



Five-Year Master Development Plan

**2020–2025**

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Prepared by:



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## CHAPTER ONE

# Introduction

## A. Location

The ski lease area for Mount Sunapee Resort includes approximately 968 acres of forested and developed land on the slopes of Mount Sunapee, in Newbury and Goshen, New Hampshire. See Figure I-1 for a regional location map. Ranging from approximately 1,230 feet elevation at the base of the ski slopes to 2,743 feet at the summit, forested natural communities follow a typical elevation derived transition from hardwood forests at the lower to mid-mountain slopes to sub-alpine spruce-fir forests at the summit. Mount Sunapee’s slopes fall towards the southeastern shore of Lake Sunapee, while Lake Solitude, Mountainview Lake, and Rand Pond circle the mountain on southwestern, northern, and western sides, respectively. Pillsbury State Park lies to the south. Nearby peaks include Bald Sunapee to the east, Goves Mountain to the south, Thompson and Chandler Hills to the west and Blueberry Mountain to the north.

Mount Sunapee is located on northeast, north, west and southeast slopes. The steepest slopes on the mountain are in the North Peak area. Slopes are generally uniform below the ridgelines, with the steepest areas near the top and lowest grades at the bottom. The ski area is divided into four distinct areas by distinct sub-ridges: the Sunbowl area, the Sunapee area, the South Peak learning area, and the West Bowl area. This type of topography allows for a variety of developed and “off-piste” ski opportunities, though the distinct sub-ridges make connections between lift served “ski pods” complicated.<sup>1</sup> See Figure I-2 for a Slope Analysis.

The resort’s distinct mountain peak affords exposures in many directions. Individual portions of developed runs have exposures to almost every aspect, but the majority of runs face north or northeast. Slope aspect plays an important role in snow quality and retention at this latitude. The variety of exposures present opportunities to provide a range of slope aspects that can respond to the changes in sun angle. The placement and location of snow features, such as half pipes and terrain parks, need to consider the effects of late season sun due to varying snow softening, melting and freezing depending on sun exposure.

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<sup>1</sup> *off-piste*: skiing which occurs in areas that are un-groomed and in a natural condition; *ski pod*: a collection of ski trails/runs served by a common chairlift.



## **B. Land Ownership**

Mount Sunapee Resort is located on lands owned by the State of New Hampshire and leased by VR NE Holdings, LLC and operated by The Sunapee Difference, LLC. Additional information is available in Appendix B (Lease and Operating Agreements) and includes a map and description of the leased premises; building inventory; a listing of assets and a space use description of the Sunapee Lodge, Spruce Lodge, and Summit Lodge. Appendix B includes the 2016 amended Lease.

The resort is in both Merrimack and Sullivan counties with approximately 900 acres in the Town of Newbury in Merrimack County and 68 acres in the town of Goshen in Sullivan County. Mount Sunapee Resort privately owns a total of 656 acres of land along the summit ridgeline south of Mount Sunapee (towards Pillsbury), and on the western flank of the mountain which is called the West Bowl. The expansion of the ski area into the West Bowl area is located on both private land and state land.

## **C. Current Ski Area Data**

Mount Sunapee's alpine ski area operations are operated by The Sunapee Difference, LLC d/b/a Mount Sunapee Resort. Mount Sunapee is primarily a day-use resort, hosting most of its guests on weekends and during holiday periods.

Mount Sunapee currently has five aerial lifts, five surface lifts and sixty-seven developed Alpine trails including glades (tree skiing areas). Snowmaking coverage is provided on approximately 207 acres of terrain. There is currently no night skiing at the resort. Support facilities include two base lodges—Spruce Lodge and Sunapee Lodge, the Learning Center, the Ski and Snowboard Rental Shop, the Alpine Racing Competition Center, the on-mountain Summit Lodge and two maintenance facilities.

## **D. Purpose and Goals of the Master Development Plan**

The Lease and Operating Agreement (the Agreement) originally dated April 30, 1998 between the State of New Hampshire and Okemo Mountain, Inc, which was assigned to VR NE Holdings as a successor to CNL Income Mount Sunapee, LLC on October 5, 2018, requires the Operator (The Sunapee Difference, LLC d/b/a Mount Sunapee Resort) to present a Master Development Plan (MDP) to the New Hampshire Department of Natural and Cultural Resources (a division of the now-dissolved Department of Resources and Economic Development [DRED]) for public notification, review and comment prior to DNCR approval:



*The MDP shall be submitted to DRED on or before June 1, 2000, and thereafter the MDP shall be revised and submitted every five (5) years.<sup>2</sup> An Environmental Management Plan (EMP) shall be developed and submitted for approval to DRED in conjunction with the MDP. An Annual Operating Plan (AOP) shall be submitted on or before May 15 of each year.*

Mount Sunapee Resort presents this MDP to the State of New Hampshire in accordance with the terms of the Lease and Operating Agreement. It is also provided to the Towns of Newbury and Goshen, and other local communities in the Lake Sunapee region.

The MDP includes plans for the potential expansion the ski trail network, construction of new lifts, construction and/or renovation of lodges or other facilities, expansion of snowmaking and additional withdrawals from Lake Sunapee, upgrades or modifications to infrastructure including power, water and sewage disposal systems, and other improvements for the recreational use of the leased premises.

The many projects described in this MDP represent both short-term and long-term plans, providing our vision for maintaining the overall facilities at Mount Sunapee.

This document serves as a “road map” for future planning. As such it is a broad overview of the *major* projects proposed for Mount Sunapee. More detailed planning will be required prior to implementation of many of the projects, and changes to the plan may occur during these future planning and design exercises which will be addressed in the AOP. Minor projects which are not described in the MDP may be proposed and described in the AOP for approval.

## **E. Project Summary**

This MDP describes potential upgrading and expansion of Mount Sunapee’s lifts, terrain, guest services, parking, infrastructure, and multi-season activities. Many of the projects described in the MDP have been proposed and approved in previous MDP submittals. Due to various constraints such as financial resources, permitting, competitive positioning and realignment of priorities, some of these projects have not been implemented to date.

The on-mountain and base area improvements are listed in the following table.

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<sup>2</sup> As noted, with the dissolution of DRED, the 2020 MDP document is submitted to the Department of Natural and Cultural Resources.

**Table 1. Project Summary**

Project Description	Previously Approved, Not Yet Implemented	Previously Proposed, Not Yet Approved	Newly Proposed
	Year Approved	Year Introduced	2020
<b>LIFTS</b>			
Upgrade the North Peak Triple to a quad chair	2000		
Upgrade Spruce Triple to a quad chair	2000		
Remove Duckling Double chair*	2000		
Install Cataract chairlift from Sunbowl base to North Peak summit	2005		
Upgrade Sunapee Express Quad to 6-passenger express (with possible addition of gondola cabins)	2016		
Install a 5,100' high-speed express quad chairlift - West Bowl	2016		
Install a moving carpet/beginner lift - West Bowl	2016		
Install telecord surface lift from parking lot #3 to Spruce Lodge			X
<b>TERRAIN/SNOWMAKING</b>			
Add night lighting to South Peak, Spruce Peak, and North Peak trails	2000		
Widen Jet Stream & Pipeline	2005		
Add Snowmaking to Williamson trail	2000		
Add Snowmaking to Paradise trail	2005		
Widen Upper & Lower Blast Off	2000		
Construct two new trails between Upper Ridge & Lower Blast Off	2005		
Construct Upper Outer Ridge trail	2000		
Construct Cataract run trail	2005		

**Table 1. Project Summary (cont.)**

Project Description	Previously Approved, Not Yet Implemented	Previously Proposed, Not Yet Approved	Newly Proposed
	Year Approved	Year Introduced	2020
<b>TERRAIN/SNOWMAKING (cont.)</b>			
Construct and install snowmaking on new South Peak trail	2009		
Widen lower half of Lift Line trail	2009		
Widen and extend Paradise trail	2009		
Widen Williamson & Stovepipe trails	2009		
Create new trail and terrain park between Pipeline and Elliot Slope along the old T-Bar line	2009		
Widen a small section of Province trail	2009		
Add snowmaking on a winter work road from the Sunbowl for winter maintenance vehicles	2009		
Construct +/- 75 acres of new terrain including four (4) top-to-bottom ski trails - West Bowl	2016		
Regrade South Peak (carpet conveyor areas)			X
<b>GUEST SERVICES</b>			
Renovate and expand Summit Lodge	2000		
Renovate and expand Spruce Lodge	2000		
Renovate and expand Sunapee Lodge	2000		
Construct a new base area facility with limited guest services - West Bowl	2016		
Install warming yurt at the base of South Peak			X
Renovate Ray's House/Warming Hut			X

**Table 1. Project Summary (cont.)**

Project Description	Previously Approved, Not Yet Implemented	Previously Proposed, Not Yet Approved	Newly Proposed
	Year Approved	Year Introduced	2020
<b>INFRASTRUCTURE/PARKING</b>			
Construct new parking lot #4	2000		
Install 480V/3P power along Bowl Road	2000		
Expand existing lagoon spray field lines	2000		
Install utilities and infrastructure (power, water, roads) – West Bowl	2016		
Construct new parking areas – West Bowl	2016		
Add a grip maintenance and storage barn to Sunbowl lift			X
Route water supply to Summit Lodge			X
<b>MULTI-SEASON</b>			
Install tubing runs	2000		
Install a mountain coaster between Lynx and Hansen-Chase trails		Pending	
Construct additional archery lanes			X
Construct additional mountain bike trails on South Peak			X
Base area grading around Sunapee Lodge to improve wedding & special event access			X

## CHAPTER TWO

# Existing Ski Resort Facilities

This section contains an examination and analysis of existing ski facilities at Mount Sunapee. The resort inventory is the first step in the evaluation process and involves the collection of data pertaining to Mount Sunapee’s existing facilities: ski lifts, ski trails, the snowmaking system, grooming capabilities, base area structures, skier services and day-use parking. The analysis of the inventory data involves the application of ski industry standards to Mount Sunapee’s existing conditions and compares Mount Sunapee’s existing ski facilities to those facilities commonly found at other North American ski resorts of similar size and composition.

The overall balance of the existing ski area is evaluated by calculating the skier capacities of Mount Sunapee’s various facility components and then comparing these capacities to the ski area’s Comfortable Carrying Capacity (CCC). This examination of capacities helps to identify the ski resort’s strengths and weaknesses. The proposed Upgrade Plan responds to the findings of this analysis, including improvements that bring the existing ski area into better equilibrium and help the resort meet the ever-changing needs of their skier marketplace. Accomplishing both objectives would ultimately enhance Mount Sunapee’s competitive positioning and financial performance.

## A. Existing Lift Network

Mount Sunapee’s existing lifts service the terrain efficiently and are generally newer lifts. The lifts have been well maintained and are in good working order.

In 2014, the Sunbowl Lift was upgraded to a high-speed quad, an upgrade that reduces ride times and increases efficient circulation between parts of the mountain.

**Table 2. Lift Specifications – Existing Conditions**

Lift Name, Lift Type	Vertical Rise (ft)	Slope Length (ft)	Avg. Grade (%)	Hourly Capacity (pph)	Rope Speed (fpm)	Carrier Spacing (ft)	Lift Maker/ Year Installed
Sunbowl Quad/ <i>DC4</i>	1,058	4,292	26	2,400	1,000	100	Poma/2014
Spruce Triple/ <i>C3</i>	417	1,940	23	1,600	425	48	Doppelmayr/ 1985
North Peak Triple/ <i>C3</i>	965	3,254	31	1,800	450	45	Doppelmayr/ 1987
Sunapee Express/ <i>DC4</i>	1,402	6,056	24	2,650	950	86	Poma/1998
Piggyback/ <i>HT</i>	34	300	14	400	200	30	Borer/1994
Clipper Ship Quad/ <i>C4</i>	374	1,814	19	1,600	425	64	Poma/2000
Boardwalk/ <i>RT</i>	30	200	13	250	100	24	Bruckschlogl/ 1997
Little Carpet/ <i>C</i>	8	90	9	400	50	8	Bruckschlogl/ 2000
Flying Carpet/ <i>C</i>	48	360	17	800	100	8	Bruckschlogl/ 2002
Middle Carpet/ <i>C</i>	14	130	11	800	100	8	Carpet/2011

*Notes:*

*C3* = fixed-grip triple chairlift / *C4* = fixed-grip quad chairlift / *DC4* = detachable four-passenger chairlift  
*HT* = handle-tow surface lift / *RT* = rope-tow surface lift / *C* = carpet

## B. Existing Ski Terrain Network

The existing developed ski terrain network at Mount Sunapee covers approximately 217 acres, with an additional approximately 17 acres of gladed terrain for a total of 234 acres of skiing. The maximum vertical drop of the ski trail network is approximately 1,510 feet—from the top of the mountain to the bottom of the Spruce Triple lift.

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### Importance of Terrain Variety

Terrain variety is the key factor in evaluating the quality of the actual skiing and riding guest experience (as opposed to lift quality, restaurant quality, or any other factor).

Terrain variety is consistently ranked as one of the most important criteria in skiers' choice of a ski destination, typically behind only snow quality, and ahead of such other considerations as lifts, value, accessibility, resort service, and others. This is a relatively recent industry trend, representing an evolution in skier/rider tastes and expectations. The implication of the importance of terrain variety is that a resort must have a diverse, interesting, and well-designed developed trail system, but also must have a wide variety of alternate-style terrain, such as mogul runs, bowls, gladed trees, open parks, in-bounds "backcountry-style" (i.e., hike-to) terrain, and terrain parks and pipes. At resorts across the nation, there is a growing trend favoring these more natural, unstructured types of terrain, since the availability of this style of terrain has become one of the more important factors in terms of a resort's ability to retain guests, both for longer durations of visitation and for repeat business.

To provide the highest quality guest experience, resorts should offer groomed runs of all ability levels and some level of each of the undeveloped terrain types. Undeveloped terrain is primarily used by advanced and expert level skiers/riders during desirable conditions (e.g., periods of fresh snow, spring corn, etc.). Even though some of these types of terrain only provide skiing/riding opportunities when conditions warrant, they represent the most intriguing terrain, and typically are the areas that skiers/riders strive to access. Terrain variety is increasingly becoming a crucial factor in guests' decisions on where to visit.

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**Table 3. Terrain Specifications – Existing Conditions**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Beck Brook	2,019	1,759	261	1,928	66	2.9	14%	30%	Low Intermediate
Bonanza	2,691	2,143	548	2,365	133	7.2	24%	38%	Intermediate
Byway	2,062	1,947	114	526	51	0.6	22%	28%	Low Intermediate
Calypso	1,542	1,374	168	945	108	2.3	18%	29%	Low Intermediate
Chase Ledges	2,147	1,685	462	2,109	107	5.2	23%	43%	Advanced Intermediate
Chipmunk	2,094	1,321	774	3,817	112	9.8	21%	29%	Low Intermediate
Coconut Grove	1,362	1,295	67	564	257	3.3	12%	17%	Novice
East Side	2,357	2,132	226	1,239	79	2.2	19%	28%	Low Intermediate
Eggbeater	1,660	1,275	385	1,911	175	7.7	21%	32%	Low Intermediate
Elliot Slope	1,672	1,260	412	2,413	116	6.4	17%	35%	Intermediate
Explorer	1,661	1,361	300	2,152	101	5.0	14%	25%	Novice
Fin	1,310	1,295	15	355	74	0.6	4%	8%	Novice
Flip Flop	1,344	1,278	67	498	221	2.5	14%	18%	Novice
Flyway	1,316	1,267	49	1,083	193	4.8	5%	10%	Low Intermediate
Fox Run	2,243	2,036	208	1,731	43	1.7	12%	27%	Low Intermediate
Goosebumps	2,246	1,621	625	1,944	74	3.3	34%	53%	Expert



**Table 3. Terrain Specifications – Existing Conditions (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Guster	1,672	1,592	80	795	44	0.8	10%	13%	Low Intermediate
Hansen Chase	1,692	1,323	369	1,595	152	5.6	24%	31%	Low Intermediate
Jet Stream	1,660	1,265	395	2,115	143	7.0	19%	34%	Intermediate
Kartwheel	1,965	1,729	236	888	72	1.5	28%	39%	Intermediate
Kick Back	2,135	1,993	142	649	117	1.7	23%	29%	Low Intermediate
Lemon	1,385	1,335	50	401	121	1.1	13%	15%	Novice
Lifeline	2,405	2,000	405	1,583	134	4.9	27%	35%	Intermediate
Lime	1,346	1,309	37	432	41	0.4	9%	13%	Novice
Lower Blast Off	2,038	1,322	715	3,993	90	8.3	18%	33%	Intermediate
Lower Cataract	1,866	1,666	200	903	105	2.2	23%	36%	Intermediate
Lower Crossover	2,300	2,247	52	351	51	0.4	15%	25%	Low Intermediate
Lower Flying Goose	1,641	1,296	345	1,388	123	3.9	26%	35%	Intermediate
Lower Ridge	1,771	1,316	455	3,054	115	8.1	15%	24%	Low Intermediate
Williamson	2,472	1,673	800	5,071	54	6.3	16%	24%	Low Intermediate
Lower Wingding	1,996	1,666	331	1,735	116	4.6	20%	33%	Intermediate
Lynx	2,235	1,306	929	3,151	134	9.7	31%	47%	Advanced Intermediate



**Table 3. Terrain Specifications – Existing Conditions (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Middle Wingding	2,360	1,996	363	1,462	176	5.9	26%	40%	Intermediate
Old Goat	2,656	2,608	48	359	37	0.3	14%	25%	Low Intermediate
Outer Ridge	2,206	1,871	335	2,120	56	2.7	16%	31%	Low Intermediate
Paradise	1,647	1,485	162	1,195	59	1.6	14%	19%	Novice
Pipeline	1,679	1,260	420	2,108	176	8.5	20%	31%	Low Intermediate
Porky's	2,711	2,633	78	556	48	0.6	14%	36%	Intermediate
Portage	1,624	1,525	99	543	57	0.7	19%	26%	Low Intermediate
Promenade	1,334	1,292	43	327	148	1.1	13%	17%	Novice
Little Carpet/Broadwalk	1,295	1,323	28	168	120	1.5	10%	10%	Beginner
Province	1,661	1,298	363	2,286	110	5.8	16%	28%	Novice
Skyway Ledges	2,690	2,493	197	1,006	80	1.9	20%	37%	Intermediate
Skyway	2,621	2,078	543	2,250	124	6.4	25%	37%	Intermediate
Smooth Sail'n	1,425	1,295	130	930	118	2.5	14%	22%	Novice
Spinnaker	1,598	1,382	215	823	49	0.9	27%	36%	Intermediate
Sundance	2,015	1,866	149	794	107	1.9	19%	29%	Low Intermediate
Sunnyside Down	1,391	1,353	38	396	55	0.5	10%	18%	Novice

**Table 3. Terrain Specifications – Existing Conditions (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Sunrise Glades	0	0	0	-	0	0.0	0%	0%	Expert
Toboggan Chute	2,233	2,048	185	1,660	58	2.2	11%	21%	Low Intermediate
Upper Blast Off	2,657	2,038	619	2,486	93	5.3	26%	38%	Advanced Intermediate
Upper Cataract	2,199	1,861	338	1,235	118	3.3	29%	39%	Advanced Intermediate
Upper Crossover	2,472	2,426	46	480	37	0.4	10%	11%	Low Intermediate
Upper Flying Goose	2,242	1,641	601	1,815	140	5.8	35%	43%	Advanced Intermediate
Upper Hansen Chase	2,245	2,091	153	793	90	1.6	20%	31%	Advanced Intermediate
Upper Ridge	2,711	1,771	940	5,875	108	14.5	16%	31%	Low Intermediate
Stovepipe	2,604	2,472	132	929	43	0.9	14%	27%	Low Intermediate
Upper Wingding	2,684	2,360	324	1,377	141	4.4	24%	32%	Intermediate
Westside	2,488	2,158	330	1,564	97	3.5	22%	37%	Intermediate
<b>TOTAL</b>				<b>89,218</b>		<b>217.2</b>			



Overall, the trail network is well balanced and efficient.

The utilization of the Sunbowl side of the mountain has been improved with the upgrading of the Sunbowl lift.

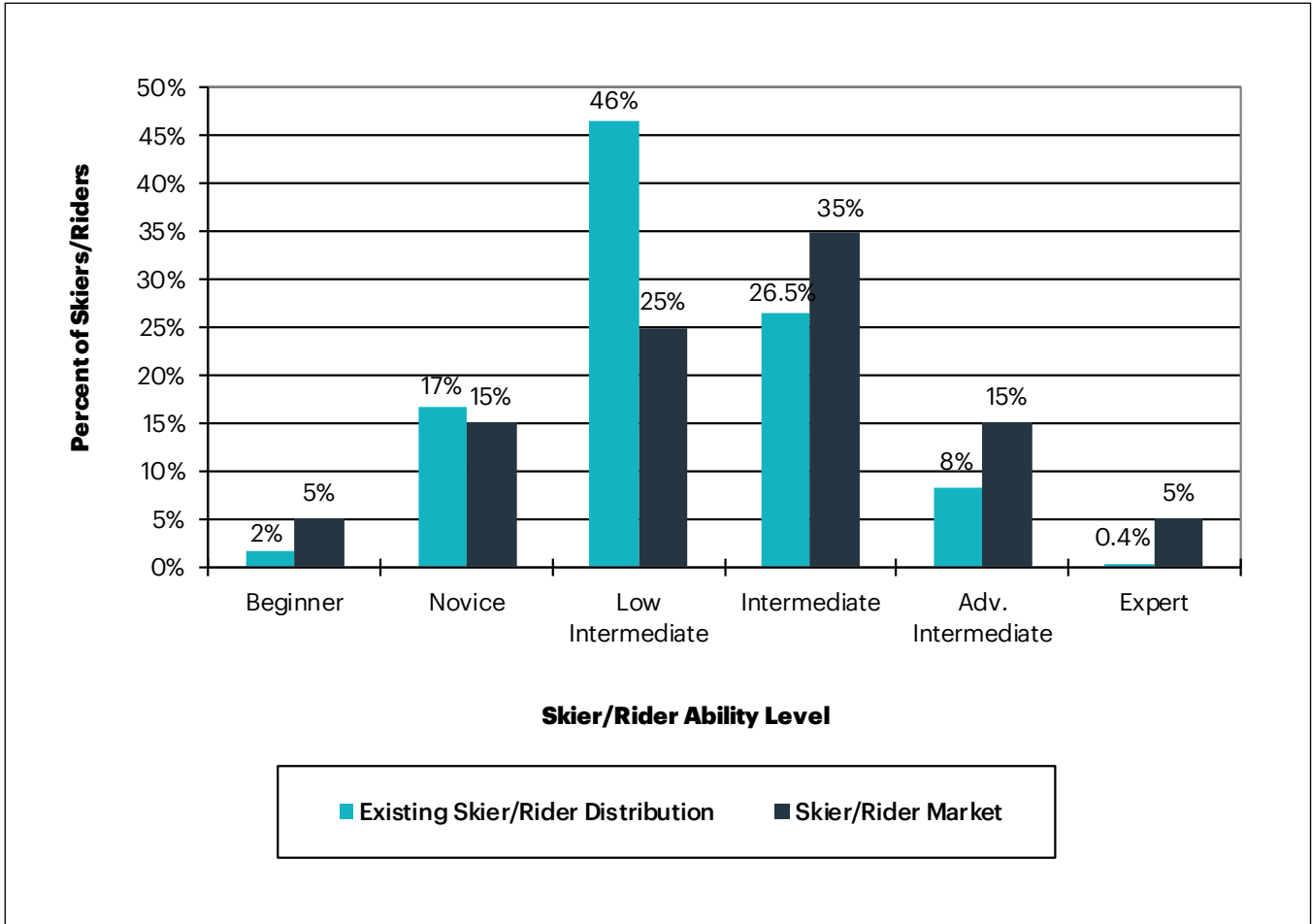
The western side of the existing mountain is underutilized by intermediate skiers due to some narrow/steep sections on the Upper Ridge run that are on the high end of intermediate level terrain, and as a result are often congested. There are good opportunities to increase the amount of intermediate level terrain in this area on the mountain. The overall mountain currently has a deficit of intermediate terrain.

The following terrain distribution exhibits show that the trail network at Mount Sunapee accommodates a range of skier ability levels—from beginner to expert. There is a shortage of Beginner, Intermediate, Advanced Intermediate, and Expert terrain, and a surplus of Novice and Low Intermediate terrain. The significant surplus of Novice and Low Intermediate terrain skews the rest of the percentages. However, this is reflective of Mount Sunapee’s target market. Since Mount Sunapee is positioned as a family-oriented, lower ability level resort within the region, the abundance of lower level terrain is a positive attribute. The shortage of expert terrain is mitigated by the existing gladed areas.

**Table 4. Terrain Distribution by Ability Level – Existing Conditions**

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	1.5	45	2%	5%
Novice	24.5	441	17%	15%
Low Intermediate	87.4	1224	46%	25%
Intermediate	69.6	696	26.4%	35%
Advanced Intermediate	30.9	216	8%	15%
Expert	3.3	10	0.4%	5%
<b>TOTAL</b>	<b>217.2</b>	<b>2,632</b>	<b>100%</b>	<b>100%</b>

**Chart 1. Terrain Distribution by Ability Level - Existing Conditions**





## C. Existing Capacity Analysis

### 1. Comfortable Carrying Capacity

The CCC of the lift and trail network at Mount Sunapee is about 4,820 guests per day. It is not uncommon for ski areas to experience peak days during which skier visitation exceeds the CCC by as much as 25%. However, it is not recommended to consistently exceed the CCC due to the resulting decrease in the quality of the recreational experience, and thus the resort's repeat business.

Mount Sunapee's existing CCC is 4,820, as described in the following table.

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The daily carrying capacity of a resort is described as the Comfortable Carrying Capacity (CCC). CCC is not a cap on visitation but is rather a design standard defined as the number of daily visitors a resort can comfortably or efficiently accommodate at one time without overburdening the resort infrastructure.

CCC is a guest attendance level that can be serviced by the resort while operations remain optimally functional. The CCC is derived from the resort's *supply of vertical transport* (the combined uphill hourly capacities of the lifts) and *demand for vertical transport* (the aggregate number of runs demanded multiplied by the vertical rise associated with those runs). The CCC is calculated by dividing vertical supply (VTF/Day) by Vertical Demand.

The accurate estimation of a ski area's CCC is a complex issue and is the single most important planning criterion for the ski area. All other related skier service facilities can be planned based on the proper identification of the mountain's capacity.

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**Table 5. Comfortable Carrying Capacity – Existing Conditions**

Lift Name, Lift Type	Slope Length (ft)	Vertical Rise (ft)	Hourly Capacity (pph)	Oper. Hours (hrs)	Access Role (%)	Misload Stopping (%)	Adjusted Hourly Capacity (pers/hr)	VTF/Day (000)	Vertical Demand (ft/day)	CCC (guests)
Sunbowl Quad/ <i>DC4</i>	4,292	1,058	2,400	7.00	10	5	2,040	15,108	13,467	1,120
Spruce Triple/ <i>C3</i>	1,940	417	1,600	7.00	0	10	1,440	4,203	7,402	570
North Peak Triple/ <i>C3</i>	3,254	965	1,800	7.00	10	10	1,440	9,727	14,223	680
Sunapee Express/ <i>DC4</i>	6,056	1,402	2,650	7.00	15	5	2,120	20,806	16,809	1,240
Piggyback/ <i>HT</i>	300	34	400	7.00	0	20	320	76	850	90
Clipper Ship Quad/ <i>C4</i>	1,814	374	1,600	7.00	0	10	1,440	3,770	4,622	820
Boardwalk/ <i>RT</i>	200	30	250	7.00	0	20	200	42	1,475	30
Little Carpet/ <i>C</i>	90	8	400	7.00	0	20	320	18	370	50
Flying Carpet/ <i>C</i>	360	48	800	7.00	0	20	640	215	1,408	150
Middle Carpet/ <i>C</i>	130	14	800	7.00	0	20	640	63	868	70
<b>TOTAL</b>	<b>18,436</b>		<b>12,700</b>				<b>10,600</b>	<b>54,028</b>		<b>4,820</b>

*Notes:*

*C3* = fixed-grip triple chairlift / *C4* = fixed-grip quad chairlift / *DC4* = detachable four-passenger chairlift  
*HT* = handle-tow surface lift / *RT* = rope-tow surface lift / *C* = carpet

## 2. Density Analysis

Overall, there is a good balance between downhill terrain capacity and uphill lift capacity at Mount Sunapee. This desirable situation is reflected in the moderate skier densities.

The only area with densities at or above desirable densities is the novice terrain serviced by the Piggyback handle tow. However, even though the terrain off this lift is classified as Novice due to its 14% grade, it functions more as a higher-level beginner area. Densities are not a concern in beginner areas, since many of the skiers are clustered on the sides of the runs, in group lessons, or similar situations. As a result, the higher density index number for the Piggyback handle tow is not a concern.

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An important aspect of ski area design is the balancing of uphill lift capacity with downhill trail capacity. Trail densities are derived by contrasting the uphill, at-one-time capacity of each lift system (CCC) with the trail acreage associated with each lift pod. At any one time, skiers are dispersed throughout the resort, while using guest facilities and milling areas, waiting in lift mazes, riding lifts, or enjoying descents. For the trail density analysis, 25% of each lift's capacity is presumed to be using guest service facilities or milling areas. This 25% of the skier population is the resort's inactive population.

The active skier population can be found in lift lines, on lifts, or on trails. The number of skiers waiting in line at each lift is a function of the uphill hourly capacity of the lift and the assumed length of wait time at each lift. The number of guests on each lift is the product of the number of carriers on the uphill line and the capacity of the lift's carriers. The remainder of the skier population (the CCC minus the number of guests using guest facilities, milling in areas near the resort portals, waiting in lift mazes, and riding lifts) is assumed to be enjoying downhill descents.

Trail density is calculated for each lift pod by dividing the number of guests on the trails by the amount of trail area that is available within each lift pod. The trail density analysis compares the calculated trail density for each lift pod to the target trail density for that pod (i.e., the product of the ideal trail density for each ability level and the lift's trail distribution by ability level).

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**Table 6. Density Analysis - Existing Conditions**

Lift Name, Lift Type	Guest Dispersement					Density Analysis				Density Index (%)
	CCC	Support Facility/ Milling (guests)	Lift Lines (guests)	On Lift (guests)	On Terrain (guests)	Terrain Area (acres)	Terrain Density (guests/ac)	Target Trail Density (guests/ac)	Diff. (+/-)	
Sunbowl Quad/ <i>DC4</i>	1,120	280	218	146	476	52.7	9	11	-2	82%
Spruce Triple/ <i>C3</i>	570	143	168	110	149	27.0	6	12	-6	50%
North Peak Triple/ <i>C3</i>	680	170	192	174	144	27.0	5	10	-5	50%
Sunapee Express/ <i>DC4</i>	1,240	310	177	225	528	82.1	6	12	-6	50%
Piggyback/ <i>HT</i>	90	23	37	8	22	1.2	18	18	0	100%
Clipper Ship Quad/ <i>C4</i>	820	205	204	102	309	21.8	14	17	-3	81%
Boardwalk/ <i>RT</i>	30	8	7	7	8	0.9	9	29	-20	31%
Little Carpet/ <i>C</i>	50	13	16	10	11	0.8	15	30	-15	50%
Flying Carpet/ <i>C</i>	150	38	32	38	42	2.6	16	18	-2	89%
Middle Carpet/ <i>C</i>	70	18	21	14	17	1.3	13	18	-5	72%
Sunbowl Quad/ <i>DC4</i>	1,120	280	218	146	476	52.7	9	11	-2	82%
<b>TOTAL</b>	<b>4,820</b>	<b>1,208</b>	<b>1,072</b>	<b>834</b>	<b>1,706</b>	<b>217.2</b>	<b>8</b>	<b>12</b>	<b>-4</b>	<b>65%</b>

Notes:

*C3* = fixed-grip triple chairlift / *C4* = fixed-grip quad chairlift / *DC4* = detachable four-passenger chairlift  
*HT* = handle-tow surface lift / *RT* = rope-tow surface lift / *C* = carpet



## **D. Maintenance Facilities, Utilities, and Snowmaking Coverage**

### **1. Maintenance Facilities**

Mount Sunapee has three primary maintenance facilities. The vehicle maintenance facility has a five-bay garage and a stock room where maintenance of all rolling stock takes place. The service shop is a three-bay facility and is the location of buildings and grounds maintenance, lift maintenance, and carpentry. The snowmaking control building houses the electric air compressors and all snowmaking maintenance and storage. The resort's maintenance facilities have been renovated since the last MDP.

### **2. Utilities**

Mount Sunapee has an onsite wastewater disposal system, consisting of septic tanks at each building and a lagoon and spray field system for final treatment. The base area has a combined treatment capacity of 13,500 gallons per day. The Summit Lodge has a septic tank with a leach field with a treatment capacity of 5,000 gallons per day. The Summit Lodge leach field was replaced in 2006. All systems are considered adequate to accommodate current and future use.

Fuel storage is accomplished in multiple locations around the resort, in both underground and above ground tanks. #2 fuel is stored in underground tanks adjacent to respective buildings, ranging in size from 3,000 gallons to 10,000 gallons. Propane is stored in above ground and below ground tanks throughout the resort, ranging in size from 100 gallons to 2,000 gallons. Diesel fuel is stored in a 6,000-gallon underground tank at the service shop, and gasoline is also stored in a 6,000-gallon underground tank at the service shop. The diesel and gasoline tanks at the service shop were replaced with new double walls tanks in 2012. All tanks comply with the applicable codes.

Transmission and distribution of electrical power to Mount Sunapee is from Public Service New Hampshire (PSNH), a commercial supplier. Power is distributed throughout the resort via underground power lines and is considered adequate for current and future use.

Domestic water needs at Mount Sunapee are met by private wells. There is a 2,000 gallon underground tank in the base area fed by a 73-gallon per minute well, a 1,000 gallon above ground tank at the Summit Lodge fed by a 7.5 gallon per minute well, and a 500-gallon tank at the maintenance shop fed by a 25 gallon per minute well. Based on current usage, all sources are considered adequate, with the base area well more than adequate.

The Summit Lodge water supply tank experiences freezing issues on cold days which can cause disruptions in food and beverage services. There is a need to upgrade the water lines to ensure consistent and reliable water availability at Summit Lodge.

See Figure II-2 for a map of the existing utilities in the base area.

### 3. Snowmaking Coverage

Snowmaking is an important part of Mount Sunapee’s operation. The amount and timing of natural snowfall, and the degree to which temperatures are cold enough for snowmaking often dictate the overall success of a ski resort’s winter operation. Compounding the weather risk is the fact that most resorts receive a significant portion of their wintertime visitation during a few, relatively short vacation periods. This factor exerts extreme pressure on resorts to provide a quality snow product during those important holiday periods.

Mount Sunapee currently holds permitted water rights from the NH-Department of Environmental Services allowing for the winter seasonal use of water from Lake Sunapee annually. This water provides snowmaking coverage on approximately 207 acres of developed ski terrain. Over the past five seasons, the resort has averaged using 151.5 million gallons of water per year. Approximately 28 inches of man-made snow coverage is required to ski the terrain covered by the snowmaking infrastructure. See Figure III-4 for a snowmaking coverage map.

## E. Existing Guest Services Facilities

### 1. Space Use Analysis

Skier services are offered in four primary locations within the base area of Mount Sunapee:

- The Spruce Lodge, constructed in 1962, and is in good condition. The lodge is approximately 26,300 square feet in size, and houses a restaurant, 635 indoor and 200 outdoor seats, a bar/lounge, restrooms, guest service facilities, ski school, rentals, retail sales, ticket sales, public lockers, administration and storage.<sup>3</sup> Adjacent to the Spruce Lodge is the Ski Patrol building, housing First Aid/Ski Patrol as well as the Ski School and Ambassador locker rooms.
- The Sunapee Lodge, located at the west end of parking lot #1, was constructed in 1999. The lodge is approximately 24,800 square feet, and houses a restaurant with 590 indoor seats, ticket sales, public lockers, retail sales, restrooms, administration, and storage.
- The Learning Center, a 5,300-square foot building constructed in 2003 as the primary location for children’s ski school programs and daycare.
- The Alpine Racing Competition Center, a 1,849-square foot building constructed in 2004 and expanded with a 1,554-square foot addition in 2013. The Center is the primary location for the participants in the Mount Sunapee Alpine Racing Program.

On-mountain services are provided in the Summit Lodge. The 6,275-square foot building was constructed in 1963, The lodge houses food service and restrooms, and has 191 indoor seats.

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<sup>3</sup> For the purposes of this discussion, Spruce Lodge includes the adjacent rental shop.

## Space Use Planning

To provide a balanced resort experience, sufficient guest service space should be provided to accommodate the existing resort CCC. The distribution of the CCC is utilized to determine guest service capacities and space requirements at base area and on-mountain facilities. The CCC should be distributed between each guest service facility location according to the number of guests that would be utilizing the lifts and terrain associated with each facility.

*Service functions include:*

Restaurant Seating: All areas designated for food service seating, including restaurants, cafeterias, and brown bag areas. Major circulation aisles through seating areas are designated as circulation/waste, not seating space.

Kitchen/Scramble: Includes all food preparation, food service, and food storage.

Bar/Lounge: All serving and seating areas designated as restricted use for the serving and consumption of alcoholic beverages. If used for food service, seats are included in seat counts.

Restrooms: All space associated with restroom facilities (separate women, men, and employees).

Guest Services: Services including resort information desks, kiosks, and lost and found.

Adult Ski School: Includes ski school booking area and any indoor staging areas. Storage directly associated with ski school is included in this total.

Kid's Ski School: Includes all daycare/nursery facilities, including booking areas and lunchrooms associated with ski school functions. Storage and employee lockers directly associated with ski school are included.

Rentals/Repair: All rental shop, repair services, and associated storage areas.

Retail Sales: All retail shops and associated storage areas.

Ticket Sales: All ticketing and season pass sales areas and associated office space.

Public Lockers: All public locker rooms. Any public lockers located along the walls of circulation space are included, as well as the 2 feet directly in front of the locker doors.

Ski Patrol/First Aid: All first aid facilities, including clinic space. Storage and employee lockers directly associated with ski patrol are included in this total.

Administration/Employee Lockers & Lounge/Storage: All administration/employee/storage space not included in any of the above functions.

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Enough space should be provided to accommodate the existing resort CCC of 4,820 guests per day. Table 7 shows the size and placement of all existing visitor services at Mount Sunapee. Based upon a CCC of 4,820, Table 8 compares the current space use allocations of the visitor service functions to industry standards for a resort of similar size and market orientation as Mount Sunapee.

**Table 7. Space Use Analysis—Resort Total - Existing Conditions**

Service Function	Existing Total (sq. ft.)	Recommended Range (sq. ft.)	
		Low	High
Ticket Sales/Guest Services	3,250	1,950	2,390
Public Lockers	580	3,250	3,980
Rentals/Repair	2,825	3,900	5,210
Retail Sales	2,447	2,730	3,340
Bar/lounge	1,340	3,420	4,180
Ski School	2,927	1,740	2,120
Daycare/Nursery	1,000	3,470	4,240
Restaurant Seating	20,497	13,970	17,080
Kitchen/Scramble	5,875	4,190	5,120
Rest rooms	3,035	3,140	3,840
Ski Patrol	2,100	1,570	1,920
Administration	3,888	2,280	2,780
Employee Lockers/Lounge	1,320	1,140	1,390
Mechanical	1,748	1,260	1,900
Storage	4,412	2,100	3,170
Circulation/Waste	9,775	5,050	7,600
<b>TOTAL SQUARE FEET</b>	<b>67,019</b>	<b>55,160</b>	<b>70,260</b>

*Notes:*

Spruce Lodge includes Rentals building

Rentals represent 20% of existing CCC for skis and 7% for boards (880 skis and 330 boards, PLUS 140 skis and 42 boards in the Learning Center).

Equipment used by cell tower operation stored in Storage/Mechanical space (approx. 1,200 square feet) in the Summit Lodge is not included in this analysis.



## F. Food Service Seating

Food service seating at Mount Sunapee is provided at the base area in the Spruce Lodge and Sunapee Lodge, and on-mountain at the Summit Lodge. There is a total of 1,416 seats available to skiers.

A key factor in evaluating restaurant capacity is the turnover rate of the seats. A turnover rate of three to five times is the standard range utilized in determining restaurant capacity. Sit-down dining at ski areas typically results in a turnover rate of three, while “fast food” cafeteria style dining is characterized by a higher turnover rate. Furthermore, weather has an influence on turnover rates at ski areas, as on very cold or snowy days skiers will spend more time indoors than on mild, sunny days. Due to frequent cold and inclement weather, an average turnover rate of 3 was used for the Base Area and 3.5 at the Summit Lodge.

The following table summarizes the seating requirements at Mount Sunapee, based on a logical distribution of the CCC to each service building/location.

**Table 8. Existing Food Service Seating Recommendations (square feet)**

	Base Area	Summit	Total
Lunchtime Capacity (CCC + 5% non-skiing guests)	3,881	1,180	5,061
Average Seat Turnover	3	3.5	
Existing Seats	1,225	191	1,416
Required Seats	1,294	337	1,631
Difference	-69	-146	-215
Existing Seating Capacity	3,675	669	4,344

*Notes:*

Counts include indoor seating only. There are approx. 200 outdoor seats at Spruce Lodge and 56 and Summit Lodge.

Base area seats = 635 at Spruce Lodge and 590 seats at Sunapee Lodge.

There is a deficiency in seating capacity of 215 seats. The seating shortage is somewhat mitigated by the children’s lunches provided in the Learning Center, and by the fact that outdoor deck seating is available at the Spruce Lodge and the Summit Lodge. However, as the ski area is upgraded, additional food service seating should be provided.

## G. Parking and Roads

Total parking capacity must be balanced with the CCC. All skiers come to Mount Sunapee in cars or buses and park in the day-skier parking areas. No overnight accommodations are available at Mount Sunapee. Three parking areas exist in the base area. Lots #1 and #2 are paved, and Lot #3 is gravel.

**Table 9. Existing Parking Recommendations**

Building/Location	Multiplier	Base Area	Total
CCC plus non-ski guests	5%		5,061
Percent parking at portal		100%	
Number parking at portal		5,061	5,061
<b>Net number requiring parking</b>		<b>5,061</b>	<b>5,061</b>
Number of guests arriving by car	95%	4,808	4,808
Number of guests arriving by charter bus	5%	253	253
Required car parking spaces	2.70	1,781	1,781
Required charter bus parking spaces	35	7.2	7
Equivalent car spaces (1 bus=4.5 car)	4.5	32.5	32.5
Required employee car parking spaces	4%	193	193
Total required spaces		2,006	2,006
Existing parking spaces		2,130	2,130
Surplus/Deficit		124	124

*Notes:*

Assumes increase in bus business from 7 to 12 buses on busy days.

Existing parking: Lot 1 = 545 cars, Lot 2 = 510 cars, Lot 3 = 775 cars, Beach = 300 cars

Based upon a CCC of 4,820 skiers, there is currently a surplus of day-skier parking. This surplus is due to the inclusion of the State Beach parking spaces, which are used on busy days as overflow parking for guests and employees. Due to the long walking distance, Mount Sunapee runs a shuttle service from the State Beach (when it is in use) and Lot 3 to Sunapee Lodge. As the mountain capacity increases additional and more proximate parking would need to be provided.

## H. Summer Adventure Park

The following summer activities are currently offered at the Adventure Park. The activities are designed to appeal to a broad cross-section of guests with recreational activities for all age groups, skill sets and price points. The existing activities were developed with great care to preserve the essential character of Mount Sunapee. Both the type of activities and their locations were carefully considered to fit into the existing Mount Sunapee operations and to appeal to guests.

The Base Area Existing Conditions map (Figure II-3) shows the location of the Adventure Park activities.

***Canopy Zip Line Tour:*** The Canopy Zip Line Tour (CZLT) is in the woods at the South Peak area. There are eight (8) different zip line stages and other features such as aerial bridges and rappels from a high tree platform to a lower tree platform. The final stage ends behind the Adventure Park Welcome Center Building with a rappel from the final aerial platform down to ground level. Guests are encouraged to make reservations for a specific day and time for their canopy tour experience due to the low daily capacity.

***Aerial Challenge Course:*** The Aerial Challenge Course (ACC) is in the woods at South Peak adjacent to the base terminal of the Clipper Ship Quad chairlift. The ACC is a ropes challenge course featuring four (4) layouts of differing skill levels that progress from novice to intermediate to advanced.

***Mountain Bike Trails:*** Mount Sunapee has a network of Mountain Biking trails in the South Peak area that are designed to appeal to families. The Clipper Ship Quad chairlift has been fitted with special bike racks for transporting mountain bikes uphill to the start of the trail network. Mount Sunapee built a modular "Pump Track" for younger kids in the corner of Parking Lot 1, located in the corner of parking lot 1 near the Adventure Park. The Pump Track features are made of wood and are stored away for winter so that the full capacity of the parking lot is available for winter operations.

***Disc Golf:*** An 18-hole Disc Golf Course has a layout that features holes that traverse ski trails and holes that are in the woods on the western side of the South Peak area. Disc Golf rental equipment is available in the Mount Sunapee Adventure Center.

***Interpretive Hiking Trails:*** Mount Sunapee operates and assists with maintenance of a network of Interpretive Hiking Trails in collaboration with the Upper Valley Trails Alliance. Guests may hike on the Interpretive Hiking Trails free of charge, and they can enter the walking trail network at any location by foot. Guests may choose to ride uphill on the Clipper Ship Quad chairlift and start at the top of the Interpretive Trail for a small fee. Sections of the hiking trails that do not cross ski trails may become part of the snowshoe trail network in the winter. Hiking trails which cross ski trails will be closed in the winter.



***Miniature Golf:*** Mount Sunapee operates an 18-hole Miniature Golf course at the base of the South Peak ski trails near the Clipper Ship Quad chairlift. Landscaping for the Miniature Golf Course is perennial plants complemented by three small scale model wooden replicas of the Lake Sunapee lighthouses. Man-made snow covers the course during the ski season.

***Mining Sluice:*** Mount Sunapee operates a “Mining Sluice” from the Cold River Mining Company for children from ages 4 to 12. The children purchase small bags of mining material and use a screen box in the water sluice to find gemstones and fossils.

***Climbing Wall/Gravity Jump-Air Bag:*** Mount Sunapee operates a Climbing Wall, located adjacent to the Aerial Challenge Course in the South Peak ski trails area.

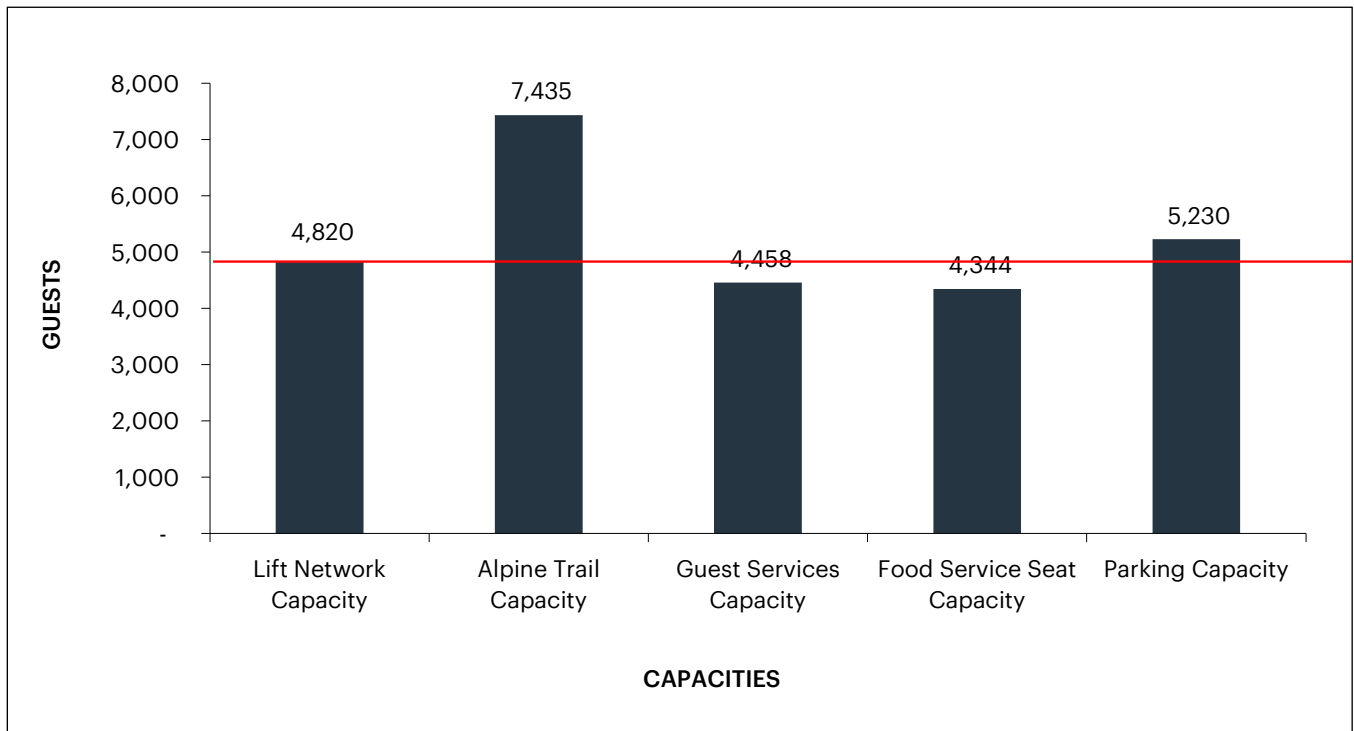
***Kids Mountain Adventure Camp:*** Mount Sunapee offers a “Kids Mountain Adventure Camp” that operates Monday through Friday from June 24th through August 23rd. The camp is a “day camp” for children ages 5 to 12 years old. The Camp Director oversees a program of age-appropriate activities for the children which includes use of the Adventure Park as well as nature programs on the mountain.

***Archery:*** A 3-D Archery Course operates with fifteen (15) 3-D animal targets located in a secluded area in the South Peak Adventure Park. The course was laid out in accordance with guidelines published by the National Field Archery Association.

# I. Resort Balance and Limiting Factors

The overall balance of the existing ski area is evaluated by calculating the capacities of the resort’s various facilities, as compared to the resort’s CCC. The existing capacities are shown in Chart 2.

**Chart 2. Resort Balance – Existing Conditions**



Sunapee’s base area and on mountain facilities are out of balance with resort’s CCC. The lower food service seating capacity is reflected in longer wait times at restaurants during the busy lunchtime rush. Parking capacity seems adequate with the ability to park approximately 5,230 guests, however 750 of those guests are having to park remotely at the State beach parking area and shuttle to the mountain. On the busiest days parking is an issue even with the overflow beach lot.

## CHAPTER THREE

# Upgrade Plan

The Upgrade Plan for Mount Sunapee reflects the findings of the existing facilities analysis. The purpose of the plan is to produce a guide for ski area development that ensures the greatest practical and profitable use of the existing lands while remaining sensitive to the environment. The goal of the plan is to produce a high-quality experience throughout the recreational area. The Upgrade Plan is shown in Figure III-1.

## A. Upgraded Lift Network

The lift upgrading plan remains similar to what was proposed in the 2014-2019 MDP. The plan calls for the installation of five new, relocated, and/or upgraded chairlifts, two new carpet conveyor lifts and a telecord surface lift.

- The existing North Peak Triple would be upgraded to a quad chairlift to increase the uphill capacity from the main base area.
- The existing Spruce Peak Triple would be upgraded to maintain the capacity of that area in the absence of the removed Duckling Double.
- A new chairlift would be installed in an alignment from the bottom area of the Sunbowl chairlift area to the top of the North Peak area and is referred to as the Cataract Triple chairlift. This would allow for improved circulation and will open new ski terrain under that lift.
- The Sunapee Express Quad chairlift would be upgraded to an Express 6-Passenger lift or a combination-lift.
- A new high-speed express chairlift would be built in what is called the West Bowl area to service the proposed new ski terrain on the western slopes of the mountain. An additional carpet lift would be built at the base of that lift for beginner skiers.

It is possible that some of the existing chairlifts that are in good condition could be reused in some of these lift alignments, such as the North Peak Triple being relocated to become the Cataract Triple.

Two lift-related projects are newly proposed in this MDP: upgrading Sunapee Express to a six-person lift (with possible gondola cabins) and a rope-tow surface lift (a telecord) to provide a more convenient connection between Parking Lot #2 and the Spruce Lodge. The remaining lift projects are previously approved.

**Table 10. Lift Specifications – Upgrade Plan**

Lift Name, Lift Type	Vertical Rise (ft)	Slope Length (ft)	Avg. Grade (%)	Hourly Capacity (pph)	Rope Speed (fpm)	Carrier Spacing (ft)	Lift Maker/ Year Installed
Sunbowl Quad/DC4	1,058	4,292	26%	2,400	1,000	100	Poma 1992/2014
Spruce Quad/C4	417	1,940	23%	2,400	425	43	Doppelmayr/1985
North Peak Quad/C4	965	3,254	31%	2,400	470	47	Old Sunbowl Quad
Sunapee Express/DC6	1,402	6,056	24%	3,000	1,100	132	Upgraded
Piggyback/HT	34	300	14%	400	200	30	Borer/1994
Clipper Ship Quad/C4	374	1,814	19%	1,600	425	64	Poma/2000
Boardwalk/RT	30	200	13%	250	100	24	Bruckschlogl/1997
Little Carpet/C	8	90	9%	400	50	8	Bruckschlogl/2000
Flying Carpet/C	48	360	17%	800	100	8	Bruckschlogl/2002
Cataract/C3	571	1,947	31%	1,800	450	45	Proposed
Middle Carpet/C	14	130	10%	800	100	8	Carpet/2011
West Bowl/DC4	1,082	5,186	21%	2,400	1,000	100	Proposed
West Bowl Carpet/C	25	250	10%	800	100	8	Proposed
Telecord/RT	15	1,000	2%	600	150	15	Proposed

*Notes:*

Upgrades to Spruce Quad and North Peak Quad, and the installation of Cataract are approved through the 2005 and 2009 MDPs but have not yet been implemented.

The two proposed lifts for West Bowl expansion were accepted in 2015.

C3 = fixed-grip triple chairlift / C4 = fixed-grip quad chairlift

DC4 = detachable four-passenger chairlift / DC6 = detachable six-person chairlift

HT = handle-tow surface lift / RT = rope-tow surface lift / C = carpet

## B. Upgraded Ski Terrain Network

The goal of the ski terrain upgrading program is to allow for better utilization of the existing terrain, as well as provide some new, more varied terrain. Mount Sunapee plans to construct several new trails, including new terrain in the Ridge trails area, the new Cataract run, a new intermediate trail in the South Peak learning area, a new terrain park trail, and the West Bowl terrain. This will add approximately 105 acres of additional terrain to Mount Sunapee’s developed trail network (217 acres), for a total of 322 acres.<sup>4</sup> Additionally, lighting for night skiing is proposed on several runs in the South Peak, North Peak, and Spruce (as shown in Figure III-1).

### 1. Trail Widening

Proposed terrain improvements include the widening of the Williamson and Stovepipe trails, widening and extending Paradise, widening Upper and Lower Blast Off, Pipeline and Lift Line trails.

### 2. New Trail Development

Additional terrain includes the construction of the Upper Outer Ridge run, J Lift/Cataract run, and two new trails between Upper Ridge and Lower Blast Off (New Ridge, Upper Ridge). The Upgrade Plan also proposes a new terrain park trail between the Elliot Slope and Pipeline trail, and an additional lower intermediate trail in the South Peak area.

The new Cataract run would provide more advanced intermediate level skiing as well as providing better circulation. The new trails in the Upper and Outer Ridge area would create more intermediate level terrain and allow better utilization of the western side of the existing mountain.

The West Bowl expansion plans include a new beginner area, two new low intermediate runs, two new intermediate runs, and one new advanced intermediate level runs, for a total of approximately 56.2 acres of new skiing when all trails are built.

### 3. Trail Reconfiguration and Regrading

The Upgrade Plan

includes proposed regrading projects on Beck Brook, Portage, Lower Ridge and Lower Blast Off. These grading projects remove steep sections allowing the trails to be true novice ski runs, facilitating progression for beginner/novice skiers between the South Peak terrain and the more difficult summit trails.

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<sup>4</sup> There are 17 acres of existing glades in addition to the 217 acres of developed trail network. The upgrading program adds 105 acres of proposed developed terrain. This takes the total skiable acreage from 234 acres (existing conditions) to 339 acres (upgrading program).



**Table 11. Terrain Specifications – Upgrade Plan**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Beck Brook	2,019	1,848	171	1,008	75	1.7	17%	30%	Novice
Bonanza	2,691	2,143	548	2,365	133	7.2	24%	38%	Intermediate
Byway	2,135	1,938	197	1,192	108	2.9	17%	28%	Low Intermediate
Calypso	1,542	1,374	168	945	108	2.3	18%	29%	Low Intermediate
Chase Ledges	2,147	1,685	462	2,109	107	5.2	23%	43%	Advanced Intermediate
Chipmunk	2,094	1,321	774	3,817	112	9.8	21%	29%	Low Intermediate
Coconut Grove	1,362	1,295	67	564	257	3.3	12%	17%	Novice
East Side	2,357	2,132	226	1,239	79	2.2	19%	28%	Low Intermediate
Eggbeater	1,660	1,275	385	1,911	175	7.7	21%	32%	Low Intermediate
Elliot Slope	1,672	1,260	412	2,413	116	6.4	17%	35%	Intermediate
Explorer	1,661	1,361	300	2,152	101	5.0	14%	25%	Novice
Fin	1,310	1,295	15	355	74	0.6	4%	8%	Novice
Flip Flop	1,344	1,278	67	498	221	2.5	14%	18%	Novice
Flyway	1,316	1,267	49	1,083	193	4.8	5%	10%	Low Intermediate
Fox Run	2,243	2,036	208	1,731	48	1.9	12%	27%	Low Intermediate
Goose Bumps	2,246	1,621	625	1,944	74	3.3	34%	53%	Expert

**Table 11. Terrain Specifications – Upgrade Plan (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Guster	1,672	1,592	80	795	44	0.8	10%	13%	Low Intermediate
Hansen Chase	1,692	1,323	369	1,595	152	5.6	24%	31%	Low Intermediate
Jet Stream	1,660	1,265	395	2,115	149	7.3	19%	34%	Intermediate
Kartwheel	1,965	1,729	236	888	72	1.5	28%	39%	Intermediate
Kick Back	2,066	1,993	73	307	131	0.9	25%	27%	Low Intermediate
Lemon	1,385	1,335	50	401	121	1.1	13%	15%	Novice
Lifeline	2,405	2,000	405	1,583	154	5.6	27%	35%	Intermediate
Lime	1,346	1,309	37	432	91	0.9	9%	13%	Novice
Lower Blast Off	2,038	1,322	715	3,993	93	8.6	18%	33%	Intermediate
Lower Cataract	1,866	1,666	200	903	105	2.2	23%	36%	Intermediate
Lower Crossover	2,300	2,247	52	351	51	0.4	15%	25%	Low Intermediate
Lower Flying Goose	1,641	1,296	345	1,388	123	3.9	26%	35%	Intermediate
Lower Ridge	1,771	1,316	454	3,004	129	8.9	15%	25%	Novice
Williamson	2,472	1,673	800	5,071	100	11.7	16%	24%	Low Intermediate
Lower Wingding	1,996	1,666	331	1,735	116	4.6	20%	33%	Intermediate
Lynx	2,235	1,306	929	3,151	134	9.7	31%	47%	Advanced Intermediate



**Table 11. Terrain Specifications – Upgrade Plan (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Middle Wingding	2,360	1,996	363	1,462	176	5.9	26%	40%	Intermediate
Old Goat	2,656	2,608	48	359	37	0.3	14%	25%	Low Intermediate
Outer Ridge	2,206	1,642	564	3,753	115	9.9	15%	31%	Low Intermediate
Paradise	1,647	1,485	162	1,195	99	2.7	14%	19%	Novice
Pipeline	1,679	1,260	420	2,108	176	8.5	20%	31%	Low Intermediate
Porky's	2,711	2,633	78	556	48	0.6	14%	36%	Intermediate
Portage	1,624	1,525	99	543	82	1.0	19%	26%	Novice
Promenade	1,334	1,292	43	327	377	2.8	13%	17%	Novice
Promenade Carpet	1,295	1,323	28	168	120	1.5	10%	10%	Beginner
Province	1,661	1,298	363	2,286	122	6.4	16%	28%	Novice
Skyway Ledges	2,690	2,493	197	1,006	80	1.9	20%	37%	Intermediate
Skyway	2,621	2,078	543	2,250	124	6.4	25%	37%	Intermediate
Smooth Sail'n	1,425	1,295	130	930	118	2.5	14%	22%	Novice
Spinnaker	1,598	1,382	215	823	49	0.9	27%	36%	Intermediate
Sundance	2,015	1,866	149	794	107	1.9	19%	29%	Low Intermediate
Sunnyside Down	1,391	1,353	38	396	55	0.5	10%	18%	Novice



**Table 11. Terrain Specifications – Upgrade Plan (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
Sunrise Glade	0	0	0	0	0	0.0	0%	0%	Expert
Toboggan Chute	2,233	2,048	185	1,660	56	2.1	11%	21%	Novice
Upper Blast Off	2,657	2,038	619	2,486	97	5.5	26%	38%	Advanced Intermediate
Upper Cataract	2,199	1,861	338	1,235	118	3.3	29%	39%	Advanced Intermediate
Upper Crossover	2,472	2,426	46	480	37	0.4	10%	11%	Low Intermediate
Upper Flying Goose	2,242	1,641	601	1,815	140	5.8	35%	43%	Advanced Intermediate
Upper Hansen Chase	2,245	2,091	153	793	90	1.6	20%	31%	Advanced Intermediate
Upper Ridge	2,711	1,771	940	5,735	110	14.4	17%	31%	Low Intermediate
Stovepipe	2,604	2,472	132	929	119	2.5	14%	27%	Low Intermediate
Upper Wingding	2,684	2,360	324	1,377	141	4.4	24%	32%	Intermediate
West Side	2,488	2,158	330	1,564	97	3.5	22%	37%	Intermediate
<i>J Lift/Cataract Run</i>	2,245	1,669	576	2,052	160	7.5	29%	49%	<i>Advanced Intermediate</i>
<i>Upper Outer Ridge</i>	2,549	2,065	484	1,823	114	4.8	28%	37%	<i>Intermediate</i>
<i>New Ridge Trail</i>	2,127	1,590	537	2,620	107	6.5	21%	33%	<i>Low Intermediate</i>
<i>Paradise – Extension</i>			115	513	148	1.7	23%	45%	<i>Intermediate</i>
<i>New South Peak Trail</i>			225	1,221	149	4.2	19%	45%	<i>Intermediate</i>

**Table 11. Terrain Specifications – Upgrade Plan (cont.)**

Trail Name	Top Elevation (ft)	Bottom Elevation (ft)	Vertical Drop (ft)	Slope Length (ft)	Avg. Width (ft)	Slope Area (acres)	Avg. Grade (%)	Max Grade (%)	Skier/Rider Ability Level
<i>New Spruce Quad Trail</i>			215	925	111	2.4	24%	31%	<i>Low Intermediate</i>
<i>West Bowl 01</i>	1,848	1,462	386	3,824	84	7.3	10%	20%	<i>Low Intermediate</i>
<i>West Bowl 02</i>	2,020	1,485	535	3,298	96	7.3	17%	36%	<i>Intermediate</i>
<i>West Bowl 03</i>	2,215	1,620	595	2,816	113	7.3	22%	35%	<i>Advanced Intermediate</i>
<i>West Bowl 04</i>	2,345	1,483	862	4,568	125	13.1	19%	31%	<i>Low Intermediate</i>
<i>West Bowl 05</i>	2,529	1,462	1,067	6,177	146	20.7	18%	39%	<i>Intermediate</i>
<i>West Bowl Carpet</i>	1,470	1,460	25	275	218	0.5	10%	12%	<i>Beginner</i>
<b>TOTAL</b>				<b>120,181</b>		<b>321.7</b>			

The following table and chart show the comparison of the existing distribution of terrain by skier ability level with the distribution after upgrading. These exhibits show that the upgraded trail network at Mount Sunapee would accommodate a range of skier ability levels from Beginner to Expert.

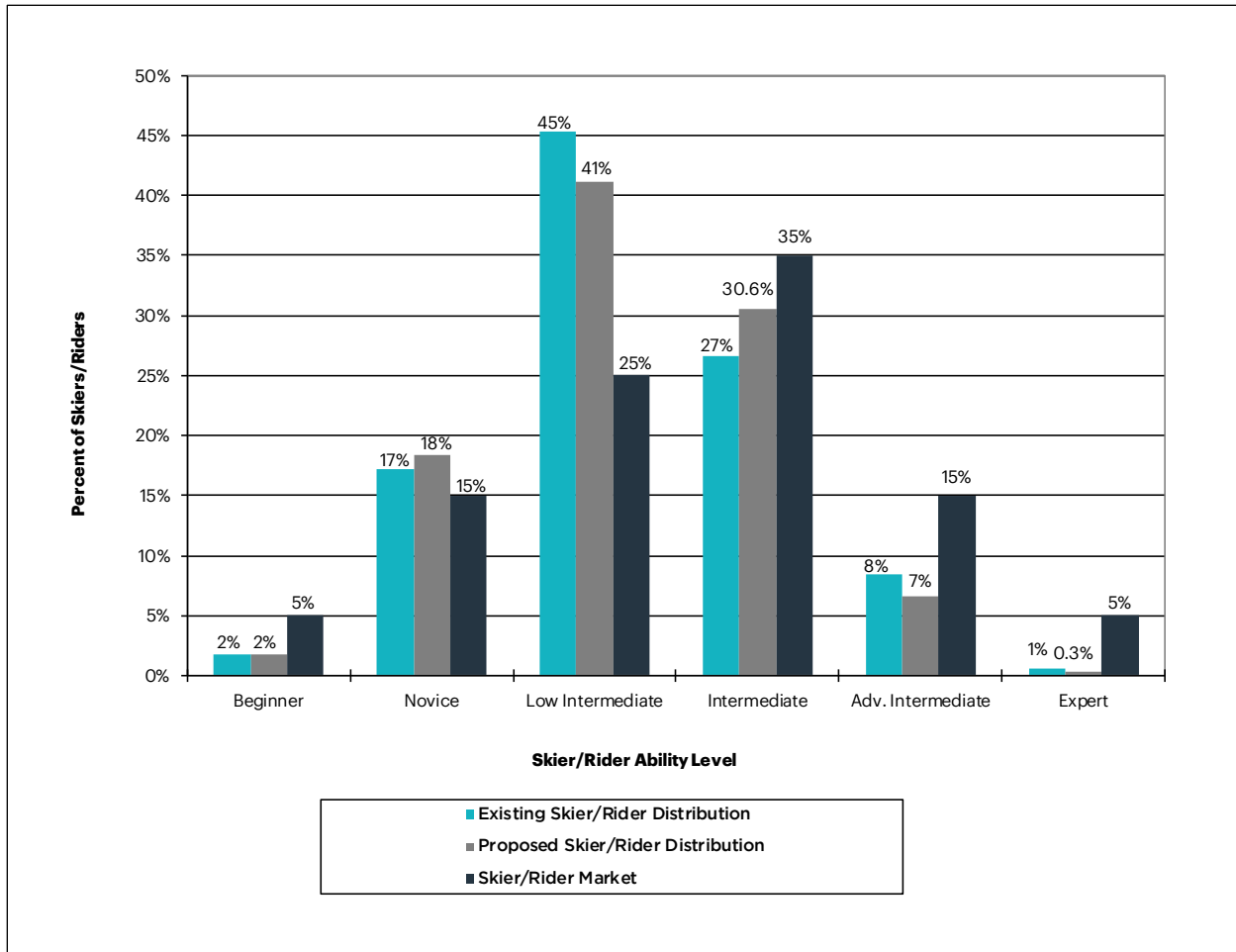
The terrain distribution figures indicate a shortage of Beginner, Novice, Intermediate, Advanced Intermediate, and Expert terrain, and a surplus of Low Intermediate terrain. Again, this surplus of Low Intermediate terrain is a positive attribute for Mount Sunapee and is indicative of the resort's target market and market position as a family-oriented area.

With the addition of the proposed Intermediate and Advanced Intermediate terrain, the distribution figures indicate a slightly closer match between the type of terrain being offered by the Upgrade Plan and the ability level profile of the region's skier market. This will provide for a better-balanced resort. The deficit of Expert level terrain continues to be mitigated by the existing gladed areas, and the new lower level fits with Mount Sunapee's family-oriented market position.

**Table 12. Terrain Distribution by Ability Level - Upgrade Plan**

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	2.0	60	2%	5%
Novice	42.3	635	18%	15%
Low Intermediate	118.5	1,422	41%	25%
Intermediate	109.6	1,096	31%	35%
Advanced Intermediate	46.0	230	7%	15%
Expert	3.3	10	0.3%	5%
<b>TOTAL</b>	<b>321.7</b>	<b>3,452</b>	<b>99%</b>	<b>100%</b>

**Chart 3. Terrain Distribution by Ability Level – Upgrade Plan**



## C. Upgraded Capacity Analysis

### 1. Comfortable Carrying Capacity

The upgrading program for Mount Sunapee increases the CCC of the lift and trail network at Mount Sunapee to about 6,850 guests per day.

**Table 13. Comfortable Carrying Capacity – Upgrade Plan**

Lift Name, Lift Type	Slope Length (ft)	Vertical Rise (ft)	Hourly Capacity (pph)	Oper. Hours (hrs)	Access Role (%)	Misload Stopping (%)	Adjusted Hourly Capacity (pers/hr)	VTF/Day (000)	Vertical Demand (ft/day)	CCC (guests)
Sunbowl Quad/DC4	4,292	1,058	2,400	7.00	10	5	2,040	15,108	13,467	1,120
Spruce Quad/C4	1,940	417	2,400	7.00	0	10	2,160	6,305	8,396	750
North Peak Quad/C4	3,254	965	2,400	7.00	10	10	1,920	12,970	14,421	900
Sunapee Express/DC6	6,056	1,402	3,000	7.00	20	5	2,250	22,082	18,034	1,220
Piggyback/HT	300	34	400	7.00	0	20	320	76	850	90
Clipper Ship Quad/C4	1,814	374	1,600	7.00	0	10	1,440	3,770	5,066	740
Boardwalk/RT	200	30	250	7.00	0	20	200	42	1,475	30
Little Carpet/C	90	8	400	7.00	0	20	320	18	310	60
Flying Carpet/C	360	48	800	7.00	0	20	640	215	1,254	170
Cataract/C3	1,947	571	1,800	7.00	10	10	1,440	5,756	13,377	430
Middle Carpet/C	130	14	800	7.00	0	20	640	63	690	90
West Bowl/DC4	5,186	1,082	2,400	7.00	10	5	2,040	15,451	13,647	1,130
West Bowl Carpet/C	250	25	800	7.00	0	20	640	112	909	120
Telecord	1,000	15	600	7.00	100	0	-	0	256	-
<b>TOTAL</b>	<b>26,819</b>		<b>20,050</b>				<b>16,050</b>	<b>81,968</b>		<b>6,850</b>

Notes:

C3 = fixed-grip triple chairlift / C4 = fixed-grip quad chairlift  
 DC4 = detachable four-passenger chairlift / DC6 = detachable six-person chairlift  
 HT = handle-tow surface lift / RT = rope-tow surface lift / C = carpet



## **2. Density Analysis**

The existing densities at Mount Sunapee are at desirable levels. Since significant increases in skier density would decrease the quality of the skiing experience, it is a goal to balance increases in lift capacity with commensurate increases in terrain capacity. The density analysis for the Upgrade Plan at Mount Sunapee is illustrated in Table 14. The last line of the table shows that this goal would be accomplished, with densities remaining at desirable levels.

**Table 14. Density Analysis – Upgrade Plan**

Lift Name, Lift Type	Guest Dispersement					Density Analysis				Density Index (%)
	CCC	Support Facility/Milling (guests)	Lift Lines (guests)	On Lift (guests)	On Terrain (guests)	Terrain Area (acres)	Terrain Density (guests/ac)	Target Trail Density (guests/ac)	Diff. (+/-)	
Sunbowl Quad/DC4	1,120	280	218	146	476	59.5	8	10	-2	80%
Spruce Quad/C4	750	188	180	164	218	29.7	7	11	-4	64%
North Peak Quad/C4	900	225	256	222	197	27.2	7	9	-2	78%
Sunapee Express/DC6	1,220	305	150	206	559	102.1	5	11	-6	45%
Piggyback/HT	90	23	37	8	22	1.3	16	15	1	107%
Clipper Ship Quad/C4	740	185	163	102	290	29.4	10	14	-4	74%
Boardwalk/RT	30	8	7	7	8	1.0	8	27	-19	30%
Little Carpet/C	60	15	21	10	14	0.8	19	30	-11	63%
Flying Carpet/C	170	43	43	38	46	4.4	10	15	-5	67%
Cataract/C3	430	108	120	104	98	8.7	11	6	5	183%
Middle Carpet/C	90	23	32	14	21	1.4	15	15	0	100%
West Bowl/DC4	1,130	283	282	176	389	55.7	7	10	-3	70%
West Bowl Carpet/C	120	48	32	27	13	0.5	26	30	-4	87%
<b>TOTAL</b>	<b>6,850</b>	<b>1,734</b>	<b>1,541</b>	<b>1,224</b>	<b>2,351</b>	<b>321.7</b>	<b>8</b>	<b>11</b>	<b>-3</b>	<b>73%</b>

Notes:

C3 = fixed-grip triple chairlift / C4 = fixed-grip quad chairlift  
 DC4 = detachable four-passenger chairlift / DC6 = detachable six-person chairlift  
 HT = handle-tow surface lift / RT = rope-tow surface lift / C = carpet



## **D. Maintenance Facilities, Utilities, and Snowmaking Coverage**

### **1. Maintenance Facilities**

The resort's maintenance facilities have been renovated since the last MDP and continue to be renovated and possibly expanded as part of on-going maintenance activities. No new maintenance facilities are proposed to be built as a part of this master plan.

### **2. Utilities**

Upgrades to the sewer system include expanding the spray field lines and installing a sewer system for the West Bowl facility.

The new lifts and lift upgrades will require service upgrades in Mount Sunapee's power supply. The existing single phase, 220v service on the Bowl Road will need to be upgraded to 480volt, 3-phase service.

The addition of the West Bowl facility will require installing the water supply to that area. No other upgrades to the resort's water supply system are proposed at this time.

Upgrades to the Summit Area include an extension of existing water lines to reduce the likelihood of freezing and subsequent water-supply interruptions.

### **3. Snowmaking Coverage**

Expansion of the resort's snowmaking system is an important part of the Upgrade Plan. Ensuring a reliable and quality skiing product on the proposed trails is critical to the reputation and development of the resort. In conjunction with the terrain modifications, the installation of snowmaking infrastructure on the proposed ski trails would add approximately 123 additional acres of snowmaking coverage.

Mount Sunapee's currently permitted water rights from the NH-Department of Environmental Services to use water from Lake Sunapee for winter snowmaking operations are sufficient to accommodate the proposed increases in snowmaking coverage for the additional ski trails that are proposed in this MDP.

Both existing and expanded coverage is illustrated on the Snowmaking Plan (Figure III-4).



## **E. Upgraded Guest Services Facilities**

Improved and expanded skier services would be offered at Mount Sunapee upon completion of the upgrading program, accommodating the upgraded resort CCC of 6,850 guests per day. Base area improvements include:

- Renovate and expand Sunapee Lodge
- Renovate and expand the Spruce Lodge
- Renovate and expand the Summit Lodge
- Construct new parking lot #4
- Construct a new base lodge facility with basic skier services in the West Bowl
- Construct a new parking lot in the West Bowl.

This MDP is proposing the addition of three new guest service improvements, two to be located at the base of South Peak and one at Sunapee Lodge. These include:

- Installing a warming yurt
- Renovating Ray’s House and the existing Warming Hut
- Grading the Base Area around Sunapee Lodge to improve wedding & special event access.

### **1. Space Use Analysis**

Based upon the upgraded CCC of 6,850 skiers, Tables 15 and 16 compare the current space use allocations of the visitor service functions to industry standards for a resort of similar size and market orientation as Mount Sunapee.

Existing deficits would be addressed in the proposed expansions of the Sunapee and Summit lodges, and in the proposed new base lodge facility in the West Bowl area. Improvements at Summit Lodge would allow for enhanced food and beverage offerings for visitors throughout the year.

**Table 15. Space Use Analysis—Main Base Area Total - Upgrade Plan**

Service Function	Existing Total (sq. ft.)	Recommended Range (sq. ft.)	
		Low	High
Ticket Sales/Guest Services	3,250	2,360	2,880
Public Lockers	580	3,930	4,800
Rentals/Repair	2,825	5,550	7,400
Retail Sales	3,540	3,180	3,890
Bar/lounge	1,340	4,820	5,900
Ski School	2,087	2,220	2,710
Daycare/Nursery	1,000	4,930	6,030
Restaurant Seating	19,404	21,390	26,150
Kitchen/Scramble	5,875	6,420	7,840
Rest rooms	3,035	4,810	5,880
Ski Patrol	1,510	2,410	2,940
Administration	3,888	3,240	3,960
Employee Lockers/Lounge	2,840	1,620	1,980
Mechanical	1,748	1,810	2,720
Storage	4,412	3,010	4,530
Circulation/Waste	9,775	7,220	10,870
<b>TOTAL SQUARE FEET</b>	<b>67,109</b>	<b>78,920</b>	<b>100,480</b>

**Table 16. Space Use Analysis—West Bowl Base Area Total - Upgrade Plan**

Service Function	Recommended Range (sq. ft.)	
	Low	High
Ticket Sales/Guest Services	420	510
Public Lockers	690	850
Rentals/Repair	-	-
Retail Sales	680	830
Bar/lounge	-	-
Ski School	250	300
Daycare/Nursery	-	-
Restaurant Seating	4,560	5,580
Kitchen/Scramble	1,370	1,670
Rest rooms	1,030	1,250
Ski Patrol	510	630
Administration	-	-
Employee Lockers/Lounge	-	-
Mechanical	260	380
Storage	430	640
Circulation/Waste	1,030	1,530
<b>TOTAL SQUARE FEET</b>	<b>11,230</b>	<b>14,170</b>



## 2. Food Service Seating

The following table summarizes the proposed seating requirements at Mount Sunapee, based on a logical distribution of the CCC to each service building/location.

**Table 17. Upgrade Plan Food Service Seating Recommendations (square feet)**

	Base Area	Summit	West Bowl	Total
Lunchtime Capacity (CCC+5% non-skiing guests)	4,773	1,170	1,250	7,193
Average Seat Turnover	3	3.5	3.5	
Existing Seats	1,225	191		1,416
Required Seats	1,591	334	357	2,282
Difference	-366	-143	-357	-866
Upgrade Seating Capacity	4,773	1,170	1,250	7,193

*Notes:*

Counts include indoor seating only. There are approx. 200 outdoor seats at Spruce Lodge and 56 at Summit Lodge. Base area seats = 635 at Spruce Lodge and 590 seats at Sunapee Lodge.

As shown in Table 17, given the upgraded CCC of 6,850 there is a deficiency in the existing seating capacity of 866 seats. As the ski area is upgraded, this deficit could be addressed through additional food service seating at both the Spruce and Sunapee Lodges, at the on-mountain Summit Lodge and in the new West Bowl Lodge. Additionally, seating continues to be provided within the Learning Center for program participants’ lunches, and on fair weather days at the Spruce and Summit lodges’ outdoor decks.

## F. Parking and Roads

Total parking capacity must continue to be balanced with the CCC. To maintain this balance Lot #4 would be built in the existing base area, providing an additional 272 parking spaces. A day skier lot would be built at the West Bowl base area, with approximately 450 parking spaces. In addition, a new telecord surface lift running from Lot #3 to the Spruce Lodge would help alleviate the demands on the base area shuttle system.

**Table 18. Recommended Parking – Upgrade Plan**

Building/Location	Multiplier	Base Area	West Bowl	Total
CCC plus non-ski guests	5%	5,898	1,250	7,148
Percent parking at portal		100%	100%	
Number parking at portal		5,898	1,250	7,148
<b>Net number requiring parking</b>		5,898	1,250	7,148
Number of guests arriving by car	95%	5,603	1,188	6,791
Number of guests arriving by charter bus	5%	295	63	357
Required car parking spaces	2.70	2,075	440	2,515
Required charter bus parking spaces	35.00	8.4	1.8	10
Equivalent car spaces (1 bus=4.5 car)	4.5	37.9	8.0	46
Required employee car parking spaces	4.0%	236	25	261
Total required spaces		2,349	473	2,822
Existing parking spaces		2,130	0	2,130
Surplus/Deficit		-219	-473	-692
Proposed spaces		272	450	722
<b>Proposed Total Spaces</b>		<b>2,402</b>	<b>450</b>	<b>2,852</b>

*Notes:*

Assumes increase in bus business from 8 to 10 buses on busy days.

Existing parking: Lot 1 = 545 cars, Lot 2 = 510 cars, Lot 3 = 775 cars, Beach Lot = 300



## **G. Summer Adventure Park**

Mount Sunapee plans to continue its summer Adventure Park improvements as an integral part of its annual operations. The existing activities were developed with great care to preserve the essential character of Mount Sunapee. That same thought process will be used in the next phases of the Adventure Park.

An Alpine Slide has been proposed since the first MDP in 2000 but has not been constructed to date. In the 2014 MDP a Mountain Coaster was proposed as an alternative to the Alpine Slide. This proposal remains pending as it was neither accepted nor denied during the 2016 revised-MDP approval process, and Mount Sunapee continues to propose installing a Mountain Coaster in this MDP.

Other proposed activities in the summer Adventure Park include the construction of additional archery lanes, summer tubing lanes, and continued development of Mountain Biking trails, as described in the 2011 Summer Recreational Program Proposal.

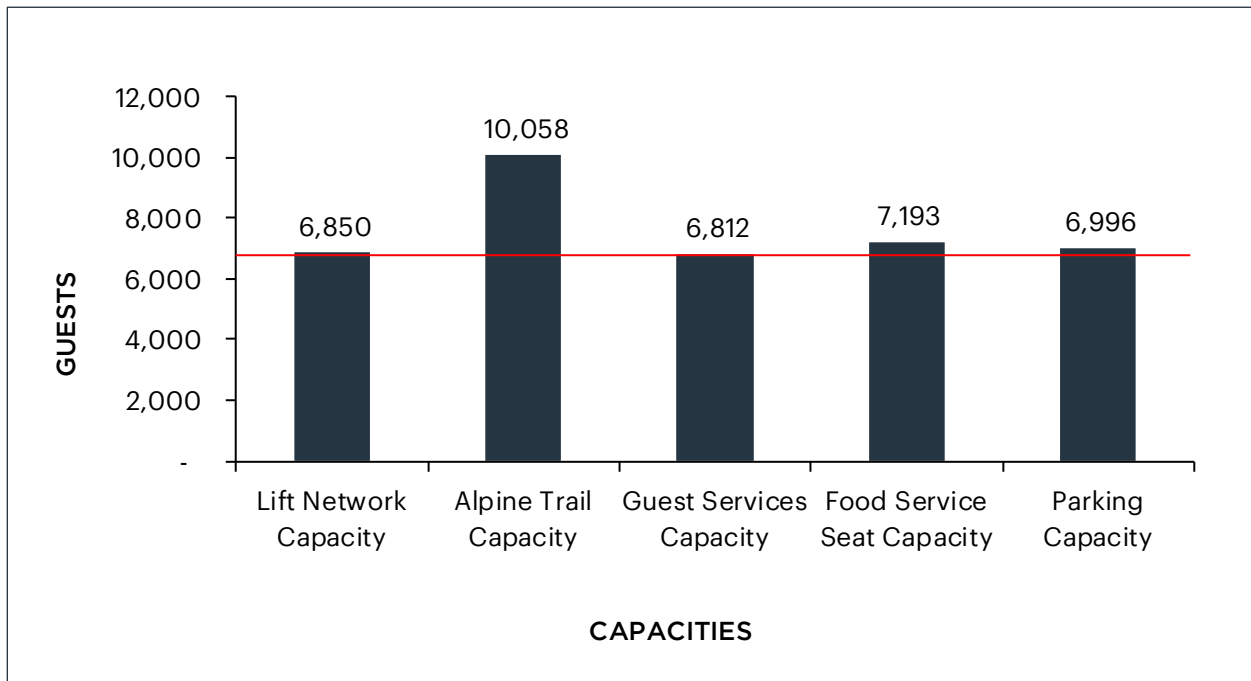
The locations of summer activities are illustrated in Figure III-5.

It is again noted that over the next five years, minor improvements to the Adventure Park or to other Mount Sunapee's facilities may be proposed in the Annual Operating Plans.

## H. Resort Balance and Limiting Factors

The overall balance of the ski area is evaluated by calculating the capacities of the resort’s various facilities, as compared to the resort’s CCC. The above discussed capacities are shown in Chart 4.

**Chart 4. Resort Balance – Upgrade Plan**



As the chart illustrates, skier services space, restaurant seating, and parking capacity would be improved with the upgraded CCC of the ski area, bringing the resort into overall balance. The higher capacity of the trail network is a desirable situation that results in preferable low trail densities.