski slopes	1
K-4	Small gullies on cleared ski slopes	1
K-5	Severe gullying	1
K-10	Severe gullying	1
K-11	Cutslope erosion, or unvegetated cutslope	1
K-12	Small gullies on cleared ski slopes	1
K-13	Trail cutslopes, surfaces, or ditch erosion	1
K-14	Small gullies on cleared ski slopes	1
K-22	Cutslope erosion, or unvegetated cutslope	1
K-23	Small gullies on cleared ski slopes	1
K-32	Cutslope erosion, or unvegetated cutslope	1
K-42	Cutslope erosion, or unvegetated cutslope	1
K-44	Cutslope erosion, or unvegetated cutslope	3
H-3	Small gullies on cleared ski slopes	1
H-6	Small gullies on cleared ski slopes	1
H-7	Small gullies on cleared ski slopes	1
H-8	Small gullies on cleared ski slopes	1
H-9	Small gullies on cleared ski slopes	1
H-11	Bare soils, minor rill development	1
H-13	Bare soils, minor rill development	1
H-17	Ditch erosion, or blocked ditch	1

a - The site code and description of these restoration projects come from the South Fork Snoqualmie River and Coal Creek Watershed Condition Assessment (Jones & Stokes 2001).

2.7 COMPARISON OF ALTERNATIVES

Table 2.7-1 presents a summary comparison of The Summit at Snoqualmie facilities under Alternatives 1 through 5. Table 2.7-2 compares the environmental consequences of each alternative.

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Alpental					
Alpine Ski Area Capacity (CCC) (change from Alternative 1)	1,880	2,920 (+1,040)	2,620 (+740)	2,920 (+1,040)	2,920 (+1,040)
The Summit					
Alpine Ski Area Capacity (CCC) (change from Alternative 1)	7,920	10,710 (+2,790)	9,990 (+2,070)	9,360 (+1,440)	10,710 (+2,790)
Total Forest Service SUP Area (acres)	1,834 SUP area between Summit East and Summit Central would continue to be separated by Hyak Creek. The existing Trail 49 would continue to provide unsuitable slope gradients for skiers and snowboarders going from Summit Central to Summit East.	1,886 (+53) SUP Area between Summit East and Summit Central would include the area along Hyak Creek and an expansion to accommodate a re-route of Trail 49 between Summit Central and Summit East. The re-route would provide more suitable slope gradients for skiers and snowboarders going from Summit Central to Summit East.	1,851 (+17) SUP Area between Summit East and Summit Central would include the area along Hyak Creek and the existing Trail 49 between Summit Central and Summit East. The existing Trail 49 would continue to provide unsuitable slope gradients for skiers and snowboarders going from Summit Central to Summit East.	1,851 (+17) SUP Area between Summit East and Summit Central would include the area along Hyak Creek and the existing Trail 49 between Summit Central and Summit East. The existing Trail 49 would continue to provide unsuitable slope gradients for skiers and snowboarders going from Summit Central to Summit East.	1,886 (+53) SUP Area between Summit East and Summit Central would include the area along Hyak Creek and an expansion to accommodate a re-route of Trail 49 between Summit Central and Summit East. The re-route would provide more suitable slope gradients for skiers and snowboarders going from Summit Central to Summit East.

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Lifts[a, b]					
Alpental					
Total Number of Lifts	5	7	6	7	7
Armstrong Express	Existing	Existing	Existing	Existing	Existing
Drei	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Edelweiss	Existing	Existing	Existing	Existing	Existing
Internationale	Non Existent	Proposed	Proposed	Proposed	Proposed
Magic Carpet	Non Existent	Proposed	Proposed	Proposed	Proposed
Pulse Gondola	Non Existent	Proposed	Non Existent	Proposed	Proposed
Sessel	Existing	Modified	Modified	Modified	Modified
St. Bernard	Existing	Modified	Modified	Modified	Modified
Summit					
Total Number of Lifts	20	22	21	20	22
Baby Double	Non Existent	Proposed	Proposed	Proposed	Proposed
Backside	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Bunny	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Central Express	Existing	Existing	Existing	Existing	Existing
Creek Run	Non Existent	Proposed	Non Existent	Non Existent	Proposed
Dodge Ridge	Existing	Modified	Modified	Modified	Modified
Easy Gold	Existing	Modified	Modified	Modified	Modified
Easy Rider	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Easy Street	Existing	Modified	Modified	Modified	Modified
Gallery	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Holiday	Existing	Modified	Modified	Modified	Modified

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Julie's Chair	Existing	Modified	Modified	Modified	Modified
Little Thunder	Existing	Modified	Modified	Modified	Modified
Magic Carpet I	Existing	Modified	Modified	Modified	Modified
Magic Carpet II	Existing	Modified	Modified	Modified	Modified
Mill Creek	Non Existent	Proposed	Proposed	Proposed	Proposed
Mt. Hyak	Existing	Existing	Existing	Existing	Existing
Northside	Non Existent	Proposed	Proposed	Proposed	Proposed
Pacific Crest	Existing	Existing	Existing	Existing	Existing
Rampart	Non Existent	Proposed	Proposed	Non Existent	Proposed
Reggie's Chair	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Rope Tow	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Silver Fir	Existing	Modified	Modified	Modified	Modified
Ski School	Non Existent	Proposed	Proposed	Proposed	Proposed
Surface Lift I	Non Existent	Proposed	Proposed	Proposed	Proposed
Surface Lift II	Non Existent	Proposed	Proposed	Proposed	Proposed
Triple 60	Existing	Modified	Modified	Modified	Modified
Wildside	Existing	Modified	Modified	Modified	Modified
Ski Terrain by Ability (acres/percent distribution)					
Total Ski Terrain (Alpental and Summit)					
Beginner (acres/% of total)	12.2 / 1.6	8.8 / 1.1	8.8 / 1.1	8.8 / 1.1	8.8 / 1.1
Novice (acres/% of total)	111 / 14.8	127.8 / 15.7	104.5 / 13.6	120.1 / 15.6	118.2 / 14.6
Low (acres/% of total)	131.5 / 17.5	179.6 / 22	155.1 / 20.2	148.5 / 19.3	168.9 / 20.9
Intermediate (acres/% of total)	106 / 14.1	145.5 / 17.8	138.0 / 18	129.1 / 16.7	152.6 / 18.8

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Adv. Intermediate (acres/% of total)	146.7 / 19.5	101.9 / 12.5	109.8 / 14.3	112.8 / 14.6	109.8 / 13.6
Expert (acres/% of total)	243.1 / 32.4	252.8 / 31	252.3 / 32.9	252.2 / 32.7	252.3 / 31.1
Ski Trails[c, d]					
Alpental					
Number of Trails	25	27	27	27	27
Formal Terrain (acres) (change from Alternative 1)	206	217 (+11)	217 (+11)	217 (+11)	217 (+11)
Trail Number					
1	Existing	Existing	Existing	Existing	Existing
2	Existing	Existing	Existing	Existing	Existing
3	Existing	Modified	Modified	Modified	Modified
4	Existing	Existing	Existing	Existing	Existing
5	Existing	Existing	Existing	Existing	Existing
6	Existing	Existing	Existing	Existing	Existing
7	Existing	Modified	Modified	Modified	Modified
8	Existing	Existing	Existing	Existing	Existing
9	Existing	Existing	Existing	Existing	Existing
10	Existing	Existing	Existing	Existing	Existing
11	Existing	Existing	Existing	Existing	Existing
12	Existing	Existing	Existing	Existing	Existing
13	Existing	Existing	Existing	Existing	Existing
14	Existing	Existing	Existing	Existing	Existing
15	Existing	Existing	Existing	Existing	Existing

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
16	Existing	Existing	Existing	Existing	Existing
17	Existing	Existing	Existing	Existing	Existing
18	Existing	Existing	Existing	Existing	Existing
19	Existing	Existing	Existing	Existing	Existing
20	Existing	Modified	Modified	Modified	Modified
20A	Non Existent	Proposed	Proposed	Proposed	Proposed
21	Existing	Existing	Existing	Existing	Existing
21A	Non Existent	Proposed	Proposed	Proposed	Proposed
22	Existing	Existing	Existing	Existing	Existing
23	Existing	Existing	Existing	Existing	Existing
25	Existing	Existing	Existing	Existing	Existing
69	Existing	Existing	Existing	Existing	Existing
Summit					
Number of Trails	70	80	75	75	80
Formal Terrain (acres) (change from Alternative 1)	545	599 (+54)	551 (+6)	554 (+9)	593 (+48)
Trail Number					
1	Existing	Modified	Modified	Modified	Modified
2	Existing	Modified	Modified	Modified	Modified
3	Existing	Modified	Modified	Modified	Modified
4	Existing	Modified	Modified	Modified	Modified
4A	Non Existent	Proposed	Proposed	Proposed	Proposed
5	Existing	Modified	Modified	Modified	Modified
6	Existing	Non Existent	Non Existent	Non Existent	Non Existent

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
7	Existing	Existing	Existing	Existing	Existing
8	Existing	Existing	Existing	Existing	Existing
9	Existing	Modified	Modified	Modified	Modified
9A	Non Existent	Proposed	Proposed	Proposed	Proposed
10	Existing	Existing	Existing	Existing	Existing
11	Existing	Modified	Modified	Modified	Modified
12	Existing	Modified	Modified	Modified	Modified
12A	Non Existent	Proposed	Proposed	Proposed	Proposed
12B	Non Existent	Proposed	Proposed	Proposed	Proposed
13	Existing	Modified	Modified	Modified	Modified
13B	Non Existent	Proposed	Proposed	Proposed	Proposed
14	Existing	Existing	Existing	Existing	Existing
15	Existing	Modified	Modified	Modified	Modified
16	Existing	Existing	Existing	Existing	Existing
17	Existing	Existing	Existing	Existing	Existing
18	Existing	Existing	Existing	Existing	Existing
18A	Non Existent	Proposed	Proposed	Proposed	Proposed
19	Existing	Modified	Modified	Modified	Modified
20	Existing	Existing	Existing	Existing	Existing
21	Existing	Modified	Modified	Modified	Modified
22	Existing	Existing	Existing	Existing	Existing
23	Existing	Modified	Modified	Modified	Modified
24	Existing	Existing	Existing	Existing	Existing
25	Existing	Modified	Modified	Modified	Modified

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
26	Existing	Modified	Modified	Modified	Modified
27	Existing	Modified	Modified	Modified	Modified
28	Existing	Non Existent	Non Existent	Non Existent	Non Existent
29	Existing	Modified	Modified	Modified	Modified
30	Existing	Modified	Modified	Modified	Modified
31	Existing	Modified	Modified	Modified	Modified
32	Existing	Existing	Existing	Existing	Existing
33	Existing	Existing	Existing	Existing	Existing
34	Existing	Existing	Existing	Existing	Existing
35	Existing	Existing	Existing	Existing	Existing
36	Existing	Existing	Existing	Existing	Existing
37	Existing	Existing	Existing	Existing	Existing
38	Existing	Existing	Existing	Existing	Existing
39	Existing	Existing	Existing	Existing	Existing
40	Existing	Existing	Existing	Existing	Existing
41	Existing	Existing	Existing	Existing	Existing
42	Existing	Existing	Existing	Existing	Existing
43	Existing	Modified	Modified	Modified	Modified
44	Existing	Modified	Modified	Modified	Modified
45	Existing	Existing	Existing	Existing	Existing
46	Existing	Modified	Modified	Modified	Modified
49	Existing	Modified	Modified	Modified	Modified
50	Existing	Non Existent	Non Existent	Non Existent	Non Existent
51	Existing	Modified	Modified	Modified	Modified

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
51A	Non Existent	Proposed	Proposed	Proposed	Proposed
51B	Non Existent	Proposed	Proposed	Proposed	Proposed
51C	Non Existent	Proposed	Proposed	Proposed	Proposed
51E	Non Existent	Proposed	Proposed	Proposed	Proposed
52	Existing	Modified	Modified	Modified	Modified
52A	Non Existent	Proposed	Proposed	Proposed	Proposed
52B	Non Existent	Proposed	Proposed	Proposed	Proposed
52C	Non Existent	Proposed	Proposed	Proposed	Proposed
52D	Non Existent	Proposed	Proposed	Proposed	Proposed
52E	Non Existent	Proposed	Proposed	Proposed	Proposed
53	Existing	Non Existent	Non Existent	Non Existent	Non Existent
54	Existing	Modified	Modified	Modified	Modified
55	Existing	Modified	Revegetated	Existing	Modified
55A	Non Existent	Proposed	Non Existent	Non Existent	Proposed
55B	Non Existent	Proposed	Non Existent	Non Existent	Proposed
56	Existing	Modified	Modified	Modified	Modified
57	Existing	Revegetated	Revegetated	Revegetated	Revegetated
58	Existing	Modified	Modified	Modified	Modified
59	Existing	Modified	Modified	Modified	Modified
60	Existing	Modified	Modified	Existing	Modified
60A	Non Existent	Proposed	Proposed	Proposed	Proposed
60B	Non Existent	Proposed	Proposed	Proposed	Proposed
61	Existing	Modified	Modified	Existing	Modified
62	Existing	Modified	Modified	Modified	Modified

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
63	Existing	Existing	Existing	Existing	Existing
64	Existing	Non Existent	Non Existent	Existing	Non Existent
65	Existing	Existing	Existing	Existing	Existing
66	Existing	Modified	Revegetated	Existing	Modified
67	Existing	Modified	Revegetated	Existing	Modified
68	Existing	Existing	Existing	Existing	Existing
69	Existing	Non Existent	Non Existent	Non Existent	Non Existent
70	Existing	Non Existent	Non Existent	Non Existent	Non Existent
71	Existing	Relocated	Relocated	Existing	Relocated
72	Existing	Non Existent	Non Existent	Non Existent	Non Existent
Night Skiing					
Alpental					
Total Trails	12	15	15	12	15
Available Terrain (acres) (change from Alternative 1)	95	112 (+17)	112 (+17)	112 (+17)	112 (+17)
Capacity (skiers) (change from Alternative 1)	1,550	2,170 (+620)	2,170 (+620)	1,550	2,170 (+620)
Summit					
Total Trails	54	70	67	54	70
Available Terrain (acres) (change from Alternative 1)	420	544 (+124)	543 (+123)	544 (+124)	545 (+125)
Capacity (skiers) (change from Alternative 1)	6,210	9,870 (+3,660)	9,870 (+3,660)	6,210	9,870 (+3,660)

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Parking (acres)					
Alpental					
Lot 1	0.8	0.8	0.8	0.8	0.8
Lot 2	1.9	1.9	1.9	1.9	1.9
Lot 3	0.9	0.9	0.9	0.9	0.9
Lot 4	0.6	0.6	0.6	0.5	0.6
Lot 5	0.9	0.9	0.9	0.9	0.9
Lot 6	2.5	2.5	2.5	1.9	2.5
Lot 7	0.2	0.2	0.2	0	0.2
Subtotal Alpental (acres) (change from Alternative 1)	7.8	7.8	7.8	6.9 (-0.9)	7.8
Summit					
Summit West, First Western	1.8	8.0	8.0	8.0	8.0
Summit West, SR 906	2.3	4.3	4.3	4.3	4.3
Summit West Lot 1	5.2	0.1	0.1	1.8	0.1
Summit West Lot 2	4.3	1.8	1.8	2.3	1.8
Summit West Maintenance Lot	Non Existent	2.3	2.3	0.1	2.3
Summit Central Lot 1	10.9	10.9	10.9	10.9	10.9
Summit Central Lot 2	4.2	4.2	4.2	4.2	4.2
Silver Fir Lot 1	2.7	2.7	2.7	2.7	2.7
Silver Fir Lot 2	1.4	3.6	3.6	3.6	3.6
Silver Fir Lot 3	1.3	1.3	1.3	1.3	1.3
Silver Fir Lot 4	Non Existent	4.8	4.8	4.8	4.8
Summit East Lot 1	1.8	1.8	1.8	1.8	1.8

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Summit East Lot 2	2.6	2.6	2.6	2.6	2.6
Summit East Lot 3	1.1	1.1	1.1	1.1	1.1
Subtotal Summit (acres)	39.6	49.5 (+9.9)	49.5 (+9.9)	49.5 (+9.9)	49.5 (+9.9)
Total (acres) (change from Alternative 1)	47.4	57.3 (+9.9)	57.3 (+9.9)	56.4 (+9.0)	57.3 (+9.9)
Parking Capacity (people)	12,346	14,786	14,786	14,518	14,786
Parking Requirement (people)	12,800	16,630	16,630	15,280	16,630
Parking Deficit	454 Parking requirement for skiers, tubers, Nordic skiers and other users would not be met. Alpental parking would continue to be overburdened on busy days.	1,844 Parking requirement for skiers, tubers, Nordic skiers and other users would not be met. Alpental parking would continue to be overburdened on busy days.	1,844 Parking requirement for skiers, tubers, Nordic skiers and other users would not be met. Alpental parking would continue to be overburdened on busy days.	762 Parking requirement for skiers, tubers, Nordic skiers and other users would not be met. Alpental parking would continue to be overburdened on busy days, more so than under any other alternative	1,844 Parking requirement for skiers, tubers, Nordic skiers and other users would not be met. Alpental parking would continue to be overburdened on busy days.
Support Facilities					
Alpental					
Food Service Seats (change from Alternative 1)	528	813 (+285)	528	813 (+285)	813 (+285)
Guest Services Buildings (sq. ft.) (change from Alternative 1)	20,688	38,188 (+17,500)	34,688 (+14,000)	38,188 (+17,500)	38,188 (+17,500)
Maintenance Building (sq. ft.) (change from Alternative 1)	2,754	3,682 (+928)	3,682 (+928)	3,682 (+928)	3,682 (+928)

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Ski Patrol Stations (number)	3	4	3	4	4
Total Size of Ski Patrol Stations (sq. ft.) (change from Alternative 1)	1,516	1,705 (+189)	1,516	1,705 (+189)	1,705 (+189)
Summit					
Food Service Seats (change from Alternative 1)	1,386	4,234 (+2,848)	4,234 (+2,848)	4,234 (+2,848)	4,234 (+2,848)
Guest Services Building (sq. ft.) (change from Alternative 1)	97,566	174,720 (+77,154)	174,720 (+77,154)	174,720 (+77,154)	174,720 (+77,154)
Maintenance Building (sq. ft.) (change from Alternative 1)	12,317	21,127 (+8,810)	21,127 (+8,810)	21,127 (+8,810)	21,127 (+8,810)
Ski Patrol Stations (number)	9	9	8	8	8
Total Size of Ski Patrol Stations (sq. ft.) (change from Alternative 1)	4,527	5,764 (+1,237)	5,514 (+987)	5,514 (+987)	5,514 (+987)
Utilities					
Alpental					
Average Water Demand (gpd) Capacity = 620,640	28,000 (below capacity)	34,500 (below capacity)	30,916 (below capacity)	34,500 (below capacity)	34,500 (below capacity)
Water Storage Capacity	100,000-gallon storage tank	No Change	No Change	No Change	No Change
Wastewater Disposal	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity
Power Demand (mw)	The existing power system at Alpental has the capacity to accommodate all proposed lifts, lighting, and facilities.				
Fuel Storage (gallons)	2,000	No Change			
Number of Fuel Tanks	2	2 – Tanks would be re-located to the new Maintenance Facility			

Table 2.7-1
Summary Comparison of Facilities by Alternative

Master Plan Components	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Summit					
Average Water Demand (gpd) Capacity = 465,000	93,500 (below capacity)	149,126 (below capacity)	117,882 (below capacity)	110,448 (below capacity)	149,126 (below capacity)
Wastewater Disposal	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity	SPUD – Sufficient Capacity
Power Demand (mw)	The existing power system at the Summit has the capacity to accommodate all proposed lifts, lighting, and facilities.				
Fuel Storage (gallons)	17,000	No Change			
Number of Fuel Tanks	4	4 – Two 4,000-gallon tanks at Summit West would be re-located to the new Maintenance Facility			
Roads					
Road Network Density (mi/mi^2) (change from Alternative 1)	4.86	4.79 (-0.07)	4.79 (-0.07)	4.74 (-0.12)	4.79 (-0.07)
Road Network (miles) (change from Alternative 1)	22.0	21.35 (-0.65)	21.35 (-0.65)	21.09 (-0.91)	21.35 (-0.65)
Proposed Roads (miles)	0.0	0.58	0.58	0.35	0.58

a - The modification of existing lifts includes the realignment and/or changes in length.
b - Non existent lifts are lifts that would either be removed or not construcfted.
c - Modified ski trails includes trails where blasting/grading/clearing, widening, lengthening or shortening, or realignment occurs as a result of MDP component implementation.
d - Non Existent ski trails are trails that have been removed or have not been identified as a designated ski trail.

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Geology and Soils[a]					
Road Network Density (mi/mi^2) (change from Alternative 1)	4.86	4.79 (-0.07)	4.79 (-0.07)	4.74 (-0.12)	4.79 (-0.07)
Road Network (miles) (change from Alternative 1)	22.0	21.35 (-0.65)	21.35 (-0.65)	21.09 (-0.91)	21.35 (-0.65)
Developed Area (acres)	87.8	99.3 (+11.6)	96.1 (+8.3)	96.8 (+9.1)	98.4 (+10.6)
Bare Area Soils (acres)	13.5	9.1 (-4.4)	9.1 (-4.4)	9.2 (-4.4)	9.1 (-4.4)
Total detrimental soil conditions (acres)	107.1	108.5 (+1.4)	105.2 (-1.9)	106.0 (-1.1)	107.5 (+0.4)
Percent of Study Area in a Detrimental Soil Condition (percent)	4.0%	4.0%	4.0%	4.0%	4.0%
Watershed					
Streams					
Number of Stream Crossings (all channel types) by crossing structure[15]					
Culvert	61	60	60	59	60
Bridge	1	3	3	1	3
Ford[b]	12	12	12	12	12
Total Number of Stream Crossings	74	75	75	72	75
Wetlands					
Clearing Impacts (acres)					
Palustrine Emergent (PEM) (change from Alternative 1)	47.8	46.5 (-1.3)	46.8 (-1.1)	46.8 (-1.1)	46.5 (-1.3)
Palustrine Forested (PFO) (change from Alternative 1)	2.7	2.7 (0.0)	2.7 (0.0)	2.7 (0.0)	2.7 (0.0)

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Palustrine Scrub Shrub (PSS)	21.9	21.0	21.3	21.9	21.0
(change from Alternative 1)		(-0.9)	(-0.6)	(0.0)	(-0.9)
Total	72.4	70.2	70.7	71.3	70.1
(change from Alternative 1)		(-2.2)	(-1.7)	(-1.1)	(-2.3)
Grading Impacts (acres)					
Palustrine Emergent (PEM)	47.8	46.3	46.2	46.3	46.2
(change from Alternative 1)		(-1.5)	(-1.6)	(-1.5)	(-1.6)
Palustrine Forested (PFO)	2.7	2.6	2.6	2.6	2.6
(change from Alternative 1)		(-0.1)	(-0.1)	(-0.1)	(-0.1)
Palustrine Scrub Shrub (PSS)	21.9	21.6	21.7	21.7	21.7
(change from Alternative 1)		(-0.3)	(-0.2)	(-0.2)	(-0.3)
Total	72.4	70.5	70.5	70.6	70.5
(change from Alternative 1)		(-1.9)	(-1.9)	(-1.8)	(-1.9)
Riparian Buffers					
Land cover types within riparian buffers (acres)					
Forested – Mature	312.5	291.0	297.5	304.3	293.4
(change from Alternative 1)		-21.5	-15.0	-8.1	-19.0
Forested – Immature	43.2	36.8	36.7	37.6	36.8
(change from Alternative 1)		-6.4	-6.6	-5.6	-6.5
Forested – Sapling	2.8	8.1	16.4	10.9	9.9
(change from Alternative 1)		5.3	13.6	8.1	7.1
Naturally Non-forested	71.8	68.0	70.4	70.5	69.6
(change from Alternative 1)		-3.7	-1.3	-1.2	-2.1
Modified	247.5	265.0	243.0	247.3	252.9
(change from Alternative 1)		17.6	-4.5	-0.2	5.4
Developed	28.8	35.6	33.9	33.8	35.3
(change from Alternative 1)		6.8	5.1	5.0	6.5
Road length within riparian buffers (miles)					

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Native	3.9	3.8 (-0.1)	4.3 (+0.4)	3.7 (-0.2)	4.3 (+0.4)
Paved	0.4	0.4	0.4	0.4	0.4
Total	4.3	4.2 (-0.1)	4.7 (+0.4)	4.1 (-0.2)	4.7 (+0.4)
Fish					
Fish bearing Stream Crossing	20	20	20	20	20
Presumed Fish Bearing Stream Crossings	10	11	11	10	11
Culverted stream length (miles) (change from Alternative 1)	2.1	2.2 (+0.1)	2.2 (+0.1)	2.2 (+0.1)	2.2 (+0.1)
Vegetation					
Vegetation Communities (acres)					
Mixed Conifer – Western hemlock (change from Alternative 1)	123.3	123.1 (-0.2)	123.1 (-0.2)	123.2 (-0.1)	123.1 (-0.2)
Mixed Conifer – Pacific Silver fir (change from Alternative 1)	988.3	912.3 (-76.0)	937.8 (-50.5)	949.8 (-38.5)	919.6 (-68.7)
Mixed Conifer – Mountain hemlock (change from Alternative 1)	224.6	218.0 (-6.6)	223.8 (-0.8)	222.2 (-2.4)	219.4 (-5.2)
Shrub (change from Alternative 1)	429.8	395.6 (-34.2)	402.5 (-27.3)	400.7 (-29.1)	395.7 (-34.1)
Herbaceous (change from Alternative 1)	430.6	379.0 (-51.7)	381.7 (-48.9)	379.5 (-51.1)	379.1 (-51.5)
Lakes/Open Water (change from Alternative 1)	1.3	1.3	1.3	1.3	1.3
Unvegetated Rock Outcrops/Talus (change from Alternative 1)	224.6	219.1 (-5.5)	222.2 (-2.4)	219.1 (-5.5)	219.2 (-5.4)

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Threatened and Endangered Species	No T&E Plant Species are present in the Study Area	No T&E Plant Species are present in the Study Area	No T&E Plant Species are present in the Study Area	No T&E Plant Species are present in the Study Area	No T&E Plant Species are present in the Study Area
Wildlife					
Habitat Connectivity		Full clearing associated with lift and ski trail construction (*Creek Run* and *Rampart*) in Section 16 would result in a loss of mature forest and increase forest fragmentation.	Full clearing associated with lift and ski trail construction (*Rampart*) in Section 16 would result in a loss of mature forest and increase forest fragmentation. However, the land donation (see Section 21) would improve connectivity in the long term.	Full clearing associated with lift and ski trail construction in Section 16 would not occur under Alternative 4. Forest fragmentation and loss of mature forest would be the least of all Action Alternatives.	Full clearing associated with lift and ski trail construction (*Rampart*) in Section 16 would result in a loss of mature forest and increase forest fragmentation. Glading of ski trails in the *Creek Run* pod would result in less fragmentation and mature forest removal than Alternative 2. However, the land donation (see Section 21) would improve connectivity in the long term.
Impacts to Species					
Northern Spotted Owl	No impacts to owls or habitat.	Reduction in foraging and dispersal habitat – see Habitat connectivity above.	Reduction in foraging and dispersal habitat – see Habitat connectivity above.	Reduction in foraging and dispersal habitat – see Habitat connectivity above.	Reduction in foraging and dispersal habitat – see Habitat connectivity above.

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Marbled Murrelet	Potential Habitat in the Study Area has a status of "probable absence." No impacts to marbled murrelets or habitat.	Potential Habitat in the Study Area has a status of "probable absence." No impacts to marbled murrelets or habitat	Potential Habitat in the Study Area has a status of "probable absence." No impacts to marbled murrelets or habitat	Potential Habitat in the Study Area has a status of "probable absence." No impacts to marbled murrelets or habitat	Potential Habitat in the Study Area has a status of "probable absence." No impacts to marbled murrelets or habitat
Bald Eagle	Study Area lacks habitat for bald eagle – No impact to bald eagles or habitat.	Study Area lacks habitat for bald eagle – No impact to bald eagles or habitat.	Study Area lacks habitat for bald eagle – No impact to bald eagles or habitat.	Study Area lacks habitat for bald eagle – No impact to bald eagles or habitat.	Study Area lacks habitat for bald eagle – No impact to bald eagles or habitat.
Grizzly Bear and Gray Wolf	No impacts species or habitat. Species may use all habitat types in the Study Area.	Increased human presence in the summer and winter may lead to increase disturbance.	Increased human presence in the summer and winter may lead to increase disturbance. Elimination of gondola development at Alpental would reduce the disturbance compared to the other Action Alternatives.	Increased human presence in the summer and winter may lead to increase disturbance.	Increased human presence in the summer and winter may lead to increase disturbance.
Great Gray Owl and Pileated Woodpecker	No New Impacts	Impacts may occur due to construction and proposed ski area operations	Impacts may occur due to construction and proposed ski area operations	Impacts may occur due to construction and proposed ski area operations	Impacts may occur due to construction and proposed ski area operations
Habitat (acres)					
Mature western hemlock and pacific silver fir	828.50	788.98	801.73	815.14	799.21
(change from Alternative 1)		(-39.52)	(-26.77)	(-13.36)	(-29.29)
Mature western hemlock, Pacific silver fir, and mountain hemlock	1,053.11	1,007.83	1,025.46	1,037.45	1,020.38
(change from Alternative 1)		(-45.28)	(-27.65)	(-15.66)	(-32.73)

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Immature mixed conifer- Pacific silver fir; Pacific silver fir-sapling; western hemlock (change from Alternative 1)	616.07	611.54 (-4.53)	624.10 (+8.03)	621.84 (+5.77)	615.79 (-0.28)
Deer and Elk					
Foraging Habitat (acres)	1,210.4	1,244.0 (+33.6)	1,228.5 (+18.1)	1,216.9 (+6.5)	1,232.4 (+22.0)
Cover Habitat (acres)	1,007.7	962.9 (-44.8)	980.5 (-27.2)	992.5 (-15.2)	975.4 (-32.3)
Neotropical Migratory Bird Habitat (acres) (change from Alternative 1)	860.2	898.0 (+37.8)	870.0 (+9.8)	860.6 (+0.4)	882.2 (+22.0)
Air Quality					
Exceed 1-hour CO Standard?	No	No Change			
Exceed 24-hr PM2.5 Standard?	No	No Change			
Exceed 24-hr PM10 Standard?	No	No Change			
Exceed Class 1 Visibility Criteria?	No	No Change			
Heritage Resources					
NRHP-eligible Heritage Resources affected?	No	No	No	No	No
NRHP-eligible Traditional Cultural Heritage Resources affected?	No	No	No	No	No
Potential effects to tribal hunting, gathering, and fishing practices: (see Wildlife and Fisheries sections)	No Effect				
Social and Economics					
Estimated Development Costs ($000,000)	0	~$48.4	~$42.4	~$45.3	~$48.4
Estimated Short-term Employment Changes (FTE)	0	138	121	125	141
Lifts	138	121	125	138	138
Trails	8	8	8	8	8

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Night Lighting	6	6	6	6	6
Buildings	190	182	190	190	190
Utilities	16	7	16	16	16
Roads	5	5	3	5	5
Parking	0	5	5	5	5
FTE Total	0	368	334	353	368
Projected Total Employees (change from Alternative 1)	~1,515	~2,100 (+585)	~1,950 (+435)	~1,890 (+375)	~2,100 (+585)
Recreation					
Annual Alpine Visitation (full build-out) (change from Alternative 1)	536,846	633,803 (+96,957)	622,823 (+85,977)	597,698 (+60,852)	633,803 (+96,957)
Additional Non-alpine visits	0	80,000 Pulse gondola operation would resulting in new summer offering	0	80,000 Pulse gondola operation would resulting in new summer offering	80,000 Pulse gondola operation would resulting in new summer offering
Transportation					
Parking Capacity (people)	12,346	14,786	14,786	14,518	14,786
Parking Requirement (people)	12,800	16,630	16,630	15,280	16,630
Parking Deficit	454	1,844	1,844	762	1,844
Parking Area:					
Alpental					
# Lots	7	7	7	6	7
Area (acres) (change from Alternative 1)	7.8	7.8	7.8	6.9 (-0.9)	7.8
The Summit					
# Lots	12	13	13	13	13
Area (acres) (change from Alternative 1)	39.6	49.4 (+9.8)	49.4 (+9.8)	49.4 (+9.8)	49.4 (+9.8)

Table 2.7-2
Summary Comparison of Environmental Consequences by Alternative

Parameter	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Utilities					
Domestic Water Demand (gpd)					
Alpental (change from Alternative 1)	28,000	34,500 (+6,500)	30,916 (+2,916)	34,500 (+6,500)	34,500 (+6,500)
The Summit (change from Alternative 1)	93,500	149,126 (+55,626)	117,882 (+24,382)	110,448 (+16,948)	149,126 (+55,626)
Land Use					
Land Donation (390 acres)	No	No	Yes	No	Yes
Forest Plan Amendment – Adjust SUP Boundary	No	Yes – 52 acres	Yes – 17 acres	Yes – 17 acres	Yes – 53 acres
Visuals					
Prescribed VQO met at:					
Snow Lake Trail	Retention – Yes	Retention – Yes	Retention – Yes	Retention – Yes	Retention – Yes
Pacific Crest Trail Looking at Summit West	Retention – No Meets Partial Retention	Retention – No Meets Partial Retention	Retention – No Meets Partial Retention	Retention – No Meets Partial Retention	Retention – No Meets Partial Retention
Pacific Crest Trail Looking from Summit West to Base Area	Retention- No Meets VQO of Modification and EVC of Moderately Altered	Retention- No Meets VQO of Modification and EVC of Moderately Altered	Retention- No Meets VQO of Modification and EVC of Moderately Altered	Retention- No Meets VQO of Modification and EVC of Moderately Altered	Retention- No Meets VQO of Modification and EVC of Moderately Altered
I-90 Heading West	Retention – No Meets Maximum Modification	Retention – No Meets Maximum Modification	Retention – No Meets Maximum Modification	Retention – No Meets Maximum Modification	Retention – No Meets Maximum Modification

a - For Geology and Soils, Watershed, Fisheries, Vegetation, and Wildlife, Alternative 1 displays the existing condition with the MDP Area, which is defined as the Study Area minus the Mill Creek area. The comparison of impacts between Alternatives is displayed for the MDP area only. Impacts that result from the addition of the 390 acre land donation are not included in the comparison table.
b - Does include temporary crossings.