WHITEFACE

FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT
VOLUME 1

MARCH 2004

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Whiteface Mountain Ski Center
Final Generic Environmental Impact Statement
2004-2009

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EXECUTIVE SUMMARY

Section 816 of the Adirondack Park Agency Act directs the Department of Environmental Conservation (DEC) to develop, in consultation with the Adirondack Park Agency (APA), Unit Management Plans (UMPs) for each unit of land under its jurisdiction classified in the Adirondack Park State Land Master Plan (SLMP). Concurrent with the development of UMPs is the preparation of a Generic Environmental Impact Statement (GEIS), which analyzes the significant impacts and alternatives related to each UMP. The Olympic Regional Development Authority (ORDA), pursuant to its enabling law and agreement with the NYSDEC for the management of Whiteface Ski Center, prepared the unit's initial UMP in 1987, together with an EIS for such action. The 1987 UMP was updated and amended in 1996.

A. UMP Process And Documents

This UMP/GEIS is an update to the 1996 UMP and GEIS for the Whiteface Mountain Ski Center ("Whiteface" or "Whiteface Mountain"). As a Unit Management Plan Update which incorporates by reference the 1996 UMP/GEIS, it satisfies the requirements that such plans contain an inventory of existing resources, facilities, systems and uses, a discussion of management policy, a description of proposed management actions, a discussion of the potential impacts of such actions, a description of mitigating measures and a description of alternative actions which have undergone change since the 1996 document. As an environmental impact statement, it meets the requirements of the State Environmental Quality Review Act (SEQRA), which are similar to those for UMPs, as well as requirements unique to SEQRA, such as a discussion of growth inducing aspects.

The preparation, review and approval of the UMP require compliance with SEQRA. The SEQRA aspects of this document are presented as a GEIS. A GEIS may be used to assess the environmental effects of a sequence of actions contemplated by a single agency or an entire program or plan having wide application [6NYCRR 617.15(a)(2) and (4)]. They differ from a site specific EIS in that it applies to a group of common and related activities which have similar or related impacts. It is the intent of this GEIS to provide sufficient, site-specific information for all new actions proposed in this UMP. Generally, no additional SEQRA analyses are anticipated to be required for proposed new actions in this UMP, provided that such actions are carried out in accordance with the recommendations of this document. As a GEIS, the document takes a hard look at all of the projects and activities contemplated by this GEIS. However, as individual actions are implemented, if permits or approvals are required, additional environmental review will occur to determine if any environmental impacts exist that have not been evaluated

in this GEIS. A separate determination under SEQRA will be made for each such project or activity that requires a permit or approval.

In addition to providing specific information on the proposed actions in this UMP, the UMP also discusses and provides information regarding actions that are being contemplated, but are not proposed at this time. These actions are considered "conceptual actions" for the purpose of this UMP. Conceptual actions will require separate SEQRA analyses as part of a UMP amendment or a UMP update. The purpose of including conceptual actions in this UMP is to provide insight into longer range planning and vision for Whiteface and to get preliminary public input which will assure adequate assessment if and when they are eventually proposed.

The UMP and GEIS for Whiteface Mountain Ski Center is composed of two documents, the 1996 UMP/DGEIS and the 2004 Unit Management Plan Update. The 1996 UMP/GEIS is incorporated by reference and consists of two volumes. Volume I is the November 1995 Unit Management Plan and Draft Generic Environmental Impact Statement (UMP/DGEIS), and Volume II is the May 1996 Final Generic Environmental Impact Statement (FGEIS). This 2004 UMP Update consists of this FGEIS and the August 2002 UMP/DGEIS which are collectively referred to as "the GEIS".

The GEIS evaluates the potential impacts of the proposed improvements included in the Whiteface Mountain Ski Center Unit Management Plan Update on the environment and provides supporting documentation for the consideration of the adoption of the Unit Management Plan by the Department of Environmental Conservation in consultation with the Adirondack Park Agency.

A public scoping session was held on October 25, 2001. The UMP/DGEIS was accepted as complete for review by ORDA, as lead agency, on August 19, 2002 and a Public Hearing on the document was held on September 12, 2002.

Following the close of the SEQRA comment period on September 23, 2002 the FGEIS was prepared and includes all substantive comments made on the DGEIS together with responses to such comments. The FGEIS was deemed complete for review by the SEQRA lead agency on March 31, 2004. Notice of its publication has been made public and the FGEIS is under review by all interested and involved agencies and the public. After a minimum ten-day contemplation period the NYSDEC, APA and any other involved agencies will each prepare a written statement of Findings of Fact, which specify potential impacts and mitigating measures, as appropriate. The Findings of Fact form the basis for the DEC adoption of the UMP. After the Commissioner adopts the

Final UMP, the UMP will be filed with the APA.

All volumes of the GEIS are available for review at the following offices: ORDA in Lake Placid, Whiteface Mountain, APA headquarters in Ray Brook, DEC in Ray Brook and Warrensburg, Wilmington Town Hall and the Essex County Planning Department at the Essex County Municipal Center.

B. Whiteface Mountain and UMP Goals

Whiteface Mountain Ski Center is a year-round recreational, day-use resort owned by the State of New York under the administrative jurisdiction of the Department of Environmental Conservation. Whiteface is currently managed by ORDA under an agreement with the DEC. Whiteface is located off NY Route 86 approximately nine miles northeast of Lake Placid, and is in the Town of Wilmington, Essex County, New York.

The facility is classified as an "Intensive Use Area" under the SLMP. Whiteface targets winter sports enthusiasts for downhill skiing. The resort includes 74 downhill trails extending 18 miles, a gondola from the base to the Little Whiteface Mountain summit, nine other lifts, a ski school program, three lodges, a nursery program and a cocktail lounge/restaurant. There are five car and bus parking lots.

The 1996 UMP set out a much needed program of modernization and improvement for Whiteface Mountain. This program was based on a comprehensive master plan for the mountain facilities including a new gondola, chair lifts, and snowmaking improvements. Many of the mountainside facility improvements have been completed, or are well underway or need modification as described in this document. Table 1 that follows, entitled "Status of Actions Discussed in the 2004 UMP," includes 1996 UMP actions and their current status, new proposed actions that are approved under the 2004 UMP Update, and actions that are only conceptual in nature, and not proposed at this time.

The primary motivation behind this UMP Update is to continue implementing and complement the work begun as part of the 1996 UMP with new improvements.

The following specific goals were identified for the upgrade and development program in the 1996 UMP and have been refined in this UMP Update.

1. To continue the planning process for Whiteface that is consistent with the Adirondack Park State Land Master Plan and Article XIV of the NYS Constitution. Whiteface is

quite unique because it is a designated Intensive Use Area within the Forest Preserve that has received special authorization under Article XIV of the NYS Constitution. As an Intensive Use Area, Whiteface's basic management guidelines include providing facilities for intensive forms of outdoor recreation by the public. At the same time, Whiteface development will blend with the Adirondack environment and have minimum adverse impacts on surrounding State lands. A careful approach to enhancements at Whiteface will provide continued opportunity for the public to enjoy a unique experience, gain an appreciation for sensitive development, and expose large numbers of people to the Forest Preserve.

2. To bring all of the facilities into balance in a manner whereby the ski center will comfortably accommodate peak days.

3. To improve the ability of Whiteface to compete in the modern ski industry through optimizing skier visits and revenues providing an attractive venue for year round use. The growth and prosperity of the ski center should be related to the growth and prosperity of the regional economy.

4. To evaluate the current abilities of the ski center to host major alpine events, now and in the future, with particular focus on conformance to Federation International de Ski (FIS) homologation criteria.

5. To create a pleasing, user-friendly environment that enhances the opportunities for generating tourism and other economic stimuli in the region.

6. To develop a UMP that has Management Actions that are consistent with the National Ski Areas Association (NSAA) Environmental Charter.

The development of the 2004 UMP Update follows a logical sequence which includes an update to the inventory of existing conditions, an analysis of potential improvements, and the creation of the proposed plan for new improvements or management actions which is the subject of this UMP Update that complements and builds on the 1996 UMP.

Many of the improvements listed in the proposed UMP are safety-related and pertain directly to present needs of the mountain in terms of customer expectations and the proposed comfortable carrying capacity (CCC) of the mountain. Primarily, the proposed improvements are designed to spread traffic out in order for skiers and riders to experience less congestion on trails, which makes it safer and more enjoyable for all. Excelsior is the only intermediate trail from the top of Little Whiteface. Consequently, it is very busy during weekends and holiday periods. The addition of intermediate terrain

on Little Whiteface and the possible future conceptual Tree Island Pod system will greatly enhance safety and the Whiteface experience.

As a result of the management actions proposed in the 2004 UMP Update, the comfortable carrying capacity (CCC, the number of skiers that can be accommodated at any given time) is expected to increase from 5,070 to 5,640, an 11% increase.

C. UMP Actions

1. New Proposed Actions

The following new improvements and upgrades are proposed in the 2004 UMP Update ("Proposed Actions"):

On-Mountain
1. Terrain expansion
2. Low intermediate terrain on Little Whiteface
3. Terrain park
4. Extreme skiing

Base Area
1. Base Lodge expansion
2. Base area bus drop-off and , parking lot #5
3. Easy Acres expansion
4. NYSEF Training Center

Snowmaking
1. Update snowmaking analysis – evaluate potential need for reservoir
2. Update snow gun inventory

Civil/Infrastructure
1. Drainage improvements

Green Theme
1. Sustainable Slopes Charter
2. Whiteface Wildlife Interpretive Program
3. Environmentally Sensitive Construction

4.
5. Bicknell Thrush Research and Monitoring

Events
1. Trail homologation
2. Definition of events agenda

The above improvements will increase the amount of downhill ski trails on the mountain from approximately 18.06 miles of alpine ski trails to 20.02 miles, or a 1.96 mile increase (below the 25 miles as authorized by the New York State Constitution).

2. Previously Approved Actions

In addition to the above, the improvements identified in the 1996 Unit Management Plan, which remains in effect today, are still valid. Certain of the improvements in the 1996 UMP have been modified and updated in this UMP Update. Many improvements identified in the 1996 UMP have been constructed, while others are under construction or have not been implemented to date. The status of actions in the 1996 UMP is summarized completely in the 2002 DGEIS/UMP Update in Section I.E.

The actions approved in the 1996 UMP/GEIS which remain a part of the 2004-2009 plan include:

1. Base Lodge rehabilitation
2. Easy Acres facilities expansion
3. Extend parking
4. Lift improvements
5. Trail improvements
6. Snowmaking improvements

3. Conceptual Actions

The following actions are conceptual in nature at this time and would require a separate UMP amendment or update and SEQRA review.

1. Cloudsplitter Lodge and associated infrastructure
2. Snowmaking Reservoir
3. Tree Island Pod and Lift M

4. Entrance area improvements and other base area vehicular and pedestrian circulation improvements
5. New Water source for the Base Lodge
6. Creation of new glades and other new trails above 2,800 feet

The following table summarizes all actions (proposed, previously approved and conceptual) included in the 2004 UMP/GEIS.

TABLE 1 STATUS OF ACTIONS DISCUSSED IN THE 2004 UMP

FACILITY	IMPROVEMENTS	CURRENT STATUS
Parking and Access		
Lot #5	An additional parking facility (350 cars) is proposed near the Easy Acres base area.	New Action 2004 UMP Update. See Appendix P.
Bus Drop-off	A bus drop-off area is proposed along the existing access road to the right after the bridge.	New Action, additional planning and permitting may be required.
Entrance and Base Area	Various alternatives to improve the Route 86 access as well as pedestrian and vehicular circulation in the area of the Base Lodge.	Conceptual only; not a proposed action at this time.
Utilities		
Potable Water	An additional source of water should be developed for the Base Lodge area.	Conceptual only; not a proposed action at this time.
	A new source of water will need to be developed for Cloudsplitter Lodge.	Conceptual only; not a proposed action at this time.
Drainage	Culvert No. 2 should be replaced with a single large diameter pipe.	New Action 2004 UMP Update.
	Debris control structures, as depicted in DGEIS Figures IV-20 and IV-21, will be installed upstream from large culverts to prevent potential clogging with debris during flood conditions. Structures will consist of metal grates (typically welded rebar) attached to the upstream ends of the culverts to capture, primarily, woody debris. Debris will be regularly removed after storm events.	New Action 2004 UMP Update.
Sanitary Wastewater	A new wastewater disposal system will need to be constructed for the proposed Cloudsplitter Lodge.	Conceptual only; not a proposed action at this time.

Buildings		
Base Lodge	Improvements to the Base Lodge will include: (a) a larger reception and ticket area (4,000sf. additional space); (b) enclosing the existing deck area to provide additional cafeteria space (2,500 sf.); (c) a second retail shop (replacing 860sf. administration space); (d) the relocation of the ski school operations (replacing 880sf. of locker and ticketing space and adding 770sf.); (e) a VIP room (700sf.) and coffee shop (700sf.) to be established in the relocated ski school space; (f) additional rest rooms (utilizing 750sf. of the retail shop space); (g) an expansion of the ski patrol/first aid space (680sf.); (h) additional offices, storage and conference space for administration (350sf.); (i) the relocation of employee lockers/lounge space to the breezeway storage space (950sf.); (j) an expansion of employee lockers/lounge space, (336sf.); (k) updating the computer ticketing system, creating more efficient sales points; (l) updating the drop-off area to reflect the reception/ticketing area addition.	The 1996 UMP indicated that several changes should be made to the Base Lodge to improve space use and internal circulation. (a) underway (b) not yet started (c) not yet started (d) not yet started (e) not yet started (f) not yet started (g) not yet started (h) not yet started (i) not yet started (j) not yet started (k) underway (l) not yet started
Easy Acres Lodge	The Easy Acres Lodge should be renovated to increase the size of the restaurant facility, kitchen/scramble, restrooms, rentals, ticket sales, storage and administration. An additional building (6,000sf. total) should be constructed to accommodate SkiWee/Drop-in Center functions.	The 1996 UMP indicated that the Kid's Kampus Lodge (recently renamed the Easy Acres Lodge) should be expanded to 10,500 s.f.. Not yet started.
Alpine Training Center (Existing NYSEF Building)	Rehabilitation of the existing Alpine Training Center building, including: improvements to first floor level without increasing floor space; Addition of approximately 960 sf. to the second floor plan; Addition of an approximately 940 sf. conference space to the upper level floor; Improvement to the façade	New Action 2004 UMP Update.

	of the existing building; Providing water and sewer service to the building.	
New NYSEF Training Center Building	Construction of a new building adjacent to the Base Lodge and the Alpine Training Center	New Action 2004 UMP Update
Cloudsplitter Lodge	A new on-mountain restaurant with 355 seats (13,500 sf.) is proposed at the summit of Little Whiteface.	Conceptual only; not a proposed action at this time. See Appendix S for preliminary information.
Mid-station Lodge	The Mid-station Lodge will be relocated approximately 150 feet to the south of its current position.	This action was approved in the 1996 UMP. Not yet started.
Fox Pole Barn	The relocation of the Fox Pole Barn. Double the size of the barn to 3,400sf.	New Action 2004 UMP Update. See Sketch Plan in Appendix O.
Lot 5 Pole Barn	Relocate the Lot 5 Pole Barn to the maintenance facility. Double the size of the barn to 2,400sf.	New Action 2004 UMP Update. See Sketch Plan in Appendix O.
Don Straight's Building	Double the size of Don Straight's building to 720sf.	This action was approved in the 1996 UMP. Not yet started.
New maintenance building	Create an additional maintenance building (1,200sf.) to accommodate two vehicle bays for equipment storage.	New Action 2004 UMP Update. See Sketch Plan in Appendix O.
Ski Lifts		
Lift A	It is recommended that the existing Mixing Bowl lift be upgraded from a double chair to a triple chair.	This action was approved in the 1996 UMP. Not yet started.
Lift B	The existing Bear double chair lift should be replaced with a fixed grip quad chair, and the bottom terminal should be relocated as shown.	This action was approved in the 1996 UMP. Not yet started.
Lifts D and E	The existing Mid-Station Shuttle double chair and the Valley triple chair should be replaced with a high-speed detachable quad (L).	This action was approved in the 1996 UMP. (The new lift was installed summer 2002.)
Lifts G and H	The removal of the Mountain Run lift (H) double chair and the replacement of the Little Whiteface (G) double chair with a fixed grip quad is recommended.	This action was approved in the 1996 UMP. Not yet started.
Lift I	The top terminal of the Freeway double chair should be lowered approximately 60 vertical feet and the lift should be shortened approximately 500 feet.	This action was approved in the 1996 UMP. Not yet started.
Lift J	The beginner Handle Tow should be	This action was approved in the

	replaced with a surface conveyor lift, realigned with the bottom terminal extended to a point where it is more easily accessible.	1996 UMP and has been completed.
Lift M	Relocate a lift or install new lift to service the conceptual Tree Island Pod.	Conceptual only; not a proposed action at this time.
Snowmaking		
Water System Improvements	Reconfigure PH1 Intake	New Action 2004 UMP Update. Engineering Review Underway
	Increase System Pumping Capacity PH 2 Water	This action was approved in the 1996 UMP. Pumping Capacity was increased from 2,400 gpm to 5,100 gpm between 1996-2001. New improvements are proposed to increase capacity to 6,000 gpm.
	Electrical Revisions to achieve 6,000 gpm	This action was approved in the 1996 UMP; same as above.
	Monitoring and Control Revisions	This action was approved in the 1996 UMP, recommendations updated based on current technology.
	PH 1 Water Pressure Increase	New Action 2004 UMP Update.
	PH 3 Water, Electrical Revisions to achieve 6000 gpm	This action was approved in the 1996 UMP. Pumping Capacity was increased from 1,800 gpm to 3,800 gpm between 1996-2001.
	Tree Island Pod Pump House	Conceptual only; not a proposed action at his time.
	New Water Storage Reservoir	Conceptual only; not a proposed action at this time.
Air System Improvements	Replace Existing Rotary Screw Compressors	This action was approved in the 1996 UMP. Two rotary screw compressors replaced between 1996-2001.
	Air-to-Air Aftercooler Repair	New Action 2004 UMP Update.
	Install Additional Cooling Water System	This action was approved in the 1996 UMP. A water cooling tower system and injection pumps were installed to improve cooling.

Mountain Infrastructure	Piping	Piping Upgrades were approved in 1996 UMP and are underway.
	Valve House (VH)	VH Upgrades in conjunction with Piping upgrades were approved in 1996 UMP but has not yet started.
Snowguns and Hose	Fan Guns and Fan Support (10 fan guns)	1996 UMP approved increase in low energy snowgun capacity. Two fan guns were added between 1996-2001.
	Tower Guns (300 tower guns)	1996 UMP approved increase in low energy snowgun capacity. Two permanent mount fan guns were added between 1996-2001 and five are rented annually.
	Hose	This action was approved in the 1996 UMP. Hose is replaced annually as part of ongoing maintenance and is also purchased to facilitate operation of new snowguns.
Ski Trails		
Upper Mountain	(1) The upgrading to occur on the Upper Mountain focuses on the Downhill/FIS trail homologation standards. (2) Trail 3a, Niagara, will be used to connect Upper Skyward (trail 3) to Upper Cloudspin (trail 1). (3) A new 9.8-acre expert glade, Trail 5a, will be constructed in the forest between Paron's Run (trail 5), Excelsior (trail 6), Connector (trail 10) and Upper Cloudspin (trail 1).	Conceptual only; not a proposed action at this time.
Lower Mountain	Selective widening on the Lower Mountain terrain should include Broadway (25), Upper Valley (22) and Lower Valley A (23), Lower Thruway (21), Danny's Bridge (28) and Mixing Bowl (30)	This action was approved in the 1996 UMP and is underway.
	A new trail Fox (31A) will be built between Wolf (31) and Wolf Run (66).	This action was approved in the 1996 UMP but has not yet started.
	A new 5.7-acre intermediate glade (27A) will be built along the northern edge of	New Action 2004 UMP Update.

	Boreen (27). This area will span the entire area between Boreen (27) and Medalist (43).	
	The improvements on the lower mountain consist mainly of the widening of certain low intermediate, and intermediate trails in order to satisfy FIS requirements for Downhill homologation. Routing the Downhill course down Broadway (25), Ladies Bridge (48), and Lower Gap (49), circumventing the mid-station/ mid-mountain lodge intersection is also recommended.	This action was approved in the 1996 UMP but has not yet started.
Little Whiteface	The addition of an intermediate trail (73/73a) from the summit of Little Whiteface.	Approved under June 2001 amendment to 1996 UMP. Portions above 2,800 feet elevation will not occur until after completion of the VINS report and the 2004 field study of Bicknell's Thrush.
	An additional intermediate trail, 12a, will be added, beginning at Approach near the top of Upper Mackenzie.	Conceptual only; not a proposed action at this time.
	Selective widening to Empire (12), Upper Mackenzie (13), Upper Wilderness (15), Upper (18) and Lower Parkway (19) and Upper Thruway (20).	This action was approved in the 1996 UMP. This work is underway. Empire, Upper MacKenzie and part of Upper Wilderness above 2,800 feet elevation will not occur until after completion of the VINS report and 2004 field study on Bicknell's Thrush.
Trail 36a	A new glade (36a) should be constructed in the area between Gold and Bronze.	New Action 2004 UMP Update.
Easy Acres pod (formerly Kid's Kampus)	Selective widening of Bronze (36), Gold (35), Silver (34) and Silver Shoot (40).	These actions were approved in the 1996 UMP, however most but not all improvements have been implemented.
	It is also recommended that a children's snow play area be constructed on the south side of the lodge. A "magic carpet" type of surface conveyor should	This action was approved in the 1996 UMP and has been completed.

	be installed.	
Tree Island pod	This new pod (74 through 83) will be established north of the Summit Quad pod. Situated around a double chair, the trail network will consist of several weaving, intertwined and interconnected narrow (40 – 80 foot wide) expert trails.	Conceptual only; not a proposed action at this time.
Alternative Recreation		
Trails	A 0.7-mile hiking/cross country skiing/snowshoeing trail along the Ausable River on the south side of the base area; 0.5 miles of hiking trails on the north side of the Easy Acres base area; A 2.5-mile hiking loop trail to Bear Den Mountain.	New Action 2004 UMP Update.

D. Implementation of Actions

The improvements identified in this UMP Update are proposed to be accomplished in several phases. ORDA recognizes that implementation may take longer than the planned five years for a variety of reasons. Throughout the course of the development phases, progress evaluations will be conducted annually, work compared with the goals and objectives, and the project refocused as deemed necessary by Whiteface and ORDA. The results of this annual review will be a budget for the next phase of work that can be taken to the appropriate agencies for funding approval prior to the beginning of the work period and an assessment of any additional permitting or UMP revision needs.

The implementation of the proposed UMP Update is governed by a variety of laws and regulations. Article XIV of the State Constitution governs the use and character of State

Lands in the Forest Preserve. The proposed UMP actions on all State Lands at Whiteface Mountain will be conducted in accordance with the provisions of Article XIV as they apply.

The SLMP classifies State Lands in the Adirondack Park Forest Preserve according to their character and capacity to withstand use and sets forth general guidelines and criteria for the management and use of State Lands. The SLMP classifies the Ski Center as an Intensive Use Area. Intensive Use Areas are provided to allow for a significant number of visitors and a high level of use. The SLMP contains a number of management guidelines, including a recommendation that Whiteface be modernized to the extent that physical and biological resources allow. The actions in this UMP are in conformance with the guidelines in the SLMP.

E. Impact Analysis

The following potential impacts have been identified for the actions proposed in the UMP.

1. Vegetation

The construction of the identified 2004 UMP management actions for new ski trails and lifts, widening of existing trails and construction of other improvements will result in the cutting of trees. The amount of tree cutting resulting from the implementation of recommended actions in this UMP has been greatly reduced (over 90% reduction) by changing the status of the Tree Island Pod and the snowmaking reservoir ideas to "Conceptual Only, not currently proposed actions at this time."

This work will be spread out in several phases over several years, as time and budget constraints are measured against the need to maintain the existing ski center components as the first priority. All vegetative cutting in this Intensive Use Area will be conducted in compliance with DEC tree cutting policies and New York State Constitution Article XIV. Less than 1% of the mountain spruce-fir forest would be impacted. However, over 630 acres of this covertype would remain undisturbed within the Intensive Use area alone at Whiteface. This impact to the covertype will not be significant (99+% will remain undisturbed). An even smaller percentage of this covertype would be disturbed in relation to the whole mountain.

2. Water and Wetland Resources

No new or increased snowmaking water withdrawal is proposed in the 2004 UMP over what was approved in the 1996 UMP.

Upgrades to the snowmaking system to increase Whiteface's ability to pump water within the system to various parts of the Mountain are proposed, but these have no effect on snowmaking water withdrawal.

An updated Cooperative Agreement between DEC and ORDA has been signed in November 2003 regarding withdrawal of water from the West Branch Ausable River for snowmaking purposes. It references a water withdrawal system employing a stream improvement device that monitors river discharges in real time, and requires snowmaking water withdrawals to be discontinued as the flows in the river drop below an established threshold. The Cooperative Agreement is attached in Appendix V.

Wetland resources will be avoided to the maximum extent practicable by project components. APA staff will perform field checks prior to construction. If it is determined that jurisdictional wetlands are present, a permit may be required from the Agency.

DEC and ORDA will investigate opportunities to monitor the water quality of the West Branch Ausable River to determine if any impacts are occurring due to the use of ammonium nitrate on selected ski trails to provide safe skiing conditions.

Adequate groundwater resources are available to meet the needs of the Ski Center; therefore, there will be no significant impact to such resources.

For the Mid-Station Lodge an elapsed time meter for the present wastewater pumping units is recommended in the DGEIS to determine loading volume to the present system. After additional consultation between ORDA and NYSDEC it was agreed that metering the water flow into the building is preferred as the method to confirm loading volume to the present system. Any odors at this site are related to operation of the pump and evacuation of the chamber under septic conditions.

Debris control structures, as depicted in DGEIS Figures IV-20 and IV-21, will be installed upstream from large culverts to prevent potential clogging with debris during high flow conditions. Structures will consist of metal grates (typically welded rebar) attached to the upstream ends of the culverts to capture, primarily, woody debris. Accumulated debris will be removed from the structures following storm events to allow unimpeded flow through the culverts during subsequent storms.

3. Soils

This FGEIS contains an updated Draft Construction Stormwater Pollution Prevention Plan (CPPP). The draft CPPP describes those best management practices to be implemented during construction to prevent erosion and sedimentation. The CPPP includes details of specific best management practices produced by the USDA – Natural Resources Conservation Service as well as other practices and materials that have proven to be effective in controlling erosion, particularly on steeper slopes. A discussion of specific erosion control products recently developed for the purpose of establishing vegetation on steep slopes is provided, as well as the specifications for their use.

Expanded Construction Pollution Prevention Plans for specific construction activities will be prepared in accordance with NYSDEC's Phase II stormwater requirements and will be reviewed by NYSDEC prior to being implemented during construction. In accordance with NYSDEC General Permit GP-02-01, these materials will be prepared by a licensed/certified professional and submitted to NYSDEC for review and approval prior to beginning construction. The CPPP to be implemented during construction will also be submitted to the APA for review prior to the initiation of construction activities. As an example, this FGEIS (Appendix P) contains the CPPP prepared specifically for the construction of Lot #5 which is a proposed action in this UMP.

4. Visual Resources

The low elevation of proposed Parking Lot #5 and the building relocations preclude them from being visible from locations removed from the immediate vicinity of the Mountain. Views into Parking Lot #5 from Route 86 will be blocked by the landform (hills) and vegetation that exist on both sides of the entrance road to Whiteface. Placement of the NYSEF Training Center in close proximity to the base lodge and in an area of other existing improvements consolidates building mass and does not increase visibility of this portion of the Ski Center.

Preliminary visual assessments of the conceptual Tree Island Pod are included in (Section XII Errata XII.B , Appendix W). Similar information for the conceptual Cloudsplitter Lodge appears in Appendix S.

5. Fish and Wildlife

This FGEIS, in particular Section 2.04, describes the significant efforts made by ORDA to protect the Bicknell's thrush since the preparation of the August 2002 DGEIS.

No state or federal listed threatened or endangered species will be affected by the project. In order to avoid the potential of impacting nesting Bicknell's Thrush, which is categorized as a species of special concern in New York state, the management of Whiteface has agreed that new trail construction above 2,800 feet in elevation not already approved in the 1996 UMP, including the Tree Island Pod, will be treated only conceptually in this UMP, and that no such new actions will occur until a separate UMP amendment/SEQRA review process has occurred and satisfactorily addressed potential impacts to the Bicknell's thrush and provided measures to mitigate impacts to the maximum extent practicable in accordance with SEQRA.

The management of Whiteface has hired the Vermont Institute of Natural Science (VINS) to complete a study ("the VINS study") and develop a report that will assist with the evaluation of future high elevation ski area development and the development and implementation of measures to mitigate potential impacts to Bicknell's thrush associated with ski trail construction and ski area operation and management.

VINS has studied the ecology and population dynamics of the Bicknell's thrush since 1995 on two Vermont ski areas - the Stowe Mountain Resort (Mt. Mansfield) and Stratton Mountain. VINS is analyzing its extensive data on ski area use by Bicknell's Thrush and will apply its findings as a means to assess potential impacts of the conceptual Tree Island Pod project on Bicknell's Thrush and recommend mitigation measures. Data to be analyzed will include those on movements and behavior, nest site selection, reproductive success, and demography. Findings from Mt. Mansfield and Stratton Mountain will be compared between study areas within the developed part of each mountain and areas that are currently undeveloped for skiing. The VINS report will include recommendations for design, mitigation, and management measures that will minimize both short- and long-term potential impacts to Bicknell's Thrush.

The management of Whiteface has also agreed to implement on-site Bicknell's Thrush field studies, the findings of which will also be used to assess the compatibility of ski area development with the existing thrush population and, where appropriate, to develop measures to mitigate potential impacts to Bicknell's thrush. Section 2 of this FGEIS provides a more detailed description of the tasks that will be taken to address this issue.

The management of Whiteface has also agreed that construction of ski trails above 2,800 feet that are already approved from the 1996 UMP will be delayed until after the completion of the VINS study and the on-site field study work scheduled to be conducted in the spring of 2004. This will allow an opportunity to further evaluate potential

impacts to thrush habitat and, where appropriate, include appropriate mitigation measures.

Additionally, Whiteface management will continue their ongoing cooperative efforts with the Wildlife Conservation Society and with other similar groups interested in the Bicknell's thrush on Whiteface Mountain.

Whiteface management has also already implemented its "Whiteface Wildlife " interpretive program to increase awareness among users of Whiteface facilities of the values and benefits of the New York State Forest Preserve, including the State-designated Bird Conservation Area above 2,800 feet, and of the wildlife at Whiteface Mountain. Components of the Whiteface Wildlife program include providing summertime lift riders with binoculars for use when riding the gondola. The gondola cars will also be equipped with literature and photographs to help identify wildlife, including Bicknell's thrush, while riders make their ascent and descent. Riders will then be able to record their observations on a checklist of observed wildlife that will be available in the lodge. So far, this program focuses on summertime, but it is likely that the Wildlife at Whiteface program will be expanded to include additional wintertime activities to foster appreciation of the Forest Preserve and the wildlife at Whiteface by skiers and non-skiers alike. A brochure describing this program is included in Appendix R of this FGEIS.

6. Transportation

Currently, the entrance to the Whiteface Mountain Ski Center operates at acceptable levels of service during the AM and PM peak hours. With the increase in traffic volumes as a result of the expansion, skiers will experience longer delays during the PM peak hour. Circulation conflicts exist between Route 86 and the Base Lodge. Most significant is the merge of the main entrances and the main access road and the loading area at the Base Lodge.

The UMP Update identifies several measures, such as entrance road improvements near NY Route 86, installing new sidewalks and other similar measures, which will improve vehicular and pedestrian circulation, and may be implemented in the future in combination with others or as stand alone projects.

7. Community Services

There will be some increase in demand for community services such as fire, police, rescue, solid waste and health care. However, the Ski Center presently makes very little

demand on such services and the increase in such demand is anticipated to be small and can be accommodated by the service providers.

8. Local Land Use Plan

The actions in the UMP Update are consistent with local efforts to create a year-round recreation and sports-oriented destination resort. The UMP contains specific actions and commitments to continue cooperation and links between the Ski Center and the community such as the continuance of the ski shuttle bus.

9. Economics

Actions identified in the 2004 UMP Update will have positive economic impacts through direct construction purchases, payroll and through new hires. In addition, new skiers drawn to Whiteface will spend money. All such spending will be positively multiplied throughout the community. According to McKinsey & Company, Final Report to the Marketing Task Force-National Ski Areas Association (January 19, 1989), "For every dollar spent on skiing, another six dollars are spent in the local and regional economies on ski shop purchases, transportation, real estate, lodging, food and drink, and entertainment."

10. Growth Inducing, Secondary and Cumulative Impacts

The proposed UMP is not likely to cause significant growth in the lodging, housing, restaurant and retail sectors. Induced growth is likely to have positive impacts such as the creation of jobs, taxes and spending. The proposed management actions are not anticipated to create any significant secondary or cumulative impacts, but are designed to maintain the number of skier visits and potentially increase the comfortable carrying capacity by up to 11%. This will tend to help stabilize the local economy and job market.

11. Alternatives

The 2004 UMP Update and GEIS considers alternative lift configurations, alternative trail improvements, alternative lodge improvements, alternative parking/circulation improvements, and the No-Action alternative. The discussion covers the feasibility of each alternative.

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I. INTRODUCTION

A. Project Purpose

ORDA, the Olympic Regional Development Authority, is updating and amending the 1996 Unit Management Plan (UMP) for the Whiteface Mountain Resort located in the Town of Wilmington, Essex County, New York. Also contained as a basis for the updated and amended 2004 UMP, is a Generic Environmental Impact Statement (GEIS), which evaluates potential impacts of identified improvements along with an evaluation of viable alternatives. Whiteface Mountain Resort's UMP is in compliance with Section 816 of the Adirondack Park Agency Act as directed by the New York State Department of Environmental Conservation (NYSDEC). This updated and amended UMP satisfies requirements to develop a unit management plan for each unit of land classified under jurisdiction of the Adirondack State Land Master Plan (SLMP) in consultation with the Adirondack Park Agency (APA).

This UMP Update and amendment is a tool used to assess existing natural resources, facilities, lifts, ski trails, management objectives, operations and systems of the Whiteface Mountain Resort (Whiteface). Updated UMP's are to be used as the basis for actions that meet the projected needs of competitive year-round recreational day-use facilities. The GEIS is part of the State Environmental Quality Review Act (SEQRA), which is in compliance with Article 8 of the Environmental Conservation Law. As such, the GEIS fulfills the requirements pertaining to the SEQRA process. The level of site-specific information and impact analysis for the proposed management actions is sufficient to satisfy site-specific SEQRA requirements. Similarly, this document meets thel standards and regulations pertaining to the SLMP.

The GEIS meets the requirements set forth by SEQRA by responding to a list of actions proposed in the UMP Update and Amendment. These actions are further analyzed with regard to significant or adverse environmental impacts. The purpose of a GEIS is to produce a written document that can be used to assess the environmental implications of a broad-based action. In this case, the action involves proposed improvements within the Intensive Use Area boundaries of Whiteface. A unique feature of a GEIS is that it allows the identification and analysis of the cumulative effects of a group of actions or combination of effects from a single action. More specifically, these include the effects ranging from a single action to a group of actions regarding the proposed improvements to Whiteface in terms of ski trails, lifts, facilities and management operations system. As a GEIS, the document takes a hard look at all of the projects and activities contemplated by this GEIS. However, as individual actions are implemented, if permits or

approvals are required, additional environmental review will occur to determine if any environmental impacts exist that have not been evaluated in this GEIS. A separate determination under SEQRA will be made for each such project or activity that requires a permit or approval.

The 5-year UMP Update and Amendment is presented in 5 essential phases to update facilities, lifts, ski trails, management, operations and systems at Whiteface. The primary objective of the UMP Update and Amendment/GEIS is to continue the maintenance and operation of Whiteface at a constant level over the ensuing five-year management period in such a way that will contribute to stabilizing Olympic Region employment, economics, public recreation and governmental administration. Additional objectives include improving facilities that will add to the public carrying capacity, increase user safety, and enhance recreational pursuits. Many of the improvements listed in the proposed UMP are safety-related and pertain directly to present needs of the mountain in terms of customer expectations and the proposed comfortable carrying capacity (CCC) of the mountain. Primarily, the proposed improvements are designed to spread traffic out in order for skiers and riders to experience less congestion on trails, which makes it safer and more enjoyable for all.

The purpose of the UMP Update and Amendment/GEIS is to update the 1996 UMP with regards to the environmental setting, management objectives, and management actions, along with the analysis of the associated environmental impacts of those objectives and actions. This document will provide the foundation for ORDA's management decisions and capital expenditures through the year 2009.

B. Brief Overview

The Whiteface Mountain Resort is a New York State-owned facility operated by ORDA to provide the public with an intensive form of recreation for both the spectator and participant. Host of the 1980 Olympic Winter Games, Whiteface is located just nine miles northeast of Lake Placid. Whiteface provides diverse opportunities for year-round pubic use including competitive and recreational downhill skiing, cross-country skiing, hiking, mountain biking and summer scenic gondola rides.

Whiteface Mountain derived its name from the white anorthositic bedrock exposed on the northern flanks and summit of the mountain. The unique topography of Whiteface is unparalleled in the northeast ski industry with the greatest vertical drop east of the Mississippi;

3,166 feet[1]. The unique terrain accommodates all levels of skiing abilities in this natural and scenic setting. There are a total of 72 trails that are suitable for all skier ability levels from beginner to expert. Snowmaking covers approximately 87% of the trails at Whiteface, or 186 acres. Whiteface has a total of eleven lifts including one gondola, one quad chairlift, two triple chairlifts, six double chairlifts and one pony lift. The mountain mass is characterized by two separate peaks, Whiteface and Little Whiteface, and contains separate, but interconnected, ski terrain on the lower mountain called Kid's Kampus.

C. General Description

1. Location Description

The Whiteface Mountain Resort, located in the Town of Wilmington, Essex County, is approximately nine miles northeast of the Village of Lake Placid on New York State Route 86. The Ski Center rests in the northeastern portion of the Adirondack Park approximately 2 1/2 hours north of Albany and 2 hours south of Montreal (see Exhibit I-1 - Site Location Map). A paved access road leads from Whiteface to Route 86. Route 86 runs northeast/southwest in this general vicinity and connects the Town of Wilmington to the heart of the Olympic Village in Lake Placid. This road also follows the general configuration of the West Branch of the Ausable River.

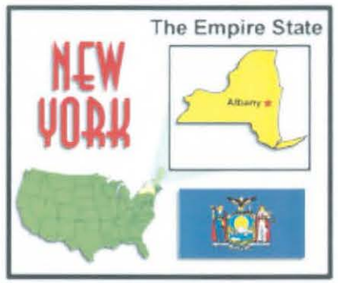
Whiteface is nestled between Route 86 and Whiteface Mountain Memorial Highway (New York State Route 431) located in the Town of Wilmington. Whiteface Mountain Memorial Highway is the highest road in New York State. After skiers leave in the spring, Whiteface Mountain Memorial Highway opens for auto traffic to the summit. This very scenic highway wraps up and around the back of the mountain.

2. Property Description

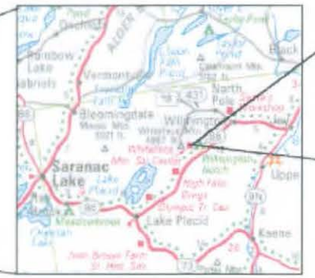
Whiteface Mountain Resort, as identified in the Adirondack Park State Land Master Plan, is classified as an Intensive Use Area. The property covers a total of 2,910 acres. Approximately 7% or 211.4 acres (the slide area is an additional 30 acres) of the site has been developed for ski trails, lifts, lodge facilities, roads and parking. Whiteface is significant in that it is designated as Forest Preserve Land and as such must be managed consistent with Article XIV of the New York State Constitution.

[1] 3,166 feet represents lift serviced vertical drop. The vertical drop from the top of the 'Slides' area (non-lift serviced) is 3,340 feet.

According to the APA, adjacent land use classifications include State and private land. State land classified as Wild Forest is located to the north of Whiteface, while Wilderness is located to the south and west. Some private land uses adjacent to Whiteface are located towards the Hamlet of Wilmington. Such private land uses classified by the APA include Resource Management, Rural Use, Low Intensity Use, and Moderate Intensity Use. The following exhibits provide descriptions of the Whiteface Mountain Resort boundaries and surrounding property.



Adirondack Park



Whiteface Area

WHITEFACE

WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP

the LA group

IZA Engineering & Planning
Ivan Zdrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

TITLE:

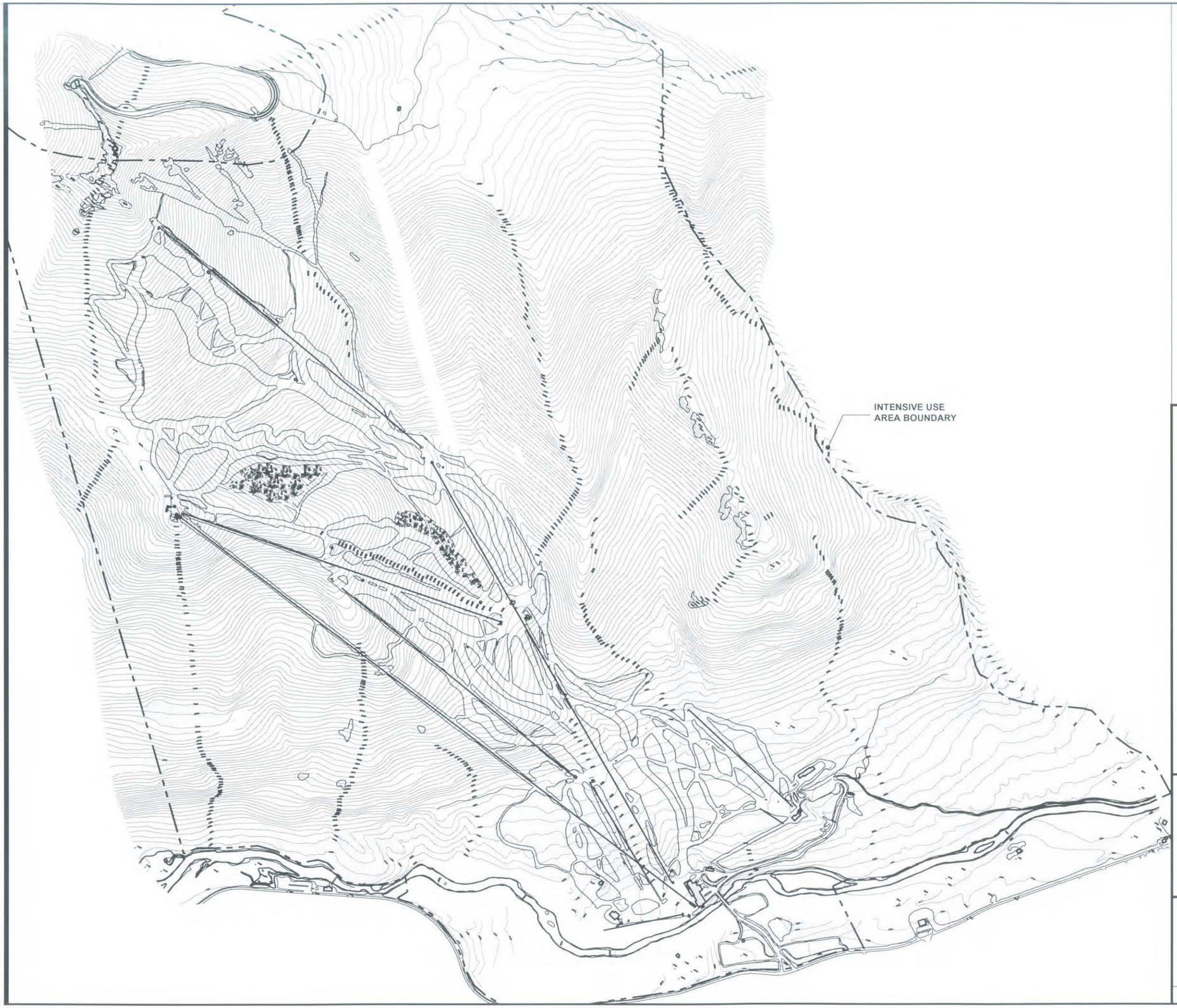
LOCATION MAP

DATE: MARCH 2002

FIGURE #: I-1

PROJECT NUMBER: 01102

FILE: [whiteface]



WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP

the LA group

IZA Engineering & Planning
Ivan Zdrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

600 0 300 600 1200 2400

Scale: 1" = 1200' Contour Interval = 5 Feet

NORTH

TITLE:

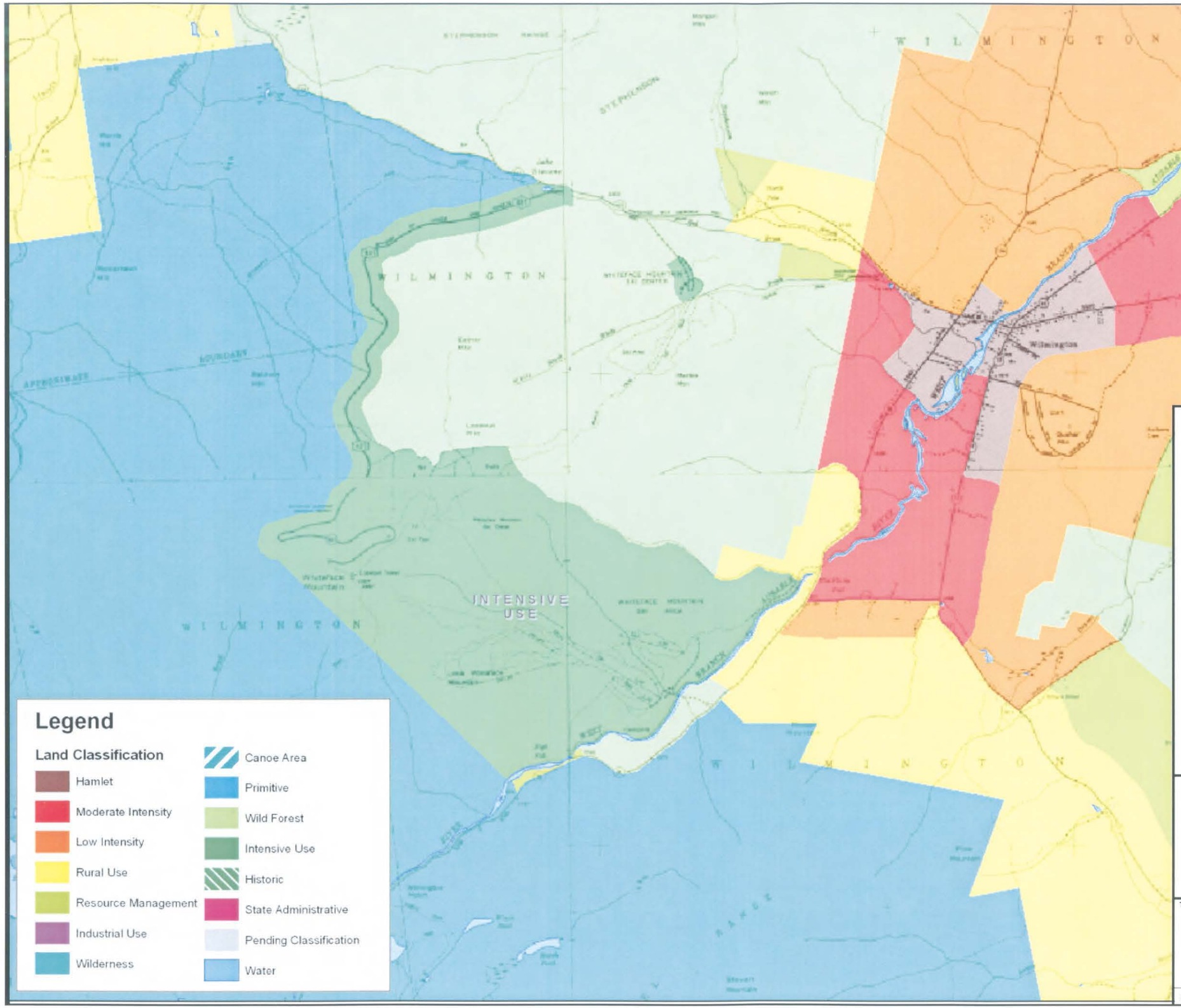
INTENSIVE USE AREA MAP

DATE: MARCH 2002

FIGURE #: I-2

PROJECT NUMBER: 01102

FILE: [whiteface]



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TITLE: ADJACENT LAND USES

DATE: MARCH 2002

FIGURE #: I-3

PROJECT NUMBER: 01102

FILE: [whiteface]

D. Historical Overview

1. Constitutional Amendment

Whiteface Mountain Resort is located on State forest preserve lands and is, therefore, governed by Article XIV of the NYS Constitution (the "forever wild" provision).

Article XIV strictly controls the use of forest preserve lands, allows for no alienation of these lands, and prohibits the cutting or removal of vegetation. Vegetative cutting for the ski trails at the Whiteface Mountain Resort is allowed pursuant to a specific amendment to Article XIV, which allows a specified width and a specified number of linear miles for ski trails on the north, east and northwest slopes of the mountain. This amendment was approved by a State referendum in November 1941 and became effective on January 1, 1942. It allowed for the construction and maintenance of 20 miles of ski trails on the northern, eastern and northwestern slopes of Whiteface Mountain. Additional limitations included that trails be restricted to a minimum of 30 feet wide to a maximum of 80 feet wide. This was amended in 1988 to allow for up to 25 miles of trails with related amendments to allowable trail widths.

Following World War II during the administration of Governor Dewey, development was undertaken on the northeast flank of Whiteface Mountain. This site was used briefly as a ski center then was later abandoned. It currently houses the State University of New York Atmospheric Sciences Research Center.

2. Adirondack Mountain Authority

Governor Harriman signed into law the Main-McEwen bill in 1957 authorizing development of the ski center. Whiteface was officially opened on January 25, 1958 and dedicated to the Mountain Ski Troops of World War II. The Ski Center opened with two chairlifts and has been operating as a recreational area open to the public during seasonal recreation periods. Winter activities include a variety of skiing events, both competitive and non-competitive. Summer uses include hiking and scenic chairlift rides.

The Adirondack Mountain Authority built and operated the Ski Center until 1968. A 1,500-foot T-bar lift was added in 1960 with associated trails. In 1961 snowmaking was extended from mid-station to the top of lift E (#1) and a J-bar was added to the lift facilities. Further extension of snowmaking was made in 1964 on the J-bar

practice slope. Another chairlift was opened in 1966 serving novice trails in the "Olympic Acres" area and lift F (#6) was completed in 1967, rising to the highest elevation of 4,386 feet of any lift in the northeast. Expansion of the Main Lodge was also completed in 1967. Another compressor was added to the snowmaking equipment in 1968 along with additional water capacity from the West Branch of the Ausable River.

3. Department of Environmental Conservation

The State Legislature terminated the Adirondack Mountain Authority in 1968 and transferred authority of the Whiteface Mountain Resort facilities to the NYSDEC beginning on October 1 of that year. The NYSDEC has had a long-term plan to improve its facilities at Whiteface to better accommodate the recreational skier. The facility gradually improved over the years, as funds were made available.

Whiteface has frequently been the site of major international alpine events including the 1971 pre-FISU Races and the 1972 World University Alpine events. The Canadian-American Slalom, Giant Slalom and the United States National Downhill races were held at Whiteface in 1974. The Empire Cup, the Governor's Cup and the Can-Am Finals were held in 1975 and 1976. In 1978, Whiteface hosted the Nor-Am and U.S. National Alpine Championship events. Most recently, Whiteface again hosted the National Alpine Championships in 2003, and in 2004 was host to the US Alpine Junior Olympic Championships.

Beginning in 1976, an extensive construction program was undertaken in order to host the Alpine Events for the XIII Olympic Winter Games. The Main Lodge was expanded and new water and sewer systems were constructed. An additional lodge was also constructed in an effort to serve the Olympic Acres area. Additional buildings were constructed which served the men's and women's downhill and slalom start and finish areas. This included the slalom area on "Mountain Run" and the common finish area for the men's and women's downhill and giant slalom runs. Continuing the 1976 program, a new maintenance shop was built on the eastern portion of the Olympic Acres area while the existing shop was raized to improve the aesthetics of the area. A new snowmaking system was also installed to serve the trails scheduled for the Olympic events. Lift E was rebuilt as a "double-double" lift, Lift G was rebuilt, Lift F was shortened and a surface lift added to reach its former upper

terminal. An additional lift, Lift I, was added to serve the new Giant Slalom "Parkway" trail.

The alpine events of the XIII Winter Olympic Games were staged at Whiteface Mountain during February 1980. Immediately prior to the 1980 XIII Winter Olympics, Whiteface was thoroughly evaluated in an EIS. This EIS did not, however, address the important issue of development beyond the 1980 Winter Olympics.

4. Olympic Regional Development Authority

The New York State Legislature determined and declared in 1981 that there was an immediate need to institute a comprehensive, coordinated program of activities utilizing the optimum year-round operation, maintenance and use of Winter Olympic venues. Article Eight of the Public Authorities Law was amended in 1981 by adding Title Twenty-Eight effectuating the declared policy and creating the "New York State Olympic Regional Development Authority" (ORDA). ORDA currently operates and manages the Whiteface Mountain Resort under an agreement with the NYSDEC. This agreement was entered into on October 4, 1982 pursuant to the Public Authorities Law, Section 2614.

5. Adirondack Park State Land Master Plan

The Adirondack Park State Land Master Plan (SLMP) was adopted in 1971 and provides guidelines for the preservation, management and use of State-owned lands by State Agencies within the Adirondack Park. The Whiteface Mountain Resort is classified under the plan as an "Intensive Use Area." The plan states that the primary management guideline for Intensive Use Areas is to provide the public opportunities for a variety of outdoor recreational pursuits in a setting and on a scale in harmony with the relatively wild and undeveloped character of the Adirondack Park. An intensive use area according to the Adirondack Park State Land Master Plan is defined as follows:

"An intensive use area is an area where the state provides facilities for intensive forms of outdoor recreation by the public. Two types of intensive use areas are defined by this plan: campground and day use areas. (Whiteface is a Day Use Area)

These areas provide overnight accommodations or day use facilities for a significant number of visitors to the Park and often function as a base for use of wild forest, wilderness, primitive and canoe areas."

6. **1987 Constitutional Amendment**

The number of miles of ski trails that may be constructed on the north, east and northwest slopes of Whiteface Mountain were increased by an amendment to Article XIV, effective on January 1, 1988, from 20 to 25 miles. The maximum width of trails was increased from 120 to 200 feet provided that no more than 5 miles can be used in excess of 120 feet width. Currently, there are 18.06 miles of trails. Under this plan, ski trail miles will be increased to 20.02 miles.

E. Status of 1996 Unit Management Plan Update and Amendment

This document, which is a UMP Update and Amendment, proposes to update and amend the 1996 UMP. As it stands today, the 1996 UMP is still in effect. Various improvements have been identified in the 1996 UMP, which, under the present circumstances either have been implemented, are currently being implemented, are planned to be implemented or have been abandoned altogether. Table I-1 identifies the status of improvements that were approved in the 1996 UMP. (Table I-1 below is different from Table 1 in the Executive Summary which includes not only 1996 UMP actions, but Table 1 in the Executive Summary also includes New Actions and Concpetual Actions from this 2004 Update.) Section IV.C of this UMP Update and Amendment identifies SE GROUP's current recommended improvements and, where appropriate, notations are made if the same or similar improvements were approved in the 1996 UMP.

TABLE I-1
STATUS OF 1996 UMP

FACILITY	IMPROVEMENTS	CURRENT STATUS
Parking		
Lot 3	Expand lot 3 by 130 spaces	Has not been implemented
Lot 3	Expand lot 3 by 40 more spaces	Has not been implemented
Lot 3	Expand lot 3 by 230 more spaces	Has not been implemented
Utilities		
Units 1 & 2	Identify and correct electrical problems in Units 1 & 2	Partially implemented (roofs built over units)
Pole Barns	Replace pole barns by maintenance building	Has not been implemented. Current sketch plans are included in this 2004 Update in Appendix O.

FACILITY	IMPROVEMENTS	CURRENT STATUS
Powerlines	Relocate overhead powerlines between poles 18 and 31	Implemented
Electrical system	Complete electrical system improvements	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Mid-station well	Test Mid-station Lodge water well to see if it will handle Mid-station Lodge expansion	Has not been implemented, but may be implemented at a later date
Sewage Treatment – Base Area	Expand sewage treatment facility / Base Lodge	Has not been implemented, but may be implemented at a later date
Sewage Treatment – Mid-station	Expand sewage treatment facility / Mid-station Lodge	Has not been implemented, but may be implemented at a later date
Buildings		
Base Lodge Basement Level	Enclosing the patio and raising the roof-line to provide the kitchen with sufficient storage space	Has not been implemented, but may be implemented at a later date
Area Under Base Lodge	Enclosing the area under the Base Lodge (except for a 25 foot path) to relocate the Ski Shop and Rental Shop	Implemented
Warm-Up Building	Adding a warm-up building, approximately 40' x 40', located at the intersection of Folly's Trail and Cloudspin	Has not been implemented, but may be implemented at a later date
Visitor Lodge	Adding a two-story visitor lodge located on the summit of Little Whiteface	Has been modified and included in the UMP Update and Amendment, but only as a Conceptual Action requiring additional review if and when pursued.
Base Lodge	Architectural evaluation of base lodge	Has not been implemented, but may be implemented at a later date
Entry & Drop-off	Planning to reconfigure existing entry and drop-off	Has been partially implemented and has been modified and included in this UMP Update and Amendment
Main Lodge	Improve/expand space-use and internal circulation of Main Lodge	Has been partially implemented but will be modified and included in the UMP Update and Amendment
Arrival Plaza	Upgrade Arrival Plaza	Has been partially implemented, and has been modified and included in this UMP Update and Amendment
Kid's Kampus	Expand Kid's Kampus Lodge (Kid's Kampus to be renamed Easy Acres)	Temporary Facilities have been added, expansion will be included in the UMP Update and

FACILITY	IMPROVEMENTS	CURRENT STATUS
		Amendment
Mid-station Lodge	Move and expand the Mid-station Lodge	Has not been implemented, but may be implemented at a later date
Ski Lifts		
Lift F	Evaluate lift and make repairs	Implemented
Lift C	Replace and shorten	Implemented
Lift J	Realignment of lift	Implemented
Lift I	Redesign of unload area of lift	Implemented
Lifts D and E	Replace Lift D and E with high-speed detachable quad	Implemented
Gondola	Install a gondola from the Base Lodge to the top of Little Whiteface	Implemented
Lift G	Replace Lift G with a fixed-grip quad	Has not been implemented, will be included in the UMP Update and Amendment
Lift H	Remove lift	Has not been implemented, will be included in the UMP Update and Amendment
Lift B	Realign Lift B and replace with a fixed-grip quad	Has not been implemented, will be included in the UMP Update and Amendment
Lift A	Upgrade Lift A to a triple	Has not been implemented, will be included in the UMP Update and Amendment
Snowmaking		
Little Whiteface and Summit	Improve water capacity to summit and Little Whiteface	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Pumphouse	Replace pumps and upgrade water and air capacity in PH2, PH3 & PH4	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Air system	Upgrade air system- efficiency and capacity	Has been partially implemented, but will be modified and included in the UMP Update and Amendment

FACILITY	IMPROVEMENTS	CURRENT STATUS
Mountain piping infrastructure	Continue improvements to mountain infrastructure	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Air system	Install cooling system for compressed air	Has been implemented
Mountain	Improve water capacity on upper, mid, and lower mountain	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Snowmaking Pond	Assess need for snowmaking pond	Has not been implemented. Hs been included in this UMP Update and Amendment, but only as a Conceptual Action requiring additional review if and when pursued.
Pumphouses	Install new water pumps at PH2, PH3 & PH4	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Mid-station	Review condition of last 6 compressors, install compressors at Mid-station	Has not been implemented, but may be implemented at a later date
Mid-station	Install new centrifugal compressors at Mid-station pump station	Has not been implemented, but may be implemented at a later date
Screw Compressors	Repair air ends of 20,000+ hour screw compressors	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Flow Monitoring of West Branch of Ausable River	Establishing flow monitoring in the West Branch of Ausable River.	Has been implemented
Ski Trails		
Ridge Runner	Improvements to top section of trail	Implemented
Paron's Run	Improvements to top section of trail	Has not been implemented
Boreen	Trail improvements	Implemented
Lift Pods C & J	Widen trails associated with Lifts C & J; Silver, Gold, Bronze, Silver Shoot, Main Street, Runner Up	Implemented
Purchase groomer	Purchase groomer	Implemented (continuous process)
Snow Play	Add Snow Play area	Has not been implemented, but may be implemented at a later date

FACILITY	IMPROVEMENTS	CURRENT STATUS
Lift Pod F	Trail improvements associated with Lift F; Cloudspin[2], Excelsior, Northway, Connector, 4a	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Lift Pods D & E	Trail improvements associated with Lifts D & E; Lower MacKenzie, Thruway, Upper Valley, Lower Valley, Broadway, Danny's Bridge, Calamity Lane, Ladies Bridge, Lower Gap	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Lift Pod G	Trail improvements associated with Lift G; Essex, Northway, Empire, Upper MacKenzie, Upper Wilderness, Mountain Run, Parkway, 19a, 63, 27a	Has been partially implemented, but will be modified and included in the UMP Update and Amendment
Lift Pod B	Trail improvements associated with Lift B; Mixing Bowl, Wolf, 31a	Implemented

F. Management Goals

At the beginning of the UMP Update and Amendment the consulting team met with management of ORDA and Whiteface to establish a clear direction for the planning process. The comments and issues that were raised during the meeting have influenced the recommendations for development alternatives to be addressed over the next five years.

The meeting was conducted by considering the components of a Vision Statement. They are:

PURPOSE - What business are you in and why?
VALUES - Qualities that you will not compromise as you pursue your day-to-day business.
IMAGE - What does the final picture look like when you have achieved your vision?

Listed below are the comments that were given by the management team during the meeting.

PURPOSE: What business is ORDA/Whiteface in?

- Entertainment.
- Outdoor recreation.

[2] Trail improvements on Lower Cloudspin were traded for other trail improvements.

- Service to customers.
- People pleasing.
- Events, competitions.
- Athlete training.

What business are we in and why?

- To provide an economic stimulator/catalyst in region.
- Maintaining the public's investment.
- Preserve the proud Olympic heritage of the region, state and nation.
- Family orientation.
- Provide quality skiing and snowboard training and competitions

VALUES

- A friendly work environment.
- Striving for the best product that is possible.
- Friendly, thoughtful customer service.
- Concern for the environment.
- Cleanliness - facilities, staff, and language.
- Exceed customer expectations.
- Follow through on commitments.
- Participatory management.
- Fun skiing and riding.

IMAGE

- Adirondack – Wilderness image
- Smooth running, well-oiled machine.
- No-hassle entry at main road with clear and attractive signage.
- Good looking, well-run shuttle system.
- Modern lifts visible and well maintained.
- Trails are freshly groomed.
- Base lodge is efficient and attractive.
- Base lodge has clear/grand sense of arrival.
- Turning off the road to enter "someplace different."
- Convenient parking.
- Unfolding entry experience.

- Disney - like welcome center.
- Organized base area services.
- Relaxing, easy pace.
- Not anxious to leave.
- Meet a friendly person at entry.

The following Mission Statement, Vision, and Values appear in Whiteface's employee handbook, and are stated as the "Whiteface Mountain Operational Objectives".

MISSION STATEMENT: To provide an excellent skiing and/or mountain recreation experience and exceptional services for our guests.

VISION: To exceed our guests' expectations in our product and our services. To establish competency and excellence in all mountain operations.

VALUES: Our guiding principles:

1. Honesty
2. Professional attitude and appearance
3. Friendliness
4. Respect for fellow employees and guests
5. Teamwork
6. Loyalty and dedication
7. Willingness to find ways to continually improve
8. Commitment to achieving our goals
9. Concern for safety of our guests and fellow employees.

The following specific goals were identified for the upgrade and development program in the 1996 UMP and have been refined in this UMP Update.

1. To continue the planning process for Whiteface that is consistent with the Adirondack Park State Land Master Plan and Article XIV of the NYS Constitution. Whiteface is quite unique because it is a designated Intensive Use Area within the Forest Preserve that has received special authorization under Article XIV of the NYS Constitution. As an Intensive Use Area, Whiteface's basic management guidelines include providing facilities for intensive forms of outdoor recreation by the public. At the same time, Whiteface development will blend with the Adirondack environment and have minimum adverse impacts on surrounding State lands. A careful approach to enhancements at Whiteface will provide continued opportunity for the public

to enjoy a unique experience, gain an appreciation for sensitive development, and expose large numbers of people to the Forest Preserve.

2. To bring all of the facilities into balance in a manner whereby the ski center will comfortably accommodate peak days.

3. To improve the ability of Whiteface to compete in the modern ski industry through optimizing skier visits and revenues providing an attractive venue for year round use. The growth and prosperity of the ski center should be related to the growth and prosperity of the regional economy.

4. To evaluate the current abilities of the ski center to host major alpine events, now and in the future, with particular focus on conformance to Federation International de Ski (FIS) homologation criteria.

5. To create a pleasing, user-friendly environment that enhances the opportunities for generating tourism and other economic stimuli in the region.

6. To develop a UMP that has Management Actions that are consistent with the National Ski Areas Association (NSAA) Environmental Charter.

Additionally, the consulting team is continuing to utilize the goals set out in the RFP and in the Proposal/Contract as guidelines throughout the planning process. For purposes of clarity, those goals are repeated here.

1. To offer a quality recreational and tourist program on publicly owned lands for the benefit and enjoyment of the people of the State.

2. To insure that programming, operating procedures and capital expenditures are based on sound cost/benefit comparisons when viewed from two perspectives:
   a. Annual revenues shall pay back return on investment and equal operating costs. A minimum of 3 to 5 year averages will be examined to minimize the effects of fluctuating weather conditions.
   b. To position the facility as an economic catalyst so as to strengthen the private sector and local government economies.

3. To protect the natural resource base in accordance with all applicable environmental and land use control laws; and to ensure consistency with Article

XIV of the New York State Constitution and the Adirondack Park State Land Masterplan.

II. INVENTORY OF FACILITIES, SYSTEMS, RESOURCES AND USE

A. Inventory of Natural Resources

1. Physical Resources

a) Topography

Topography on the upper portion of Whiteface Mountain may be described as steep and rugged. Slopes in excess of 50% are not unusual. Landslides in this area have occurred in the past exposing the "white" rock of the mountain. On the other hand, the lower elevations are characterized by grades ranging between 10% and 30% where trail construction for the lower ability level skiers can be carried out with relatively few restrictions.

Elevations range from approximately 1,220 feet in the valley near the Ski Center Base Lodge to 4,867 feet at the summit of the main mountain. This significant relief provides the greatest vertical drop east of the Mississippi.

b) Geology and Soils

Whiteface Mountain is situated in the High Peaks Region of the Central Highlands in the Adirondack Mountains. Most of Whiteface Mountain is underlaid by anorthositic bedrock thinly mantled by a layer of gravelly and bouldery soil. However, Whiteface Mountain's Base Lodge and the area adjacent to the West Branch of the Ausable River are not underlaid by anorthositic bedrock. The soil on the upper portion of the mountain (above approximately 2,000 feet) consists primarily of weathered fragments of bedrock (hard crystalline, anorthositic, igneous rock). There is very little glacial till and the unconsolidated deposits are very thin. The soil of the lower area consists principally of shallow glacial till, varying up to a possible thickness of ten feet, mantling the same kind of anorthositic bedrock. In the valley bottom, sandy and gravelly outwash deposits are fairly common. However, due to their limited extent, it is doubtful that large quantities of groundwater can be obtained from these areas.

A past history of landslides on the mountain necessitates careful site selection for any future development. Those areas of the mountain which have exhibited major

landslides are located within the areas of a steep walled cirque, whereas trail development lies on the outer flanks of the mountain. Within the cirque, the relatively smooth rock surface has allowed slippage of the overburden. On the outer flanks, the rock surface is sufficiently irregular to hold the overburden in place.

As part of the comprehensive planning for the 1980 Olympic Winter Games, local governments requested the USDA Soil Conservation Service (SCS) to survey soils specifically in the vicinity of the Olympic Games. The primary purpose in preparing this soil survey was to "pay attention to safeguarding the irreplaceable resources of the old and valued mountains in Lake Placid." Included in the report produced by the USDA SCS, "Soil Survey of Lake Placid Area, New York" is the Whiteface Mountain Ski Center. The Soil Survey Report has provided background information used as a basis for the soil portion of this document.

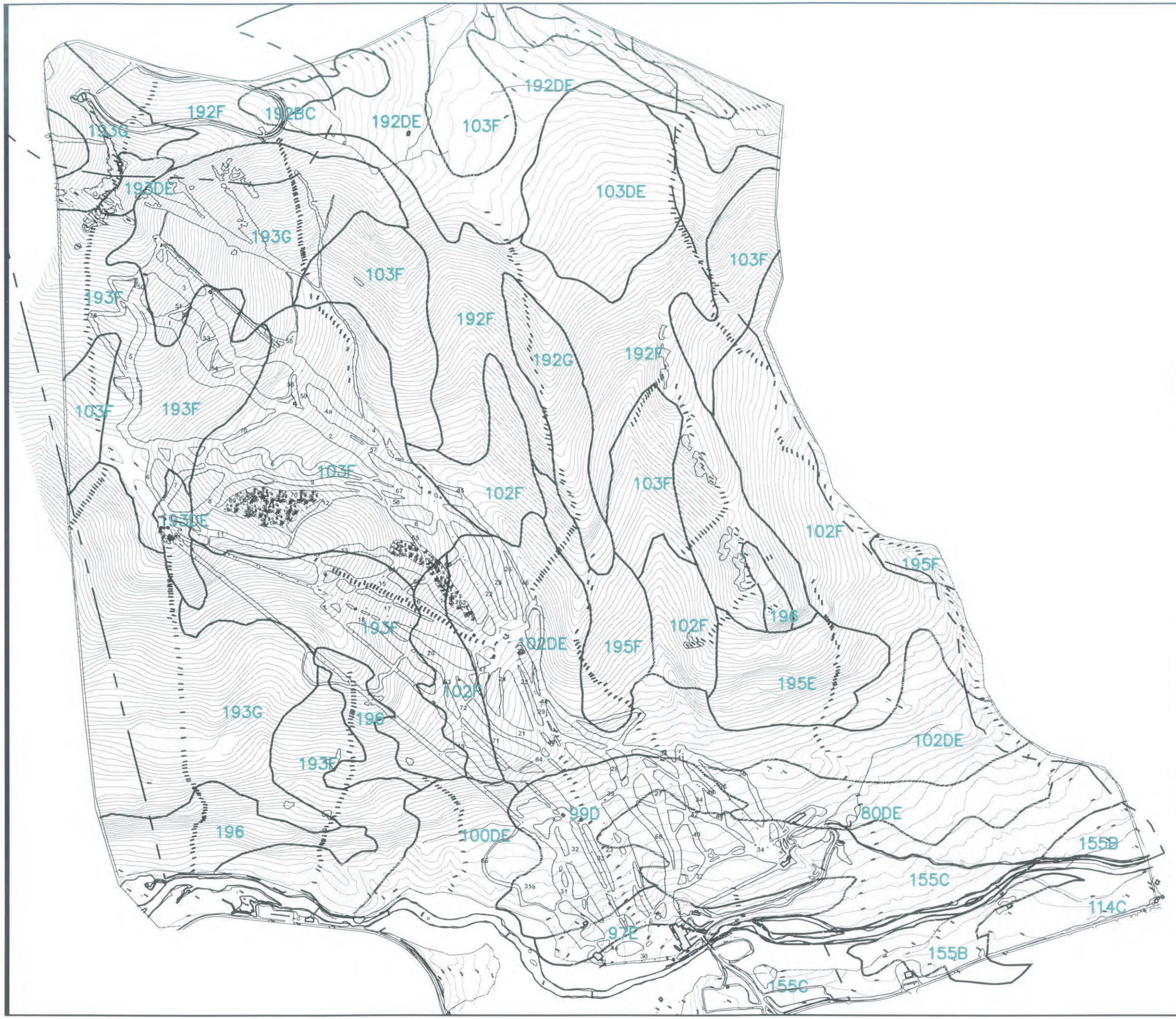
The Whiteface Mountain area is characterized by poorly or incompletely developed soils. The natural fertility of the soils is low. Soils found in this area are generally much younger and less fertile than soils found in other parts of New York State. In areas of steep slopes, which occur at high elevations, the soil is two inches in depth or less. The high altitude of this area tends to retard those biochemical processes which form soil. Consequently, the soils and associated ecosystems which predominate in this area are particularly vulnerable to damage by trail construction and other human activity. Immediate mulching and seeding of exposed soil will therefore be necessary during the development of these areas as will implementation of other best management practices to control erosion, prevent sedimentation and control runoff.

See Exhibit II-1 - Soils Map, for the distribution of soils on Whiteface Mountain Ski Center, Table II-1 - Soil Types, for a list of those soils, and Exhibit II-2 - Slope Erodability Map, for a general outline of those areas which are susceptible to erosion.

TABLE II-1
SOIL TYPES

Symbol	Scientific Name	Composition
80 DE	Becket	Fine sandy loam
97 E	Berkshire	Fine sandy loam
99 D	Hermon	Very bouldery sandy loam
100 DE	Typic Haplorthods	Extremely bouldery
102 DE	Typic Haplorthods	Extremely bouldery
102 F	Typic Haplorthods	Extremely bouldery
103 DE	Typic Cryohumods	Extremely bouldery
103 F	Typic Cryohumods	Extremely bouldery
155 C	Skerry	Bouldery sandy loam
192 BC	Cryohumods-Lithic	Complex, extremely bouldery
192 DE	Cryohumods-Lithic	Complex, extremely bouldery
192 F	Cryohumods-Lithic	Complex, extremely bouldery
192 G	Cryohumods-Lithic	Complex, very rocky
193 DE	Lithic Borofolists	Complex, very rocky
193 F	Lithic Borofolists	Complex, very rocky
193 G	Lithic Borofolists	Complex, very rocky
195 DE	Lithic Haplohumods	Very rocky
195 F	Lithic Haplohumods	Very rocky
196	Rock Outcrop	Very rocky

The Slope Erodability Map is based on specific information in the soil survey which rates these areas accordingly. Soil potential for building site development and recreation development is rated according to slight, moderate or severe limitations. Severe limitations are influenced by slope and have a depth to bedrock of less than 2 feet.



SOURCE:
NEW YORK, USDA SOIL CONSERVATION SERVICE SOURCE:
SOIL SURVEY OF LAKE PLACID

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600' 0 600' 1,200' 2,400'
Scale: 1" = 1,200'

NORTH

TITLE:
SOILS
MAP

DATE: MARCH 2002

EXHIBIT:
II-1

PROJECT NUMBER: 01102

FILE: [whiteface]

SOURCE:
NEW YORK, USDA SOIL CONSERVATION SERVICE SOURCE:
SOIL SURVEY OF LAKE PLACID

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600' 0 600' 1,200' 2,400
Scale: 1" = 1,200'
NORTH

TITLE:
SLOPE ERODABILITY MAP

DATE: MARCH 2002

EXHIBIT: **II-2**

PROJECT NUMBER: 01102 | FILE: [whiteface]

c) *Hydrology*

(1) Surficial

The Whiteface Mountain Ski Center is bordered on the east by the West Branch of the Ausable River and is located within the Lake Champlain Drainage Basin. According to the NYSDEC Division of Water Resources, Article 7, Chapter X, there is one tributary to the West Branch of the Ausable River and four sub-tributaries located within the Whiteface Mountain boundaries. Eventually, surface water from Whiteface Mountain drains via the main tributary into the West Branch of the Ausable River which ultimately discharges into Lake Champlain to the northeast. See Exhibit II-3 - Hydrology and Wetlands Map, for the locations of these tributaries and sub-tributaries on Whiteface Mountain.

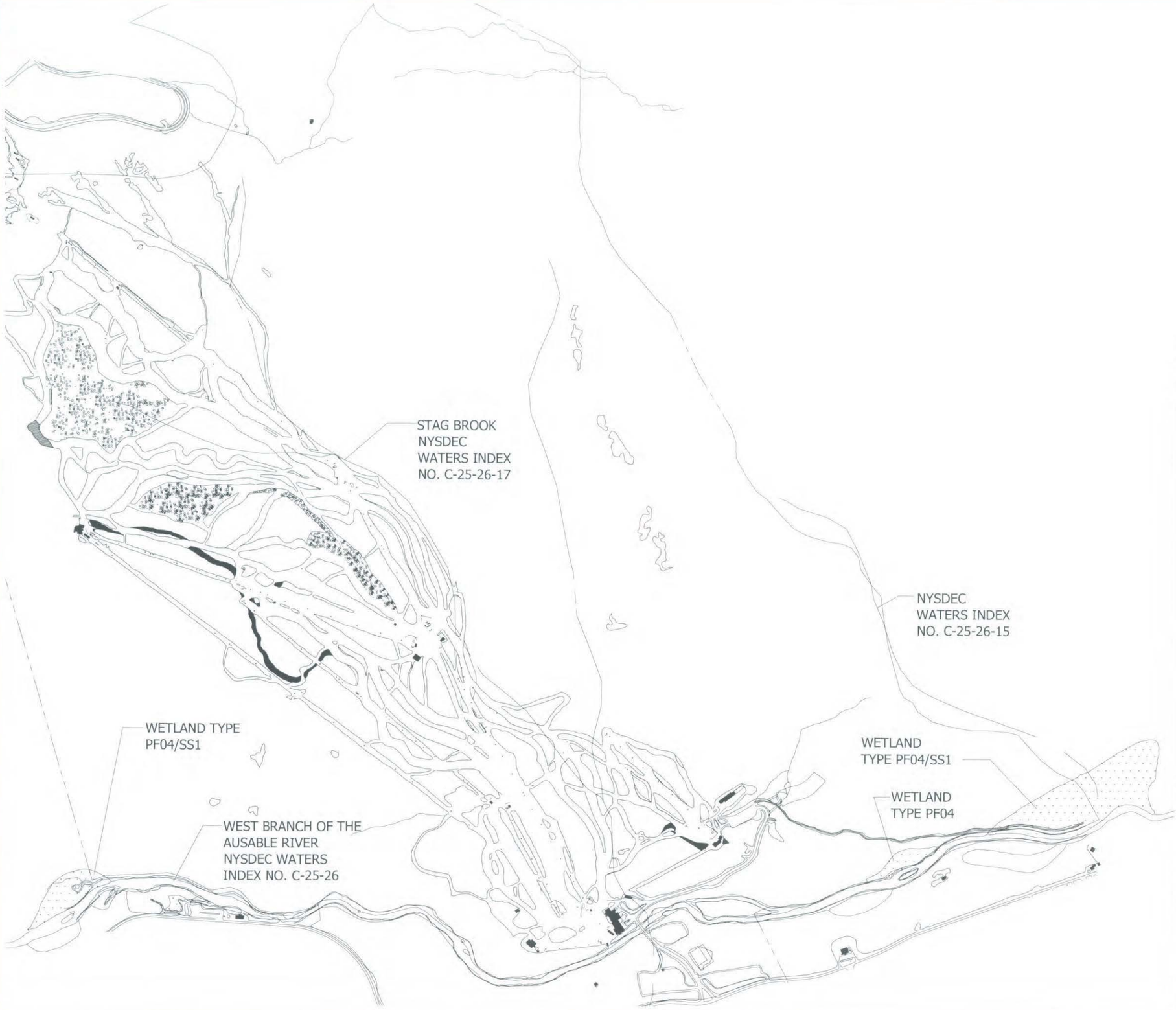
The portion of the West Branch of the Ausable River which is within the UMP is designated within the State's Wild, Scenic and Recreational Rivers System as a Recreational River.

Flow monitoring of the West Branch of the Ausable River has been implemented to minimize the impacts to the river's aquatic ecology and properly manage the fishery during times of low flow.

An operational plan has been developed in conjunction with the NYSDEC and formalized in a Cooperative Agreement between the two organizations to ensure snowmaking operations will not adversely affect the stream environment (See Appendix V, Snowmaking Withdrawal Cooperative Agreement).

(2) Subsurface

The groundwater aquifer system in the vicinity of Whiteface Mountain is found in both consolidated and unconsolidated deposits. Bedrock aquifers are fed by infiltration from precipitation, runoff and percolation from sand and gravel blanketing a portion of the valley bottom.



SOURCE:
WETLANDS ACCORDING TO ADIRONDACK PARK AGENCY WETLANDS MAP.
STREAM CLASSIFICATIONS ACCORDING TO REGULATIONS OF THE NYSDEC DIVISION OF WATER RESOURCES (6 NYCRR SECT. 830.4)

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600' 0 600' 1200' 2400'
Scale: 1" = 1200'

NORTH

TITLE:
HYDROLOGY AND WETLANDS MAP

DATE: March 2002

EXHIBIT:
II-3

PROJECT NUMBER: 01102

FILE: [whiteface]

d) Visual Resource

(1) Visual Setting

Whiteface Mountain is located in a setting dominated by the scenic quality and character of the natural environment. The visual setting of Whiteface within the Adirondack Park has largely contributed to its designation as Forest Preserve Land. This land owned by the State functions to preserve the unique ecologic, geologic, scenic and historic features of the area according to the SLMP. In addition, all development has been restricted to comply with the SLMP that is, being in a setting and on a scale that is in harmony with the relatively wild and undeveloped character of the Adirondack Park.

(2) Visibility

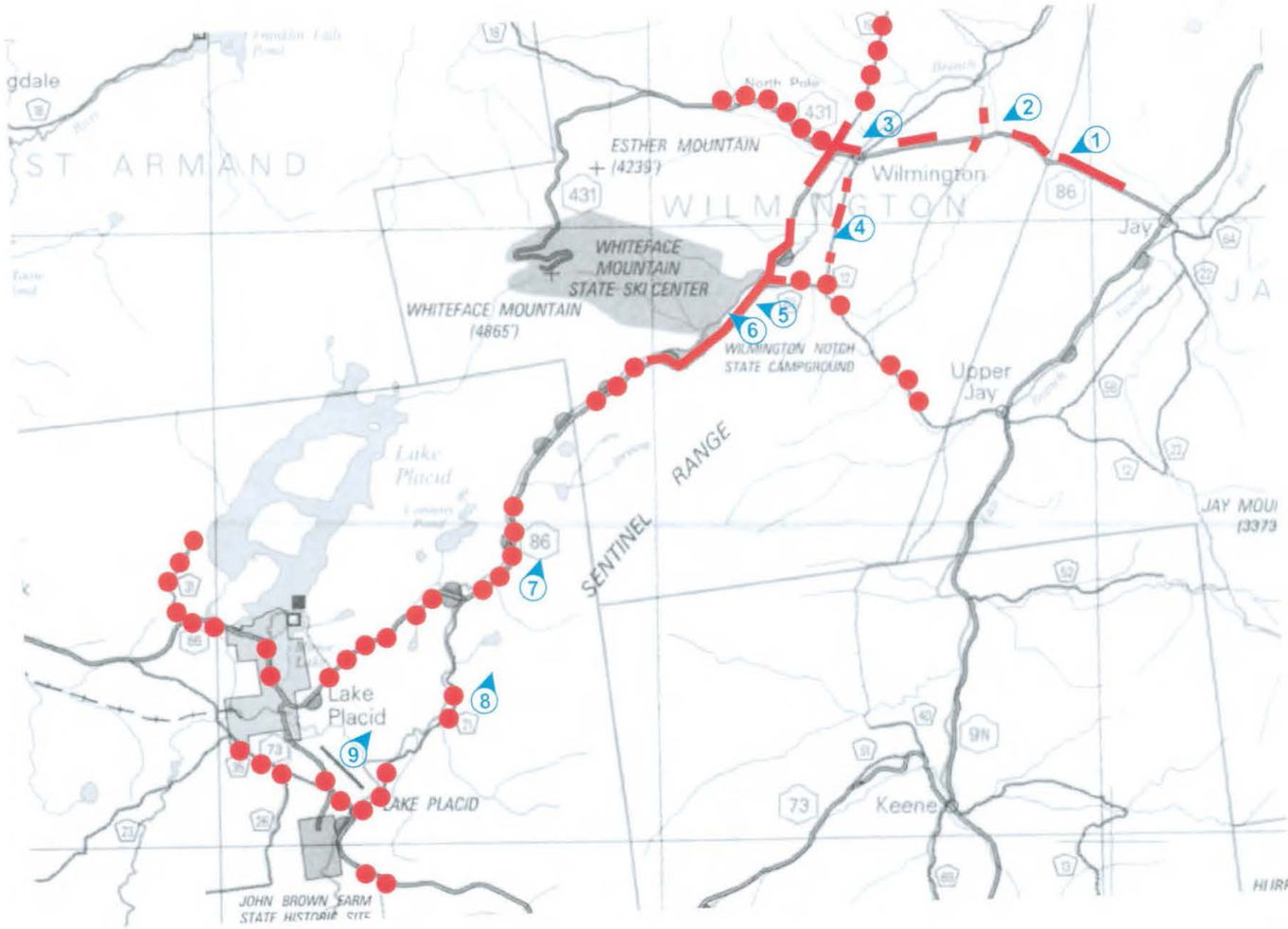
Whiteface Mountain is a relatively remote area in the Adirondacks. Due to the dense vegetation of the area and tree-lined roads, Whiteface is not clearly visible from most outside locations. However, because of the unique topography of the region and scattered clearings, Whiteface is visible at various vantage points along some nearby state and local roads. A study has been conducted to identify those areas in which Whiteface Mountain is visible. This study surveys the Ski Center within a 10-mile radius and forms the basis for the visibility section of this document.

Whiteface is visible from scattered vantage points along Route 86 beginning near Bassett Mountain and ending by High Falls Gorge. The Ski Center's lifts, ski trails, and supporting facilities are most visible from Route 86 near the Whiteface Mountain entrance road. Views west of High Falls Gorge on Route 86 begin quickly to diminish as vegetation dominates views from the roadway. Visibility to the Ski Center east on Route 86, however, is scattered due to vegetation and topography until it reaches the final vantage point at the former Paleface Mountain Ski Center located near Bassett Mountain. East of this point, visibility diminishes altogether. The upper section of Fairview Terrace on Quaker Mountain provides the most prominent vantage point to Whiteface Mountain. Although the mountain can be viewed from as far south as Route 73 near the Heart Lake Road, no ski facilities, lifts or trails are

visible. Exhibit II-4 - Viewshed Analysis Map, depicts locations along state and local roads where the Whiteface Mountain Ski Center is visible. Exhibits II-5, II-6, and II-7 - Viewshed Photos, illustrate those vantage points on the Viewshed Analysis Map that most clearly represent the quality and character of the existing views to Whiteface Mountain.

Generally speaking, Whiteface Mountain is not visible from hiking trails on Forest Preserve lands in the area. Because of intervening topography, including Wilmington Notch and Little Whiteface Mountain, there are no views into Whiteface from the trails south of Route 86 around Owen Pond, Copperas Pond and Winch Pond.

Lookout Mountain is within the same Intensive Use Area that contains the Ski Center. Field work was conducted in this area to investigate potential views. Views from the summit of Lookout include the Memorial Highway, the observatory, the upper portion of the Slides area, and the uppermost reaches of the existing ski trails. Views into portions of the Ski Center are mostly blocked by vegetation and intervening topography, a southeast sweeping ridgeline that obscures the potential views. Views towards the mountain are also available from the Wilmington trail east of the summit of Lookout Mountain before the trail drops down a steep slope on the way to Marble Mountain.



LEGEND

- PHOTO LOCATIONS
- WHITEFACE MOUNTAIN VISIBLE
- WHITEFACE MOUNTAIN SKI CENTER VISIBLE

WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE Group · the LA group · IZA Engineering & Planning — Ivan Zabrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

5,000' 0 5,000' 10,000' 20,000
Scale: 1" = 10,000'

NORTH

TITLE:

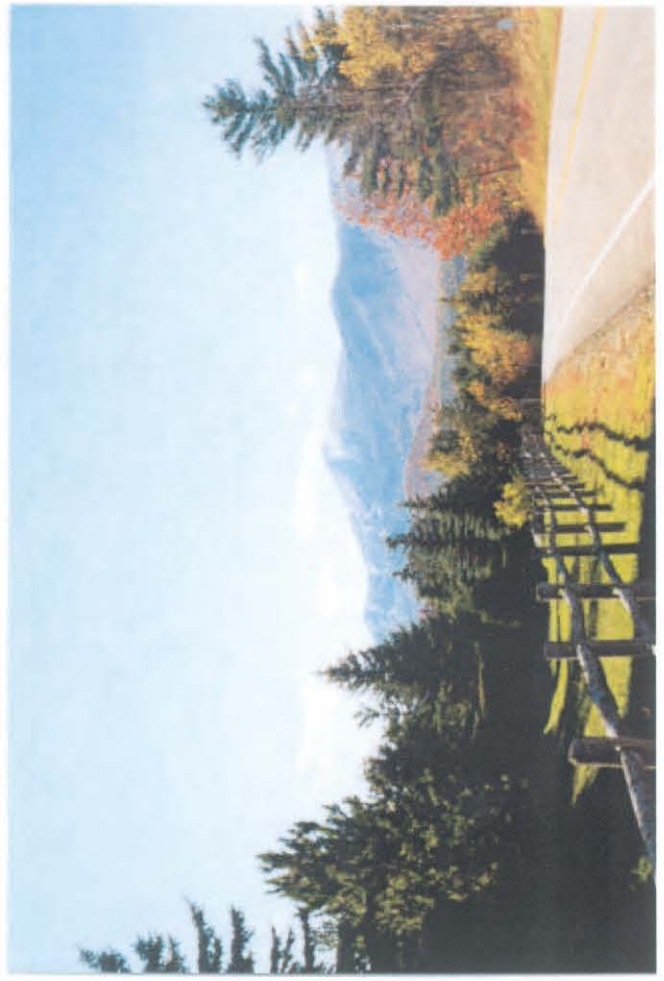
VIEWSHED ANALYSIS MAP

DATE: March 2002

EXHIBIT: II-4

PROJECT NUMBER: 01102

FILE: [whiteface]



1. View from Route 86 at the former Paleface Ski Center near Bassett Mountain looking southwest.

2. View from Route 86 near Beaver Brook looking southwest.

3. View from Route 86 on the west branch of the Ausable River bridge looking south in the hamlet of Wilmington.

WHITEFACE

Prepared For:
OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

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COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

TITLE:
VIEWSHED PHOTOS

DATE: March 2002

EXHIBIT:
II-5

PROJECT NUMBER: 01102

FILE: [whiteface]

4. View from Fairview Avenue on Quaker Mountain looking southwest.

5. View from Fox Farm looking west.

6. View from Route 86 to the entrance of Whiteface Mountain Ski Center looking west.

WHITEFACE

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OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

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COMPREHENSIVE MANAGEMENT
AND PLANNING REVIEW
AND UNIT MANAGEMENT PLAN

TITLE:
VIEWSHED PHOTOS

DATE:
March 2002

EXHIBIT:
II-6

PROJECT NUMBER: 01102

FILE: [whiteface]

7. View from Route 86 just south of Monument Falls looking north.

8. View from River Road at Lake Placid Skeet Range looking north.

9. View from Route 73 looking north.

WHITEFACE

Prepared For:
OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP | the LA group | IZA Engineering & Planning, Ivan Edrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

TITLE:
VIEWSHED PHOTOS

DATE:
March 2002

EXHIBIT:
II-7

2. Biological Resources

a) Freshwater Wetlands

Freshwater wetlands comprise approximately 0.5% of the Whiteface Mountain Intensive Use Area total acreage. The Adirondack Park Agency has mapped approximately 13.2 acres of freshwater wetlands within the boundaries of the Ski Center. Most of these wetlands are located in areas remote from any roads, ski trails or ski facilities. However, there is one small forested coniferous wetland with a value rating of 2 located near parking lot #3 which is adjacent to the West Branch of the Ausable River. The placement of downhill ski slopes and the construction of various support facilities have not disturbed nor affected the wetlands.

Exhibit II-3 - Hydrology and Wetlands Map, shows the wetlands mapped by the Adirondack Park Agency, and uses the coded symbol system of the U.S. Fish and Wildlife Service (Cowardin *et al.*, 1979) for classifying freshwater wetlands. All of the wetlands are in the palustrine ecological system, and so their identifying symbols begin with a P. The next two letters of the symbol indicate a wetland class of either forested (FO) or scrub-shrub (SS). The number following the class designation indicates whether the vegetation is deciduous (1) or evergreen (4). Some wetlands have both forest and scrub-shrub vegetation, and the code symbol shows both separated by a slash.

The Adirondack Park Agency (APA) official wetlands map was confirmed to be accurate based on file review and observations of the site. In the course of preparation of the previous Unit Management Plan, APA Resource Analysis staff were consulted and visited the sites in question for confirmation.

The wetlands identified by the APA as being under their jurisdiction are also under the jurisdiction of the US Army Corps of Engineers (ACOE). In addition, the ACOE exercises jurisdiction over other "waters of the United States," including the West Branch of the Ausable River and the small streams that drain the Whiteface Intensive Use Area, as well as pockets of riparian wetland that exist along these streams. These riparian wetlands are, in general, too small to identify on a small-scale map as in Exhibit II-3. The area of the West Branch of the Ausable River within the Ski Center boundaries is approximately 11.8 acres.

b) Vegetation

(1) Plant Species

Whiteface Mountain hosts a wide variety of plant species. A list of the common species found in the UMP area is provided in Table II-2 - "Flora of the Whiteface Mountain Ski Center Area." Most of these species thrive throughout the Adirondack Park. However, due to ecological factors, change in climate, and man-made development, there are some species that warrant protection. According to the New York State Department of Environmental Conservation, Natural Heritage Program, various plant species and ecological communities in the Whiteface Mountain Intensive Use Area have been identified as rare, threatened, or endangered. These plant species and communities are primarily ones found in the alpine meadows and krummholz (stunted forest) on the upper reaches of Whiteface Mountain where soil conditions and climate provide unique habitats.

In a report recently obtained from the New York Natural Heritage Program, sixteen plant species classified as rare, threatened, or endangered were identified to be present in the Whiteface Mountain area. The legal status of these species by New York State law is as follows: seven are on the list of endangered species, eight are listed as threatened, and one is listed as rare. Thirteen of these species are associated with the alpine meadow and/or alpine krummholz communities of the mountain summit. One species is known from the spruce-fir forest just below the alpine krummholz. Another species occurs in both the alpine krummholz and spruce-fir forest communities. Only one species occurs at lower altitudes, growing on cliffs along the Ausable River.

The files of the Fish and Wildlife Service (FWS) of the US Department of the Interior were also checked for records of plants and animals on the federal lists of threatened and endangered species. This search turned up only one record of a plant species which is considered a "species of concern" by the FWS, and which is on the New York State list of endangered species. This federal status as a species of concern does not provide protection under the federal Endangered Species Act. In addition, the FWS stated that no habitat in the project area is currently designated or proposed "critical habitat," as defined in the Endangered Species Act.

None of the known locations of any of these rare, threatened or endangered species lies within or substantially near the areas of the IUA proposed for construction activities or areas of current ski center operations.

TABLE II-2
FLORA OF THE WHITEFACE MOUNTAIN SKI CENTER AREA

Scientific Name	Common Name
Trees	
Abies balsamea	balsam fir
Acer rubrum	red maple
Acer saccharum	sugar maple
Betula alleghaniensis	yellow birch
Betula cordifolia	mountain paper birch
Betula papyrifera	paper birch
Fagus grandifolia	American beech
Ostrya virginiana	hop hornbeam
Picea rubens	red spruce
Pinus resinosa	red pine
Pinus strobus	white pine
Populus grandidentata	bigtooth aspen
Populus tremuloides	trembling aspen
Prunus serotina	black cherry
Quercus rubra	red oak
Salix nigra	black willow
Sorbus americana	mountain ash
Thuja occidentalis	northern white cedar
Tilia americana	basswood
Tsuga canadensis	hemlock
Shrubs and Small Trees	
Acer pensylvanicum	striped maple
Alnus incana ssp. *rugosa*	speckled alder
Clematis sp.	virgin's-bower
Cornus sericea	red osier
Hamamelis virginiana	witch hazel
Rubus allegheniensis	northern blackberry
Rubus idaeus	red raspberry
Rubus odoratus	pink thimbleberry
Spiraea alba	meadow-sweet

Scientific Name	Common Name
Viburnum acerifolium	maple-leaf viburnum
Herbaceous Plants and Low Woody Plants	
Apocynum sp.	dogbane
Aster puniceus	purple-stemmed aster
Athyrium filix-femina	lady fern
Calamagrostis canadensis	bluejoint grass
Carex crinita	sedge
Carex intumescens	sedge
Cichorium intybus	Chicory
Cinna latifolia	drooping woodreed
Coptis trifolia	gold thread
Cornus canadensis	bunchberry
Dryopteris carthusiana	spinulose wood fern
Eupatorium maculatum	spotted Joe-Pye weed
Eupatorium rugosum	white snakeroot
Euthamia graminifolia	bush goldenrod
Glyceria striata	fowl manna-grass
Hypericum perforatum	St. John's-wort
Lycopodium lucidulum	shining clubmoss
Lycopodium obscurum	ground pine
Lycopodium tristachyum	ground cedar
Lycopus virginicus	water-horehound
Monotropa uniflora	Indian-pipe
Onoclea sensibilis	sensitive fern
Osmunda claytoniana	interrupted fern
Osmunda regalis	royal fern
Oxalis montana	common wood sorrel
Potentilla recta	five-fingers
Solidago caesia	wreath goldenrod
Solidago canadensis	common goldenrod
Solidago squarrosa	ragged goldenrod
Thelypteris noveboracensis	New York fern
Tussilago farfara	coltsfoot

Source: Nomenclature used here follows Mitchell, and Tucker (1997).

ALPINE
KRUMMHOLTZ

LEGEND

P	PIONEER HARDWOOD
S	SPRUCE–FIR
W	WHITE–RED PINE
I	PIONEER HARDWOOD SPRUCE–FIR
N	NORTHERN HARDWOOD
R	RED PINE
H	HEMLOCK

WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP

the LA group

IZA Engineering & Planning
Ivan Zdravkal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

600' 0 600' 1200' 2400'
Scale: 1" = 1,200'

NORTH

TITLE:

VEGETATION COVERTYPE MAP

DATE: March 2002

EXHIBIT

II-8

PROJECT NUMBER: 01102

FILE: [whiteface]

(2) FOREST COVERTYPES AND ECOLOGICAL COMMUNITIES

The 2910-acre Whiteface Mountain Ski Center Intensive Use Area (IUA) is situated in the Adirondack High Peaks Ecozone, as identified by the New York Natural Heritage Program. The IUA is comprised primarily of terrestrial communities with a predominance of forested uplands, and to a lesser extent terrestrial cultural communities of the ski center and the riverine communities of the West Branch Ausable River and its tributaries. The dominant cultural feature in the IUA is the ski center, which utilizes approximately 211 acres or 7% of the IUA total area. Another major cultural feature consists of the summit facilities associated with the Whiteface Mountain Veterans Memorial Highway. However, this use is outside the Whiteface Mountain Ski Center IUA and is in the adjacent Veterans Memorial Highway IUA.

The terrestrial cultural features consisting of the ski center trails and facilities dominate the visual landscape of the IUA. As is shown in Exhibit II-8, the ski center stretches from the upper slopes of the mountain, about 400 feet below the summit of Whiteface Mountain, including the Little Whiteface Summit, down to the existing base lodge facilities adjacent to the West Branch Ausable River. The northern half of the IUA remains essentially wild, with no current ski center trails or facilities, however, the remnants of a former ski trail in an area about 4000 feet due east of the Whiteface Mountain summit are still discernible.

In general, the vegetation of the Ski Center area progresses from a hardwood forest dominated by sugar maple and beech, on the lower slopes of the mountain, to conifer forests with red spruce and balsam fir upwards toward the summit. This is a common progression found on most mountainous terrain throughout the Adirondacks. In previous unit management plans for the Ski Center, vegetation was described in terms of forest covertypes, which is a forestry-oriented approach. Exhibit II-8 - Vegetation Covertype Map, shows the forest covertypes identified by NYSDEC. The vegetation unit boundaries on this map have been altered from previous versions on the basis of in-field observations and interpretation of recent aerial photographs.

Following are descriptions of these covertypes:

a) Northern Hardwood

This forest covertype is composed primarily of sugar maple, American beech and yellow birch. Other associated species are red maple, white ash, black cherry, hemlock, red spruce, paper birch, and red oak. The northern hardwood forest type is a climax forest capable of reproducing itself under its own canopy. As the stand regenerates itself in the natural forest condition, yellow birch will tend to become less important due to its relative intolerance or inability to grow in the shade as compared to maple and beech.

b) Pioneer Hardwood

In the Adirondacks, this forest covertype is normally composed of aspen, paper birch, and pin cherry with occasional red maple and balsam fir. In the Ski Center area, the overstory of this forest type is almost entirely composed of mountain paper birch while the understory is composed of thick balsam fir.

Other associated species, as mentioned above, can be found in this forest covertype. However, the almost pure dominance of mountain paper birch overshadows the importance of the other hardwood species normally found. Pioneer hardwood is a successional forest covertype and over a period of time it will give way to climax forest covertypes due to the intolerance of the species involved. A few places mapped as this covertype are areas of thin soil and bedrock outcrops, and are not likely to progress quickly to climax forest.

c) Spruce-Fir

The species composition of this forest covertype normally consists of balsam fir, red spruce, and black spruce, which are sometimes associated with tamarack, hemlock and white cedar. The spruce-fir forest covertype on Whiteface Mountain is composed almost entirely of balsam fir and red spruce. Balsam fir is the more numerous of the two species. The presence of a heavy understory consisting of balsam fir and red spruce mixed with an overstory of the same species is evidence of a spruce-fir climax forest covertype. As shown on Exhibit II-8, the highly significant Alpine Krummholz Zone is found within the area mapped as spruce-fir forest covertype, and is dominated by stunted balsam fir and birch.

d) Pioneer Hardwood-Spruce-Fir

This combination of forest covertypes occupies an important transition niche on Whiteface Mountain, although pioneer hardwood-spruce-fir is not usually designated as a separate forest covertype. Species composition consist of mountain paper birch, balsam fir and red spruce overstory with a thick spruce-fir understory. There is a higher percentage of balsam fir in both the understory and overstory of this forest covertype than the associated red spruce. This type lies between the pioneer hardwood and spruce-fir types previously described and is a transition between the intermediate pioneer hardwood type and the climax spruce-fir type.

e) White Pine–Red Pine

This forest covertype is dominated by eastern white pine and red pine. Associated species are balsam fir, red spruce, hemlock, aspen, red maple and white birch.

f) Red Pine

A pure forest covertype of red pine exists in a small area on Whiteface Mountain. Pure natural red pine is considered a unique forest covertype due to the fact that red pine is almost always associated with white pine in unplanted situations. The red pine forest covertype is located on the rocky crest of a ridge, at an elevation of about 2400 feet.

g) Hemlock

This forest covertype occurs in the southern part of the Ski Center, immediately adjacent to the West Branch of the Ausable River. The Eastern hemlock stand is dense and very heavy with just a few associated species consisting of white birch, yellow birch, and American beech. Hemlock is a climax forest covertype capable of reproducing itself under its own shade.

This vegetation covertype classification is less useful when assessing the significance of the vegetation in the context of New York State as a whole. The New York Natural Heritage Program (NYNHP) of NYSDEC has defined and classified the ecological communities of New York State, and has ranked them in terms of their comparative rarity (Reschke, 1990). Table II-3 lists the forest covertypes identified at Whiteface Mountain, the corresponding

ecological communities defined by NYNHP, and the state element rank of each community.

In some cases, the forest covertype has more than one corresponding ecological community (See Table II-3). For instance, the spruce-fir covertype includes the mountain spruce-fir forest, mountain fir forest, and alpine krummholz ecological communities. The mountain spruce-fir forest occurs in the lower part of the area mapped as the spruce-fir covertype, and is dominated by red spruce and balsam fir, with lesser amounts of mountain paper birch, mountain ash, and pin cherry. Around 3500 feet elevation, this community grades upward into mountain fir forest, which has a tree layer composed almost entirely of balsam fir, with small amounts of mountain paper birch, and scattered individuals of red spruce. Above mountain fir forest, at elevations higher than about 4500 feet, to the summit of Whiteface Mountain, is the alpine krummholz community, a stunted woodland dominated by balsam fir. The extent of the alpine krummholz community is mapped on Exhibit II-8.

TABLE II-3
FOREST COVERTYPES AND CORRESPONDING ECOLOGICAL COMMUNITIES

Forest Covertype	Ecological Community
Northern Hardwood	Beech-Maple Mesic Forest Spruce–Northern Hardwood Forest
Pioneer Hardwood	Successional Northern Hardwoods
Spruce-Fir	Mountain Spruce-Fir Forest Mountain Fir Forest Alpine Krummholz
Pioneer Hardwood–Spruce-Fir	(successional stage leading towards Mountain Spruce-Fir Forest)
White Pine–Red Pine	Pine–Northern Hardwood Forest
Red Pine	
Hemlock	Hemlock–Northern Hardwood Forest

Mapping of the boundary of the "alpine krummholz ecozone" shown in Exhibit II-8 started with "Resource Composite Map B39" from the 1995 Whiteface Mountain Comprehensive Management and Planning Review and Unit Management Plan. A map of the location which was included with a

letter dated September 13, 2001, from Heidi J. Krahling of the NY Natural Heritage program showed essentially an identical boundary for this community. LA Group Biologists verified this boundary and refined it slightly through examination of aerial photographs supplemented by field investigations at the summit area of Whiteface Mountain on December 10, 2001. That slightly revised boundary is shown on the Vegetation Covertype Map, Exhibit II-8. On the basis of this boundary, the area of the alpine krummholz community within the UMP area is measured at 7.18 acres (see Table V-2).

The pioneer hardwoods and pioneer hardwoods–spruce–fir covertypes are successional vegetation units that appear to be trending towards the mountain spruce-fir forest community, or possibly towards the spruce–northern hardwood forest in their lower reaches, below about 2800 feet.

The northern hardwood forest covertype is also represented by two ecological communities. The beech-maple mesic forest community, which is dominated by sugar maple and beech, occupies the lower slopes. At higher elevations, red spruce becomes a more significant component among the hardwoods (mainly sugar maple, beech, yellow birch, and red maple), forming the spruce–northern hardwoods forest.

Hemlock forest covertype corresponds with the hemlock-northern hardwood forest community, which varies from nearly pure stands of hemlock to mixtures of hemlock, white pine, beech, sugar maple, red maple, red oak, and other hardwoods. The white pine–red pine covertype is equivalent to the pine–northern hardwoods community, which is dominated by white pine, usually with a significant amount of red pine, mixed with some paper birch, aspens, other hardwoods, red spruce, and balsam fir.

The one covertype for which there is no equivalent ecological community defined by NYNHP (Reschke, 1990) is red pine forest. This consists of one stand of about 5 acres on the top of a dry, rocky ridge. Red pine is by far the most abundant tree, with smaller numbers of red spruce, white cedar, white pine, and balsam fir. According to Greg Edinger, ecologist for NYNHP

(personal communication), there is a draft description of a "red pine rocky summit" community, which appears to fit this stand.

c) Fish and Wildlife

(1) Wildlife

Considering the present degree of development and use, Whiteface supports a wide variety of wildlife species. Included in Appendix L is a list of wildlife species, resident and migrant, that have been physically or visually confirmed or are species which may utilize the area because of suitable habitat conditions. Forty-six mammalian species, eighty-four avian species, eleven amphibian species, and five reptile species are identified.

Data from the breeding bird atlas of New York State (Andrle and Carroll, 1988) indicate that 21 bird species are confirmed to be breeding in the Whiteface Mountain area, and another 63 species are listed as probable or possible breeders. One of the confirmed species, the peregrine falcon, is listed as an endangered species in New York. One species listed as threatened, the osprey, is a probable breeder in the Whiteface Mountain area. Three species of special concern, Bicknell's thrush, the northern raven and Cooper's hawk, are probable breeders in the area.

The ruffed grouse (*Bonasa umbellus*) is a species not included on the list in Appendix L, but which was observed in the course of fieldwork on the Ski Center site, and which is a confirmed breeder in this vicinity, according to Andrle and Carroll (1988).

The distribution and abundance of wildlife species are determined by physical and biological factors such as elevation, topography, climate, vegetation and land use, combined with the habitat requirements and population dynamics of each species. Five major wildlife habitats can be identified at Whiteface: Northern Hardwood, Pioneer Hardwood-Spruce-Fir combination, Krummholz, Grassland (ski slopes), and Alpine Zone. The types listed above generally represent differences in wildlife habitat and, therefore, may not conform to the more technical descriptions of forest covertypes as detailed in Section II.2.b. above.

The clearings and brushy ecotones created by the ski trails provide additional habitats not frequently found in many of the "Wilderness Areas." In fact, a greater diversity of wildlife can reside in or utilize the ski trail area than is possible in portions of the maturing "Forest Preserve Wilderness Areas." Those wildlife species dependent on the earlier stages of succession can inhabit the grasslands, whereas in the adjacent forest covertypes only those species preferring mature forests can prosper. Included in Appendix L is a description of wildlife habitat types and additional information regarding the wildlife at Whiteface.

(2) Fish

Information regarding fish is derived from a study conducted on the "West Branch Ausable River; Habitat, Fishery Resources and Angler Concerns," prepared by the NYSDEC. Fishery and habitat surveys were conducted in the West Branch Ausable River and public opinions regarding the fishery were obtained during 1992. In conclusion, the 1992 study summarizes the following information:

1. The quality of the West Branch Ausable fishery is lower than might be expected for a river of such renown. Large and wild trout are present, but less abundant than is desirable.

2. The historic fish survey data is inadequate to document whether the present quality represents a decline from previous periods.

3. Habitat problems contribute significantly to poor angling quality. Severe winter ice conditions (during years of low snow pack) cause high winter mortality. Substrate embeddedness contributes to the winter mortality, probably decreasing invertebrate production and reducing natural reproduction of trout.

4. Angler use is apparently not responsible for poor quality. Use declined substantially in the period from the late 1960's to the mid-1980's with a perceived decline, not improvement, in the quality of the fishery. Therefore, additional reductions in exploitation, such as no kill regulations, are not expected to substantially improve quality. However,

the greatest potential to improve quality and satisfy constituent desires would be along the River Road section where prospects of over-winter survival are best.

5. Given the low abundance of wild fish and the evidence that stocked fish are not impacting wild fish abundance or growth, continued stocking is appropriate to achieve desired catch rates. Stocking rates will be based on CROTS estimates and the angling regulations applied to each river section.

Several changes were made in fisheries management of the river following the 1992 study. Increased numbers of two-year-old trout are stocked annually to improve the abundance of large trout. Also, catch-and-release regulations have been applied to about 5 miles of the river.

Angler use and popularity of the river has apparently increased due to the revised management. In a 1996 statewide survey of anglers conducted by Cornell University, The Ausable River received the highest satisfaction rating and the highest location rating of the 29 most heavily fished waters in the state (satisfaction and location ratings were not analyzed for waters fished less frequently due to small sample size (Connelly *et al.*, 1997). An estimated 13,440 anglers fished the Ausable during 1996 for a total of 105,600 angler-days. The survey estimated that fishing-related expenditures in 1996 for fishing in the Ausable River totaled $4,774,000, with $3,663,000 of that being "at location" expenditures.

DEC staff electrofished stations upstream of the Whiteface Ski Center on the West Branch Ausable River during the week of July 21, 2003. The study was not designed to assess the impacts of Whiteface water withdrawals or compare fish population parameters above and below Whiteface. Instead, the objectives of the electrofishing survey were to evaluate the current status of the fish resources in the river and to evaluate the biological effects of the catch-and-release regulations affecting that stretch of river from the mouth of Holcomb Pond outlet downstream to the marked boundary 2.2 miles downstream of Monument Falls. The river had last been surveyed in the early 1990s prior to enacting the catch-and-release regulations. It is possible that

results of the surveys in the 1990s led to the Commentor's statement that the fishery quality may be lower than expected.

Brown trout in the 2003 sample averaged substantially larger than the early 1990's. Considering yearling and larger trout, 41 percent were longer than 12 inches in 2003 compared to only 4 percent in the earlier period. The increased average size was observed in both the catch-and-release section and the areas where harvest is allowed. The largest brown trout collected was 19 inches long.

Overall, 23 percent of the yearling and older brown trout were wild, which was very similar to the 22 percent wild observed in the early 1990's. However, wild fingerling trout (young-of-the-year trout) were several times more abundant in 2003 than previously, which indicates increased natural reproduction. The increased abundance of wild fingerlings occurred in both the catch-and-release and in the harvest allowed sections. Qualitative observations indicated that the abundance of fines (sand) in the substrate had decreased substantially since the early 1990's, which could explain the increased natural reproduction. Also, ice conditions on the river last winter were favorable for over winter survival of trout.

The overall abundance of trout longer than 12 inches, indicate a very desirable fishery resource (from Region 5 Inland Fisheries August 2003 Monthly Highlights).

B. Inventory of Existing Ski Center

The following Inventory of Existing Ski Center reflects the existing conditions of the Whiteface lift and terrain system as inventoried during the initial UMP process in 2002. Several improvements proposed in the 1996 UMP have since been implemented, including:

- The creation of Off-Broadway and Golden Glades trails
- The creation of a terrain park on Lower Parkway, Lower Thruway and Parkway Exit (and removal of terrain parks on Danny's Bridge and Brookside)
- The replacement of the Mid-station Shuttle and Valley Triple lifts with a detachable quad chairlift – Face Lift
- Two additional grooming vehicles

These actions are consistent with the overall management goal of increasing mountain capacity.

1. **Lifts – Existing**

TABLE II-4
EXISTING LIFT SPECIFICATIONS

Map Ref.	Lift Name	Lift Type	Vert. Rise (ft.)	Slope Length (ft.)	Avg. Grade (%)	Actual Design Capacity (persons/hr.)	Year INSTALLED/ Upgraded
A	Mixing Bowl	Double	92	687	13%	800	1984
B	Bear	Double	310	1,534	20%	1,200	1984
C	Bunny Hutch	Triple	258	1,792	14%	1,600	1966/97
D[1]	Mid-Station Shuttle	Double	880	4,140	21%	1,200	1976
E[1]	Valley Triple	Triple	1,314	6,265	21%	1,670	1988
F	Summit Quad	Quad	1,830	4,706	39%	1,500	1997
G	Little Whiteface	Double	1,555	4,515	34%	1,100	1988
H	Mountain Run	Double	979	2,475	40%	1,200	1989
I	Freeway	Double	1,458	4,220	35%	800	1979
J[2]	Handle Tow	Surface	40	450	9%	400	1992
K	Cloudsplitter Gondola	Gondola (8)	2,432	8,487	29%	1,800	1999
	TOTAL					**13,270**	

Some of the specific characteristics of each of the eleven lifts serving the Whiteface terrain are set forth below.

- **Mixing Bowl (A):** This lift is well located and suitably designed for the beginner skier.

- **Bear (B):** The bottom terminal of this lift is located at a distance of 500' from the base lodge and is accessed by Lift A.

- **Bunny Hutch (C):** Lift C was relocated in 1997 so that its base terminal is at the same level as the Kid's Kampus building. Its top terminal has been lowered to

[1] These two lifts have been removed and replaced with the Face Lift quad (as specified in Table IV-1 – proposed lift F).

[2] The handle tow has been removed and replaced with a conveyor lift (as specified in Table IV-1 – proposed lift J)

provide better and easier access to the trail system and to avoid the steep section at the top which made the trail ability level too difficult for skiers in this area.

- **Mid-Station Shuttle (D) and Valley Triple (E):** The combination of these two aging lifts serving basically the same terrain contributes to skier congestion problems on the trails they serve and at the top of D and the mid-station of E; these areas will require careful consideration in future planning. Replacement of these lifts with a detachable quad (with no mid-station) is an approved action of the 1996 UMP.

- **Summit Quad (F):** Lift F serves the upper mountain terrain in a satisfactory manner. Its hourly capacity is in balance with the trails it serves.

- **Little Whiteface and Mountain Run (G & H):** As with lifts D and E, the combination of these two lifts causes skier congestion problems at the top terminal of H and the mid-station unload of G and on the trails they serve when both lifts (in addition to Lift I) are operating at full capacity. This congestion is also a factor at the base terminals of these two lifts due to their proximity to the top and mid-station unloads of D and E respectively and to the mid-station lodge. Lifts G and H are both aging and have functional problems.

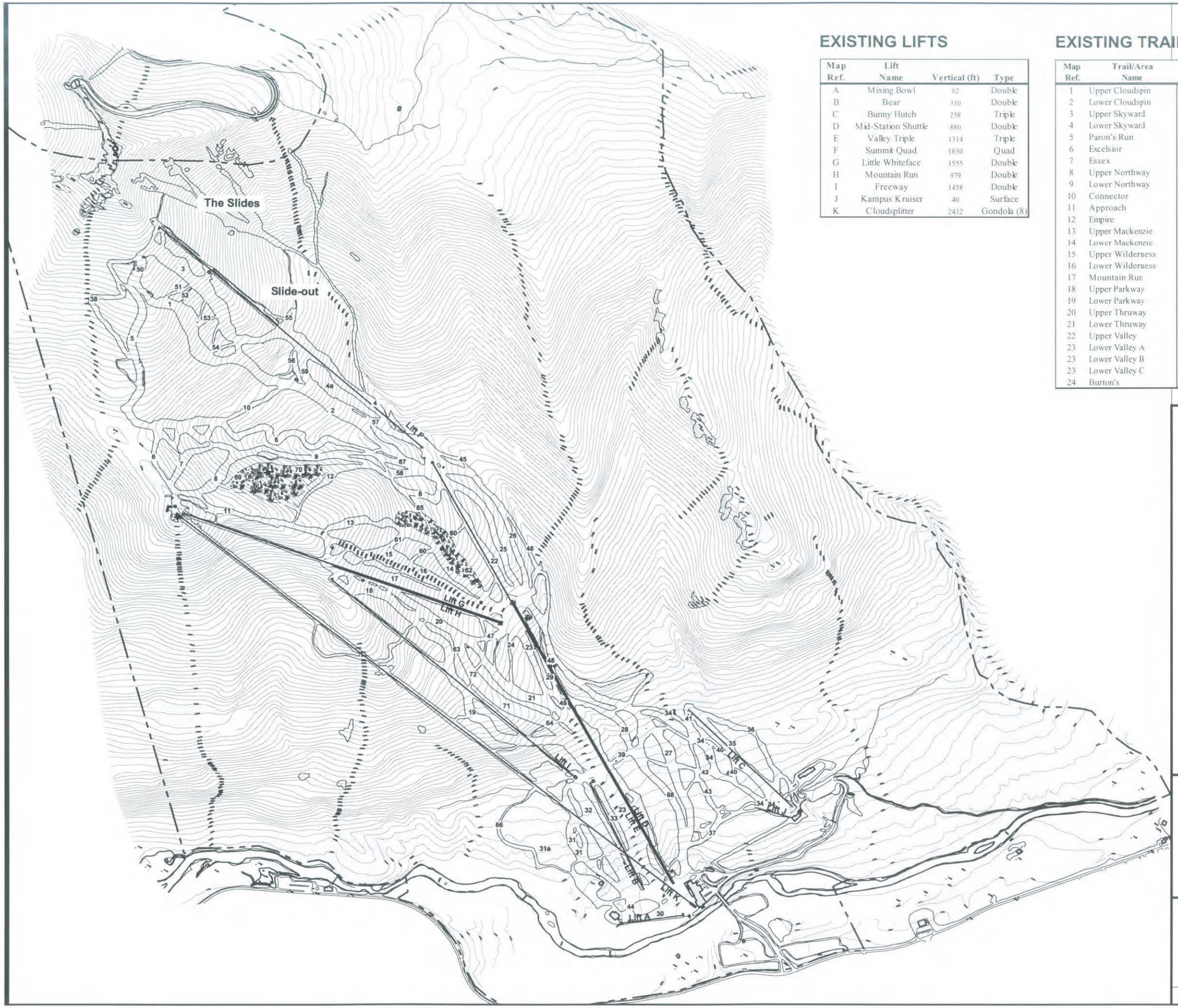
- **Freeway (I):** Lift I provides excellent skiing opportunities for the intermediate and advanced skiers. It is particularly useful on race event days as it provides a somewhat isolated area for round trip skiing on the race terrain that it serves. It is also useful when wind conditions shut down other lifts.

- **Handle Tow (J):** The location of this lift has two major disadvantages for the beginner skier. First, it requires a short but difficult climb for the new skier from the Kid's Kampus building to the bottom loading area. Second, it involves the undesirable mix of beginner skiers with the faster traffic emanating from the Silver and Gold Trails (#34 and #35).

- **Gondola (K):** The Gondola lift was installed as recommended in the 1996 UMP. Summer use of the gondola has proven to be a valuable addition to the Whiteface and Lake Placid venues. Winter use has also proven to be a valuable addition to

the ski center by improving the out-of-base capacity and as a means to access the upper reaches of the mountain on days of inclement weather.

Many improvements have been made at Whiteface over the past five years, however several lifts are more than twenty years old. It is the goal of this UMP Update to continue the modernization of the Ski Center through the focused implementation of management actions that will improve the user-friendly nature of the Ski Center while concurrently responding to the market and economic opportunities to increase public access and business potential. Items such as lift replacements will be necessary to maintain operating efficiency and avoid costly repairs and excessive maintenance.



EXISTING LIFTS

Map Ref.	Lift Name	Vertical (ft)	Type
A	Mixing Bowl	92	Double
B	Bear	310	Double
C	Bunny Hutch	258	Triple
D	Mid-Station Shuttle	880	Double
E	Valley Triple	1314	Triple
F	Summit Quad	1830	Quad
G	Little Whiteface	1555	Double
H	Mountain Run	979	Double
I	Freeway	1458	Double
J	Kampus Kruiser	40	Surface
K	Cloudsplitter	2432	Gondola (8)

EXISTING TRAILS

Map Ref.	Trail/Area Name				
1	Upper Cloudspin	25	Broadway	47	Calamity Lane
2	Lower Cloudspin	26	Easy Street A	48	Ladie's Bridge
3	Upper Skyward	26	Easy Street B	49	Lower Cap
4	Lower Skyward	27	Boreen	50	Riva Ridge
5	Paron's Run	28	Danny's Bridge [Terrain Park]	51	Cloudspin Cut
6	Excelsior	29	River Run	52	Yellow Brick Road
7	Essex	30	Mixing Bowl	53	Upper Switchback
8	Upper Northway	31	Wolf	54	Lower Switchback
9	Lower Northway	32	Bear [Half Pipe]	55	Crossover Loop
10	Connector	33	Deer	56	Glen
11	Approach	34	Silver- upper	57	Victoria Shoot
12	Empire	34	Silver- lower	58	Lower Empire
13	Upper Mackenzie	34	Silver- Kampus Kruiser	59	Weber's Way
14	Lower Mackenzie	35	Gold	60	1900 Road
15	Upper Wilderness	36	Bronze	61	2200 Road
16	Lower Wilderness	37	Home Run	62	High Country Glade
17	Mountain Run	38	Follies	63	Low Road
18	Upper Parkway	39	Valvehouse Road	64	Tom Cat
19	Lower Parkway	40	Silver Shoot	65	On Ramp
20	Upper Thruway	41	Main Street	66	Wolf Run
21	Lower Thruway	42	Runner Up - upper	67	Summit Express
22	Upper Valley	42	Runner Up - lower	68	Brookside [Terrain Park]
23	Lower Valley A	43	Medalist	69	Cloudsplitter Glade
23	Lower Valley B	44	Round-a-bout	70	10th Mtn Division Glade
23	Lower Valley C	45	Easy Way	71	Draper's Drop
24	Burton's	46	Upper Boreen	72	Parkway Exit

WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP

the LA group

IZA Engineering & Planning
Ivan Zdrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

600 0 300 600 1200 2400

Scale: 1" = 1200' Contour Interval = 5 Feet

NORTH

TITLE:

EXISTING SKI CENTER

DATE: March 2002

FIGURE #: **II-9**

PROJECT NUMBER: 01102 FILE: [whiteface]

2. Alpine Ski Trails – Existing

TABLE II-5 EXISTING TERRAIN SPECIFICATIONS

Map Ref.	Trail/Area Name	Slope Length (ft.)	Avg. Width (ft.)	Buffers Snow.	Lift	Appr. Area (ac.)	Skier Ability Level
1	Upper Cloudspin	2,600	140	*		8.4	Expert
2	Lower Cloudspin	2,500	118	*		6.8	Adv. Inter.
3	Upper Skyward	800	175	*	*	3.2	Expert
4	Lower Skyward	3,800	140	*		12.2	Adv. Inter.
5	Paron's Run	2,200	102	*		5.2	Adv. Inter.
6	Excelsior	5,600	85	*		10.9	Inter.
7	Essex	1,000	83	*		1.9	Expert
8	Upper Northway	1,000	74	*		1.7	Expert
9	Lower Northway	1,700	87	*		3.4	Inter.
10	Connector	700	40	*		0.6	Adv. Inter.
11	Approach	1,900	65	*		2.8	Adv. Inter.
12	Empire	1,600	50			1.8	Expert
13	Upper Mackenzie	1,000	80	*		1.8	Expert
14	Lower Mackenzie	1,400	106	*		3.4	Adv. Inter.
15	Upper Wilderness	500	80	*		0.9	Expert
16	Lower Wilderness	1,400	170	*		5.5	Adv. Inter.
17	Mountain Run	2,400	180	*	*	9.9	Adv. Inter.
18	Upper Parkway	1,800	120	*		5.0	Adv. Inter.
19	Lower Parkway *(Terrain Park)*	2,700	120	*	*	7.4	Inter. *(Expert)*
20	Upper Thruway	1,000	140	*		3.2	Adv. Inter.
21	Lower Thruway *(Terrain Park)*	1,400	110	*		3.5	Inter. *(Expert)*
22	Upper Valley	2,000	90	*	*	4.1	Low Inter.
23	Lower Valley A	1,500	70	*	*	2.4	Low Inter.
23	Lower Valley B	900	200	*	*	4.1	Low Inter.
23	Lower Valley C	1,700	160	*	*	6.2	Novice
24	Burton's	600	30	*		0.4	Inter. *(Expert)*
25	Broadway	1,700	80	*		3.1	Inter.
25a	*Off Broadway*	*200*	*100*			*0.5*	*Inter.*
26	Easy Street A	400	110	*		1.0	Low Inter.
26	Easy Street B	1,700	65	*		2.5	Low Inter.

Map Ref.	Trail/Area Name	Slope Length (ft.)	Avg. Width (ft.)	Buffers Snow.	Lift	Appr. Area (ac.)	Skier Ability Level
27	Boreen	5,600	86	*		11.1	Low Inter.
28	Danny's Bridge *[no longerTerrain Park]*	1,100	70	*		1.8	Expert *(Inter.)*
29	River Run	1,000	75		*	1.7	Inter.
30	Mixing Bowl	800	142	*	*	2.6	Beginner
31	Wolf	1,800	58	*		2.4	Novice
32	Bear *[Halfpipe]*	1,700	150	*		5.9	Expert
33	Deer	950	50		*	1.1	Novice
34	Silver- upper	1,000	73	*		1.7	Low Inter.
34	Silver- lower	1,500	73	*		2.5	Novice
35	Gold	1,800	125	*	*	5.2 *(5.8)*	Novice
36	Bronze	1,650	87	*		3.3	Novice
36a	*Golden Glade*	*1,600*	*100*			*3.8*	*Inter.*
37	Home Run	500	25	*		0.3	Novice
38	Follies	2,400	60	*		3.3	Inter.
39	Valvehouse Road	300	50	*		0.3	Expert
40	Silver Shoot	700	30	*		0.5	Low Inter.
41	Main Street	400	60	*		0.6	Low Inter.
42	Runner Up - upper	400	30	*		0.3	Low Inter.
42	Runner Up - lower	400	30	*		0.3	Low Inter.
43	Medalist	1,600	50			1.7	Low Inter.
44	Round-a-bout	1,100	50	*		1.3	Novice
45	Easy Way	500	25	*		0.3	Low Inter.
46	Upper Boreen	800	40			0.7	Low Inter.
47	Calamity Lane	400	70	*		0.6	Inter.
48	Ladies Bridge	500	50	*		0.6	Inter.
49	Lower Gap	300	50	*		0.3	Inter.
50	Riva Ridge	1,400	25	*		0.8	Adv. Inter.
51	Cloudspin Cut	400	25	*		0.2	Adv. Inter *(Expert)*
52	Yellow Brick Road	300	20	*		0.1	Adv. Inter. *(Expert)*
53	Upper Switchback	600	25	*		0.3	Adv. Inter.
54	Lower Switchback	600	25	*		0.3	Adv. Inter.
55	Crossover Loop	600	25	*		0.3	Adv. Inter.

Map Ref.	Trail/Area Name	Slope Length (ft.)	Avg. Width (ft.)	Buffers Snow.	Lift	Appr. Area (ac.)	Skier Ability Level
56	Glen	450	25			0.3	Adv. Inter.
57	Victoria Shoot	250	100	*		0.6	Adv. Inter.
58	Lower Empire	350	80	*		0.6	Inter.
59	Weber's Way	400	120	*		1.1	Inter.
60	1900 Road	700	25	*		0.4	Adv. Inter.
61	2200 Road	300	60	*		0.4	Adv. Inter.
62	High Country Glade	1,550	150			5.3	Adv. Inter.
63	Low Road	200	70			0.3	Inter.
64	Tom Cat	400	38	*		0.3	Inter.
65	On Ramp	600	25	*		0.3	Adv. Inter.
66	Wolf Run	550	80	*		1.0	Novice
67	Summit Express	550	80	*		1.0	Inter.
68	Brookside *[no longer a Terrain Park]*	1,800	100	*		4.1	Expert *(Inter.)*
69	Cloudsplitter Glade	300	500			3.4	Expert
70	10th Mtn Division Glade	1,000	450			10.3	Expert
71	Draper's Drop	1,700	130	*		5.1	Inter.
72	Parkway Exit *(Terrain Park)*	200	100	*		0.5	Inter. *(Expert)*
TOTAL		**17.78 miles *(18.13 miles)***				**211.4 ACRES (215.6 AC)**	

Note: *italicized* text in this table indicate changes that have been implemented since the original inventory in 2002. These changes have not been included in the following discussions or capacity calculations.

Discussion

The trail network at Whiteface for the most part has been well conceived and implemented particularly in light of the fact that the mountain mass itself is characterized by shifting fall lines and uneven ground cover, which present physical challenges to classic ski area design. The basic configuration of the mountain also presents several challenges with respect to a) the fact that Little Whiteface, which in many ways is similar to a mid-size ski area in itself, intersects the main mountain in the constrained section of the Mid-station, and b) due to the topography of the main mountain the layout of the trails has the appearance of an hour glass where the middle

section is very restricted and the constrained situation there is exacerbated by the intersection of the Little Whiteface trails, the terminals of Lifts G and H, and the location of the Mid-station lodge and restaurant.

In addition to the trails detailed in the table above, there is extensive skiing terrain in the Slides area, accessible via the Summit Quad. There are two designated trail sections, Slides and Slideout. The skiable area is comprised of natural terrain only; there is little or no trail maintenance, no groming, and no artificial snowmaking. As such, the Slides are only open as natural snowfall allows. The terrain is included as officially patrolled trails, but it is not included in the capacity or terrain acreage calculations, as usage varies significantly and is only accessible to expert skiers. As shown in DGEIS Figure II-8, the alpine krummholz vegetation is located at elevations that are higher than the "Slides." Therefore, there is no impact on this vegetation from skiers at the "Slides." Note that the Slides are only open when ski conditions are absolutely perfect. The Slides are open about 7 to 12 days per season, depending on snow conditions. Similar to other trails, the entrance to the Slides is roped off when the Slides are closed. On the occasions when the Slides are open, the ski patrol sweep the trails (i.e., the patrol is the last to ski down the trail to make sure that there are no skiers left on the trail) prior to closing for the day.

A number of improvements have been made following the recommendations of the 1996 UMP. Certain trails (or sections thereof) still require fine tuning in terms of widening, reshaping, and general upgrading in order to a) improve the overall skiing experience, b) provide a greater diversity of terrain for a broader range of user groups, c) interact more effectively with the lifts, and d) provide better on-mountain skier traffic flow.

Although a later section of this report dealing with the upgrading of Whiteface will discuss the specific trail improvements in more detail, SE GROUP makes reference below to general areas of the trail system that do not satisfy the demands of the modern day skier.

- **Lift System C (Bunny Hutch):** The trail work widening specified in the 1996 UMP was completed on most all of the designated areas on Gold, Silver, Silver Shoot and Bronze. As such, the pod is acceptable to modern design standards

- **Lift System E (Valley Triple):** The narrow width of the upper trails restricts the flow of skier traffic in this area where the terrain is shared with skiers using Lift G (Little Whiteface). When lift E is replaced, the proper lift towers and the elimination of a mid station will open up the congested area around the mid-station lodge and improve the traffic flow. *Lift E has been replaced by the new Face Lift detachable quad.*
- **Lift System F (Summit Quad):** Some of the terrain in the Summit Quad pod has been modified since the 1996 UMP for the purpose of obtaining a homologated Downhill trail. Upper Skyward has been widened by 100' through amendments to the 1996 UMP. A new section now called "Weber's Way" was also added, which connects Lower Skyward with Lower Cloudspin. Additional widening still needs to occur on certain trails to meet new FIS homologation standards. The Follies Trail was also completed as designated in the 1996 UMP, which reduces intermediate traffic on Paron's Run.
- **Lift System G (Little Whiteface):** The most significant issue with Little Whiteface is the shortage of intermediate terrain. At present, there is one intermediate trail from the summit, Excelsior, which is heavily overused, especially since the installation of the Gondola. One goal of this UMP Update is to establish at least one more intermediate trail from the summit of Little Whiteface, thereby reducing the skier density on Excelsior and improving the skiing experience for a significant number of intermediate skiers round-tripping on the Gondola.

As shown in the table above, there are 211. acres of ski trails at Whiteface, measuring 93,900 lineal feet. This yields a total of 17.78 miles, which is 7.22 miles less than the maximum of 25 miles stipulated in Section 1 of Article XIV of the New York State Constitution[3]. Of this total 17.78 miles, 1.3 miles (or 6,700 lineal feet) exceed 120' wide, which is 3.7 miles less than the 5-mile maximum allowed in Article XIV. These maximum widths assume that there are exclusions of 50' for a lift and 15' for a snowmaking line which can apply to any given trail on which they appear. ORDA's policy regarding ski trail widths is set forth in a memorandum from Philip H. Gitlen of the Department of Environmental Conservation, dated February 17, 1977. In said

[3] Since the 2002 inventory was completed, trail acreage has been increased to 215.6 acres, measuring 95,700 lineal feet. This yields a total of 18.13 miles, which is 6.87 miles less than the maximum of 25 miles stipulated in Section 1 of Article XIV of the New York State Constitution.

memorandum, the following rules regarding the measurement of trail widths are set forth:

1. Where a lift bisects a trail, an allowance for the clearing required for the lift must be made. In such cases, a minimum of 30 additional feet clearing is required for the lift line.

2. Where trails join together or at the junction of two trails a multiple of the 80 foot width is allowable; and

3. Sufficient clearing adjacent to ski trails can be allowed for the purpose of installing and maintaining snowmaking systems, an appurtenance of a modern ski center.

The sections of trails that exceed the 120 foot *adjusted* width are as follows. The raw trail widths (shown in the table above) reflect actual cleared swaths. Adjustments are made to reflect snowmaking infrastructure and lift lines, to reflect the adjusted trail widths, for the purposes of satisfying the guidelines of Article XIV. The following trails exceed the 120-foot maximum width limit, after adjustments have been made for lift lines and snowmaking infrastructure.

Map Ref	Slope Length	Actual Slope Width
1	2,600	140
3	800	175
16	1,400	170
20	1,000	140
23B	900	200
TOTAL	**6,700**	

FIS – Race and Event Trail Homologations

ORDA has a long history of holding major events at Whiteface Ski Center, including two winter Olympics. Continuing this important heritage is an important element in the mission of ORDA while it is also very important to the health of the regional economy and to the stature of the State of New York. In order to provide the appropriate venues for high quality competition events and training, specific facilities must be made available. Most of these facilities must meet standards that have been

set by governing organizations. In the case of national and international alpine events that may be held at Whiteface, the governing organization is the Federation Internationale du Ski (FIS).

At present, the following slopes and trails are homologated to meet FIS standards. It should be noted that these standards may change over time as equipment, events, and athlete's capabilities evolve.

Event	Course or Venue	FIS Certificate #	Current Status[4]
World Cup Slalom; Men & Ladies	Thruway	5715-225-00	October, 2010
	Mountain Run Olympic	5716-226-00	October, 2010
World Cup Giant Slalom; Men & Ladies	Parkway Thruway Skyward	5717-227-00	October, 2010
World Cup Super G; Men & Ladies	Skyward	4941-124-97	October, 2002
World Cup Downhill; Men & Ladies	Skyward/Boreen/to Base	5421-151-99	October, 2004
Freestyle Aerials	Kodak Sports Park	7006-005-90	
Freestyle Moguls	Wilderness	7006-003-90	

The event organizers at ORDA and management at Whiteface have indicated that there is a need to upgrade and modernize the facilities that are available at the Ski Center for holding alpine competition events. These necessary improvements include on-mountain as well as base area facilities. The improvements and management actions should focus on the following criteria:

- Upgrade all alpine terrain to meet modern requirements for holding national and international events.
- Investigate the potential to create one primary finish area for all alpine race events so that there is a centralized finish arena with all the necessary space and equipment in place. Ideally, media trucks should be able to access this site.

[4] The date when current homologation must be renewed.

- Base facilities should have adequate space and equipment (including the proper electronic transmission capabilities) to handle media and event officials.
- There should be certain conditions that are embodied in the Ski Center UMP that allows for the temporary installation of signs and banners that are used for major events, without the requirement for special permits for each event. This is especially important from the viewpoint of attracting sponsors for these events.

a) Ability Level Breakdown - Existing

For the purposes of Mountain Planning, SE GROUP uses six ability level classifications, whereas North American norms dictate only three ability levels. While the North American norms are in place at Whiteface, planning and terrain considerations require a more precise differentiation than three major levels. As such, this report will refer to the six levels outlined above. The North American norms are included here for easy comparison and conversion.

The six ability levels are defined by the following gradient limits:

Max Gradient	SE GROUP	North American
0% to 12%	Beginner	Green
13% to 25%	Novice	
26% to 30%	Low Intermediate	Blue
31% to 40%	Intermediate	
41% to 50%	Advanced Intermediate	Black
> 50%	Expert	

It should be noted that trail widths have an influence on ability levels wherein narrow widths tend to make trails more difficult to negotiate and wider dimensions will usually make them easier. At Whiteface for example, because of their narrow widths, some of the trails served by Lift C (Bunny Hutch) are classified as low intermediate rather than novice in spite of the fact that their grades are less than 25%.

SE GROUP analyzes terrain ability level distribution by capacity, rather than acreage. Acreage, while a common traditional measurement of distribution, does not accurately reflect the comfortable carrying capacity of the terrain, as the acceptable densities of skiers varies significantly by ability level. For instance,

due to slower skiing speeds, beginner trails can accommodate 20 to 25 skiers at one time on a given acre, while some expert terrain can accommodate only 2 or 3 skiers on an acre of terrain, as skiing speeds, turn shapes, and skier habits are very different for expert skiers and novice skiers. As such, this analysis will compare the actual terrain capacity at Whiteface to industry averages, as shown in the following table.

The ability level classification breakdown by terrain capacity is set forth in the following table. The right column in each ability level represents what can be considered the ideal skill level distribution in Whiteface's skier market; i.e., the aggregate market demand while the left column reflects existing distribution by capacity of each ability level at Whiteface.

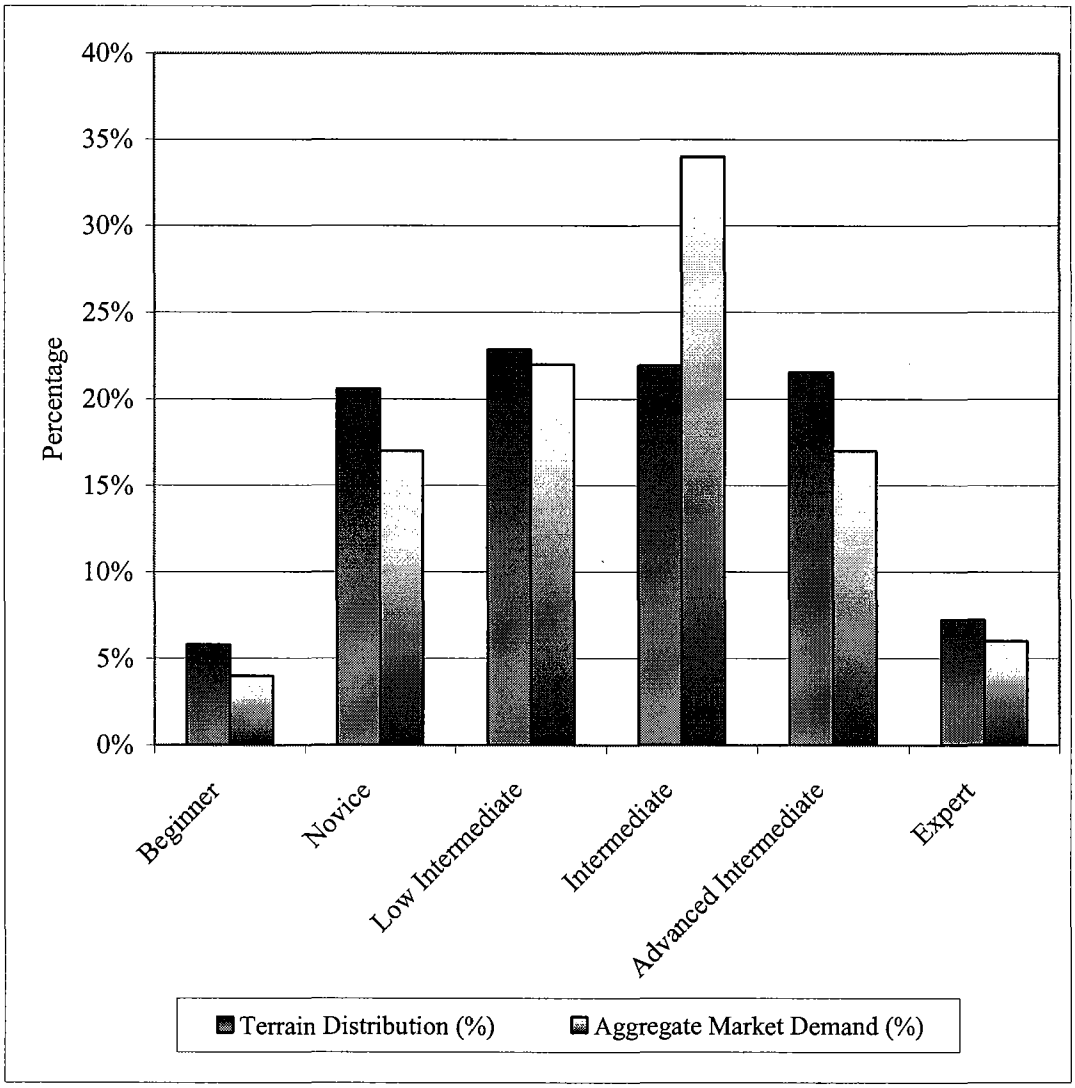
TABLE II-6
EXISTING ABILITY LEVEL DISTRIBUTION

Slope Ability Levels	Terrain Area (ac.)	Terrain CCC (guests)	Distribution by Capacity	Aggregate Market Demand
Beginner	3.4	293	5.8%	4.0%
Novice	20.8	1,040	20.6%	17.0%
Low Intermediate	33.0	1,156	22.9%	22.0%
Intermediate	44.4	1,109	22.0%	34.0%
Advanced Intermediate	64.1	1,090	21.6%	17.0%
Expert	45.6	365	7.2%	6.0%
TOTAL	**211.4**[5]	**5,053**		

The following figure illustrates the comparison of available capacity at Whiteface and the market demand.

[5] Terrain acreage has increased to 215.6 acres since the initial 2002 inventory.

FIGURE II-1
EXISTING ABILITY LEVEL BREAKDOWN



As illustrated in the table above, there is a significant shortage of intermediate terrain. There is an adequate amount of beginner, novice, and advanced intermediate terrain. Low intermediate and expert terrain compare favorably with the market demand. As a result of this analysis and the discrepancy that exists within the intermediate category, the upgrading program will attempt to increase the amount of intermediate terrain.

3. Comfortable Carrying Capacity - Existing

TABLE II-7
COMFORTABLE CARRYING CAPACITY (CCC) – EXISTING[6]

Map Ref.	Lift Name	Slope Length (ft.)	Vertical Rise (ft.)	Actual Design Capacity (persons/hr.)	VTF/Day* (000)	CCC (guests)
A	Mixing Bowl	687	92	800	442	150
B	Bear	1,534	310	1,200	2,232	350
C	Bunny Hutch	1,792	258	1,600	2,312	370
D[7]	Mid-Station Shuttle	4,140	880	1,200	6,336	540
E[6]	Valley Triple	6,265	1,314	1,670	10,698	910
F	Summit Quad	4,706	1,830	1,500	18,254	760
G	Little Whiteface	4,515	1,555	1,100	10,776	550
H	Mountain Run	2,475	979	1,200	7,401	390
I	Freeway	4,220	1,458	800	6,532	320
J[8]	Handle Tow	450	40	400	96	50
K	Gondola	8,487	2,432	1,800	14,774	680
TOTAL				**13,270**	**79,853**	**5,070**

** VTF/Day: Represented in thousands, VTF/Day measures the number of guests the lift is able to transport 1,000 vertical feet each day. VTF/Day = [(Lift PPH X Lift Vertical Rise) / 1,000] X Hours per day*

Discussion

Comfortable Carrying Capacity (CCC) is defined as the optimum level of utilization of a ski area (the number of skiers that can be accommodated at any given time) which guarantees a pleasant recreational experience while at the same time preserving the quality of the environment.

The CCC figure is based on a combination of the uphill hourly capacity of the lifts, the downhill capacity of the trail systems, the total vertical rise of the lifts, and the

[6] Due to changes in mapping technology and a more comprehensive understanding of all of the variable factors needed to calculate CCC, there are some minor variations between the CCC calculations of the 1996 UMP and the calculations in the 2002 update.

[7] These two lifts have been removed and replaced with the Face Lift Quad (as specified in Table IV-4) – proposed lift F).

[8] This handle tow has been removed and replaced with a conveyor lift (as specified in Table IV-1 – proposed lift J).

total amount of time spent in the waiting lines, on the lifts themselves, and in the downhill descent.

The capacity figures are based on maximum waiting lines of ten minutes on Valley Triple (E) and the Gondola (K); seven to eight minutes on Summit Quad (F), Little Whiteface Double (G), Mountain Run (H), and Freeway (I); and three to five minutes on the Mixing Bowl (A), Bear (B), Bunny Hutch (C), and the Handle Tow (J). It is a common practice among ski area operators, and one that has been generally accepted by the ski industry, to exceed the stated CCC on approximately ten to twenty days during the season by a total of 25%. In the case of Whiteface, this represents an increase over the CCC of almost 1,270 skiers, from 5,070 to 6,340 during those days. While this is an acceptable policy at many resorts, it is not believed that Whiteface can comfortably accommodate that quantity of skiers. Given the mountain's unique layout, Whiteface will find significant crowding and skier flow issues on days when visitors exceed the CCC of 5,070. Therefore, in this UMP, an emphasis will be placed on establishing the proper *balance* of capacities between the mountain, guest services and buildings, parking, and other resort infrastructure to ensure that all aspects of the resort operation can comfortably accommodate 5,070 guests.

a) Terrain Density – Existing

One of the critical elements in estimating total capacity and a means of making certain that the CCC figures are reasonable, is to determine the density of skiers per acre of skiable terrain. Using the trail and capacity figures developed above, the density breakdown for the ski area is as follows.

TABLE II-8
EXISTING TRAIL DENSITY ANALYSIS

Lift			Guest Dispersement				Density Analysis				
			Guests				Terrain				
Ref.	Name	CCC	Support Facility/ Milling	In Lift Lines	On Lift	On Terrain	Area (ac.)	Actual Density (guests/ac)	Desired Density (guests/ac)	Diff. (+/-)	**Density Index (%)**
A	Mixing Bowl	150	38	32	18	62	3.9	16	21	-5	**76**
B	Bear	350	88	80	49	133	11.6	11	17	-6	**66**
C	Bunny Hutch	370	93	64	91	122	12.8	10	13	-3	**76**

Lift			Guest Dispersement				Density Analysis				
			Guests				Terrain				
Ref.	Name	CCC	Support Facility/ Milling	In Lift Lines	On Lift	On Terrain	Area (ac.)	Actual Density (guests/ac)	Desired Density (guests/ac)	Diff. (+/-)	**Density Index (%)**
D[9]	Mid-Sta Shuttle	540	135	112	132	161	15.1	11	9	1	**112**
E[8]	Valley Triple	910	228	181	222	279	22.3	13	10	3	**128**
F	Summit Quad	760	190	190	224	156	43.8	4	4	-1	**79**
G	Little Whiteface	550	138	132	135	145	41.8	3	4	-1	**82**
H	Mountain Run	390	98	126	89	77	16.0	5	5	0	**96**
I	Freeway	320	80	85	97	58	21.9	3	7	-4	**39**
J[10]	Handle Tow	50	13	16	9	12	0.8	14	25	-10	**58**
K	Gondola	680	170	135	105	270	21.5	13	8	4	**154**
TOTAL		5,070	1,271	1,153	1,171	1,475	211.4[11]	7.0	8.8	-1.8	**79**

The table above is derived from assumptions about which trails are serviced by which lifts, the actual daily capacity of lifts, and the comfortable density of skiers per acre by ability levels. The table accounts for individuals using the support facilities, in the lift mazes, riding the lifts, and on the terrain. As an example, the Summit Quad services 43.8 acres of terrain. Given that this lift can accommodate 760 skiers *per day*, it is assumed that, on average, 190 of these visitors are using support facilities at any given time. 190 skiers are in the lift line, 224 are riding the lift, and 156 are actually on the terrain. Given the total pod acreage of 43.8, there are an estimated 3.6 skiers per acre. The *desired* terrain density, taking into consideration the type of terrain and the anticipated ability level of skiers in that pod, is 4.5. This shows that the actual density of skiers is slightly lower than what is desired in the Summit Quad pod. Mathematically speaking, the density index is 79, which means that actual density is 79% of the desired density. A density index greater than 100 indicates that there is not enough terrain to service the skier ability level and current lift capacity. A density index less than 100 indicates that more skiers could be comfortably accommodated on the terrain, and the lift capacity is not adequate to service the expanse of terrain in the pod. This

[9] These two lifts have been removed and replaced with the Face Lift quad (as specified in Table IV-5 – proposed lift F).

[10] This handle tow has been removed and replaced with a conveyor lift (as specified in Table IV-5 – proposed lift J).

[11] Terrain acreage has increased to 215.6 acres since the initial 2002 inventory.

analysis is very important in regards to determining which pods have a terrain deficit, or which lifts need a capacity upgrade.

Overall, the terrain densities at Whiteface are appropriate relative to the skier ability levels and terrain distribution. There are discrepancies, however, in several of the lift systems between desired terrain density and capacity of the lift system.

Of the eleven lift systems listed above, two have trail densities that closely match the desired density. Little Whiteface is operating at 82% of acceptable density, while Mountain Run is operating at 96% of acceptable density. Four lifts (A, B, C, I, & J) are operating less than the desired density. This may require upgrades in lift capacity to maximize efficient use of the terrain. Three lifts (D, E, K) are operating at higher skier densities than is acceptable. An effort will be made to adjust lift capacity, skier distribution, and increase available terrain in these pods to alleviate heavy skier traffic. This analysis concludes that adjustments either in the hourly capacity of the lift or the amount of trail acreage served would provide a better balance in several pods.

The addition of the Gondola has significantly changed the skier flow patterns on the mountain, and resulted in high skier densities, particularly on Excelsior, the only intermediate trail from the summit of Little Whiteface. This is quantified by the density index of 154, which reflects the low supply of intermediate terrain on Little Whiteface, as well as the high daily capacity of the gondola. It will be a goal of this UMP Update to improve this situation.

It is more desirable to have skier densities that are lower than the desired densities since it provides a higher quality skiing experience at a relatively low cost. However, one of the major goals of the upgrading program is to create a better density balance throughout the mountain complex which will still retain the quality skiing experience while at the same time helping to maximize profit potential through a justifiable increase in skier capacity on certain lift systems.

4. Grooming - Existing

The following tables depict recommendations in regards to terrain grooming at Whiteface. It is recommended that the following trails *not* be groomed on a daily basis:

TABLE II-9
TERRAIN NOT GROOMED

Trail	Name	Acreage
4	Skyward (Lower)	12.2
7	Essex (Upper)	1.9
8	Northway (Upper)	1.7
12	Empire	1.8
13	Mackenzie (Upper)	1.8
14	Mackenzie (Lower)	3.4
62	High Country Glade	5.3
69	Cloudsplitter Glade	3.4
70	10th Mtn Division Glade	10.3
TOTAL		**41.8**

The following table summarizes the grooming vehicles in use at Whiteface:

TABLE II-10
GROOMING VEHICLE INVENTORY[12]

Vehicles	Year	Condition
Pisten Bully 200	2001	Very Good
Pisten Bully 260DW	1995	Good
Bombardier ME Plus	1995	Fair
LMC 3700C	1992	Poor
Pisten Bully 200	1999	Very Good
Pisten Bully 300 (Winch)	1999	Very Good
Pisten Bully 280	1996	Very Good

[12] A Pisten Bully 300 in excellent condition was added to the fleet in 2003. A Pisten Bully EDGE in excellent condition was added to the fleet in 2004.

TABLE II-11
GROOMING – TERRAIN & VEHICLES

Total Skiable Acreage	211.4[13]
Acres Not Groomed Daily	41.8
Total Groomed Acreage	169.6
Ratio of Groomed Acreage to Vehicles	30 to 1
Number of Vehicles Required	6
Number of Vehicles Available	7
Vehicle Surplus (Deficit)	**1**

The ratio of one grooming vehicle for every 30 acres of skiable terrain reflects the predominance of advanced and expert terrain at Whiteface and the fact that it is necessary to use winch cats on some of the trails due to their steep grades. It assumes a single shift operation with overtime allowed when required to complete the grooming cycle.

Given the amount of groomed terrain, there is a surplus of one grooming vehicle.

C. Existing Snowmaking System

1. General Description

The existing snowmaking system at Whiteface has a compressed air capacity of 29,500 cubic feet per minute (cfm), comprised of a variety of water cooled electric centrifugal and rotary screw compressors located in Pump House 2 (PH-2) and a diesel centrifugal compressor installed at the maintenance garage. Water for snowmaking operations is withdrawn from the West Branch of the Ausable River and pumped to PH-2, where it passes through filter strainers that eliminate sand, silt, and organics. From PH-2 it is pumped to the mountain distribution system and upper Pump Houses 3 and 4 (PH-3, and PH-4). A stream gauging station has been constructed (completed fall 2001) in the West Branch of the Ausable River near the existing intake structure to measure stream flow during the snowmaking season. With the installation of this structure Whiteface will be required to maintain a minimum base flow of 38 cubic feet per second (cfs) in the river immediately downstream of the intake. ORDA and DEC have adopted a Memorandum of

[13] Total skiable acreage has been increased to 215.6 acres since the initial 2002 inventory.

Understanding (MOU) which establishes the methods and procedures by which water for snowmaking operations can be withdrawn from the river while maintaining the integrity of this surface water resource (See Appendix V). Flow monitoring of the river will minimize the impacts to the river's aquatic ecology and properly manage the fishery during times of low flow.

There are four (4) sections of the water system:

- River Withdrawal 6000 gpm
- Lower Mountain System 5,100 gpm
- Mid Mountain System 3800 gpm
- Upper Mountain System 2850 gpm

The average system air/water ratio is approximately 8:1.

The older mountain distribution system is comprised of steel pipe coupled by victaulic fittings. The newer mountain distribution system is comprised of welded steel pipe. All piping is installed on the surface except on trail crossings and the lower sections of the bottom system, where the pipe is shallow buried. The routing of piping and generalized water flow directions is indicated on Exhibit IV-3.

Snowmaking operations use a variety of snowguns at this time, with a primary concentration of Ratnik Sno-Giants, Ratnik II + II's, K-3000's, HKD Towers, and two (2) SMI Pole-Cats. Whiteface uses 2" hose and hydrants to connect the guns to the water and compressed air distribution system.

2. Condition of Equipment

An inventory of major snowmaking equipment is included in Appendix M. In general, the equipment is very well maintained and operational. Specific comments are:

- The existing rotary screw compressors are nearing the end of their life expectancy. Increased condensate and oil carryover exists as the compressor's age and snow production efficiency decreases.
- The pumping system is in good mechanical condition with significant upgrades occurring in the past 5 years.

While there is no immediate need to replace the rotary screw compressors, this type of machine is less efficient than the centrifugal compressors that are common in large modern snowmaking installations. This issue will be addressed in Section IV of the UMP.

3. Snowmaking Systems Limitations

a) System Issues

One critical limitation to the operation of the snowmaking plant at Whiteface is the lack of process control, automation, and management information.

Operational data is critical to:

- Efficiently operate snowmaking equipment.
- Provide management critical real-time and historical data.
- Allow for sequencing of pumps and compressors.
- Identify problems before a crisis exists.
- Provide maintenance scheduling.
- Reduce system and snowgun start-up time.

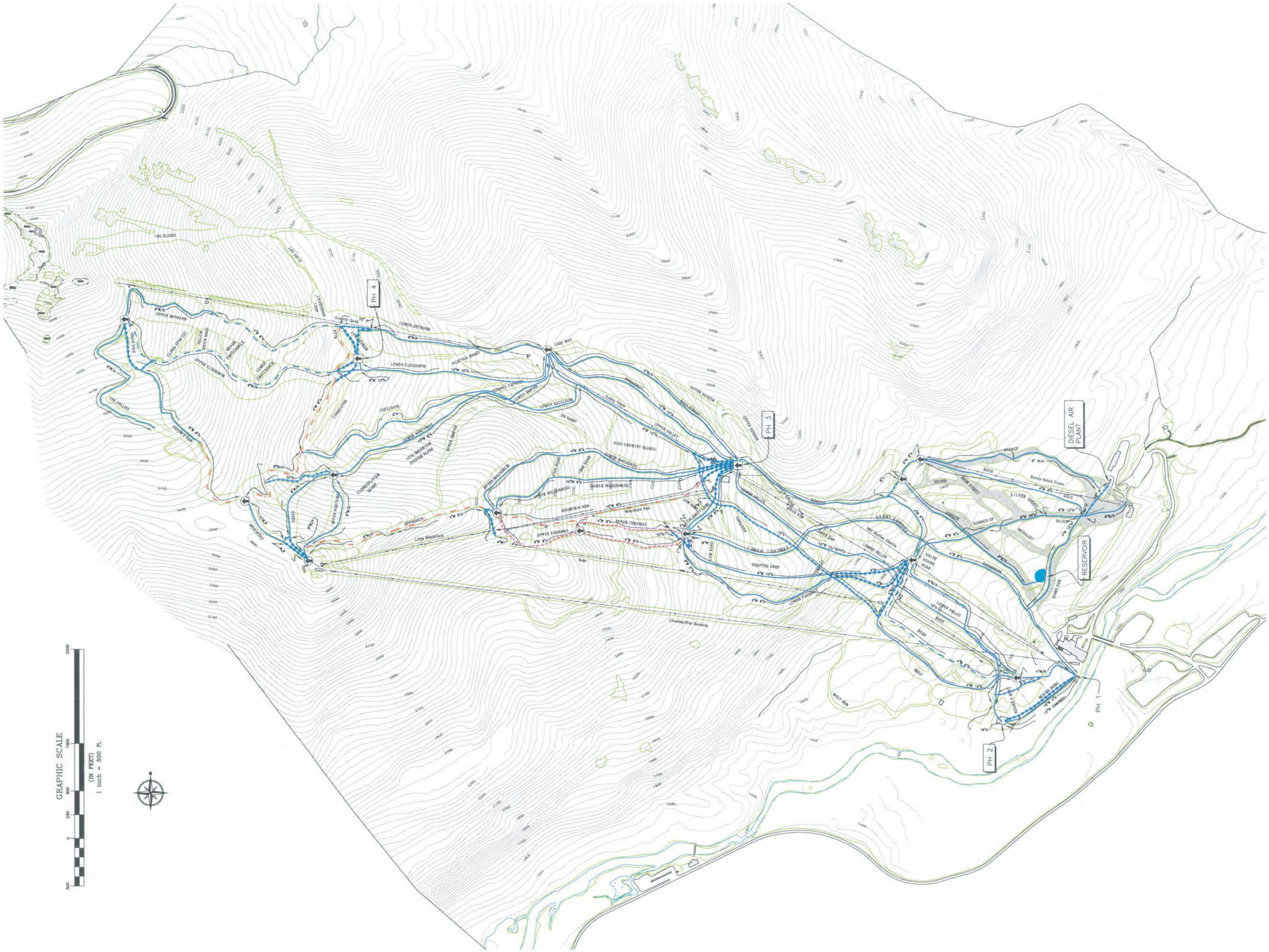
Another system limitation is the minimal integration of energy efficient snowmaking technology. Recent advances in fan and external mix tower gun technology has significantly reduced operational expenses. Whiteface employs a minimal amount of this technology to produce snow, whereas many competitors have significantly reduced energy and labor costs through integration of these technologies.

b). Operational Issues

The following limitations were identified with Whiteface personnel as existing operational issues:

- Significant frazil ice conditions in PH-1 river intake pit building up on the pump intake screen causing cavitation and potential damage to pumps. This creates a condition where only two (2) pumps can operate simultaneously reducing system capacity to 4000 gpm. Solutions to this problem are being investigated.
- Water level too low in the wet well of PH-1 causing vortexing around the pump intakes which could cavitate and damage intake pumps.
- Operational issues on the remote diesel compressor.

- Pressure control valve system at PH-3 requires tuning and adjustment.
- Lack of automation and process control of plant equipment and facilities.



REVISIONS				
No.	DATE	DESCRIPTION	DRAWN BY	APP'D BY

NOTES / LEGEND

- ASBUILT PIPING
- ASBUILT PIPING AIR ONLY
- ASBUILT PIPING WATER ONLY
- LEGACY PROPOSED PIPING
- PUMP HOUSE
- VALVE HOUSE
- ASBUILT PIPING
- ASBUILT PIPING
- ASBUILT PIPING

DRAFT

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

WHITEFACE

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CLIENT

WHITEFACE MOUNTAIN RESORT

PROJECT TITLE

WHITEFACE SNOWMAKING SYSTEM

DRAWING TITLE

ASBUILT MOUNTAIN PIPING FIGURE II -10

Designed by	Approved by
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Project no.	Drawn by
115.1	J. WILKINSON
Revision	Scale
2/22/02	1" = 500'-0" D SIZE
Drawing no.	Sheet no.
WF-GE-01.DWG	__ - __

D. Inventory of Man-made Facilities

1. Buildings

There are 29 buildings on the Whiteface property that were evaluated, all of which are currently used by the mountain in some capacity. The buildings range in size from the three story base lodge with a total of 52,848 square feet to the snowmaking valve houses that can be as small as 20 square feet. In all cases, the buildings employ a variety of construction materials and are in a varying state of physical condition. In general, the buildings that service the public are in fair to good condition and show no signs of overstress or excessive deterioration. That is, the buildings are safe for everyday use and require only minor repairs and maintenance.

This section has been organized into four categories, one for each of the major building use groups. The categories include: primary buildings, mountainside buildings, maintenance buildings, and snowmaking buildings. Included in Appendix F are details regarding the building sizes and construction materials. This section of the report covers the findings and conclusions concerning the general serviceability and condition of the buildings.

a) Primary Buildings

The primary buildings include: Base Lodge, Mid-station Lodge, Easy Acres Lodge, and the Alpine Training Center. All of these buildings are used daily by the Ski Center employees and by customers. For that reason, their overall structural integrity is very important. The buildings are in good condition with localized areas of deterioration. Typically, the deterioration is due to exposure to the elements and deferred maintenance, which results in the need for maintenance type repairs. For example, the Base Lodge has experienced deterioration of wood fascia, handrails, and window frames, while at the Mid-station Lodge checking of the timber framing and deterioration at timber column bases is visible. All of these items, although not a threat to the structural integrity of the buildings at the present time, must be repaired to prevent further deterioration and possible damage to the structural integrity of the building.

b) *Mountainside Buildings*

The mountainside buildings include: four race start buildings, two race finish buildings, three warming huts, and the bus-lot ticket booth. The four race start buildings are only used during the ski season and only during downhill and slalom races, and even then very few people are in the buildings at one time. The race finish buildings, as the name implies, are also used during races; however, portions of the buildings have also been converted to office and storage space.

The warming huts and the bus-lot ticket booth are used by Ski Center employees during the ski season. In all cases these buildings need maintenance work to replace damaged and missing items and to generally improve appearance. For example, fascia and trim pieces are missing or have been damaged, metal roof and wall panels are dented, floors are experiencing deterioration due to exposure to water and cold, and paint in many cases is old and deteriorated. The structural integrity of these buildings has not been compromised by the deficiencies; however, if the deterioration is allowed to continue, structural members may be weakened.

The Porcupine Lodge structure was built in 1933± and is not utilized currently. This lodge is not shown on the Whiteface ski trail map, the lodge is closed and in need of repair. No skier services are available here. Nothing is proposed here at this time. Any potential future actions relating to the Porcupine Lodge would be the subject of a future UMP update and SEQRA review.

c) *Maintenance Buildings*

The maintenance buildings include: the maintenance garage, Don Straight's building, and two pole barns. Unlike the other buildings associated with the mountain, these buildings are only used by employees, and with the exception of the maintenance garage, they are used primarily for storage. The maintenance garage is used primarily to service the Ski Center trucks, plows and mountain grooming equipment. In addition, the building is used for electrical and mechanical repair shops and the servicing of equipment used in the daily operation of the mountain. The building is in fair condition, requiring maintenance work to clean and repair areas that have deteriorated or damaged during the life of the building.

Don Straight's building is in good condition, requiring only minor repair work. The pole barns are in poor condition. The structural support framing of both barns has deteriorated and in some cases has broken down, requiring extensive rehabilitation or replacement. However, because the barns are not used for anything more than storage, the importance of their structural integrity is low. That is, the repairs are not critical to the operation of the Ski Center, nor do they pose a substantial threat to the well being of an employee or customer. For that reason, the repairs may be postponed until the buildings are replaced.

The maintenance garage and the Don Straight building contain a total of 9,660 square feet and 360 square feet, respectively. The breakdown of this available space, and a comparison with what is required is shown in Table II-12 below.

TABLE II-12
MAINTENANCE FACILITIES

Use	Available Square Feet	Required Square Feet
Major maintenance, repair and vehicle storage – 4 vehicles	5,940[14]	4,800
Parts, supplies, storage, office, toilets, etc.	0[15]	800
Other vehicle repair and storage	0[2]	2,200
Shop space - lifts, carpentry, electrical, etc.	4,080	3,000
TOTAL	**10,020**	**10,800**

Source: SE GROUP, Whiteface

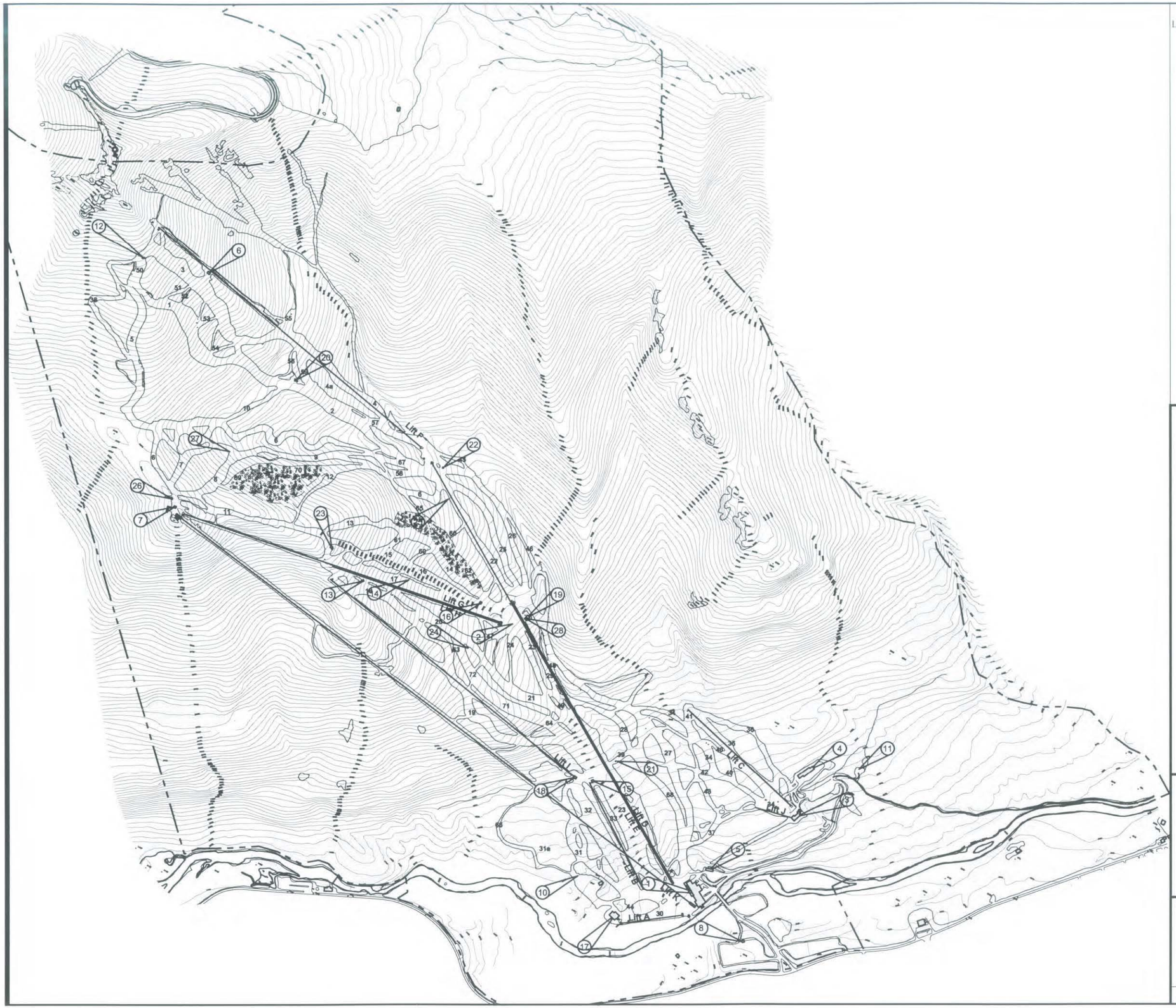
The two pole barns contain a total of 2,900 square feet with 1,700 square feet located near the Fox Trail and 1,200 square feet at the bottom of parking lot #4. Storage space is needed for many items including race supplies that were purchased for the Goodwill Games. Over 4.5 miles of B netting and thousands of fiberglass net poles, 4-5 meter wide A nets, safety pads, etc., are all currently jammed into shipping containers which makes it difficult to access and inventory.

In addition, not all of the items fit into these containers. An 80-foot by 40-foot pole barn would be adequate for proper storage of these items.

[14]Includes 5,580 square feet in the garage and 360 square feet in the Don Straight building.

[15]Included in the 5,940 square feet.

An additional two bays for vehicle and Snow Cat maintenance bays are needed to accommodate the existing fleet. An additional 60-foot by 20-foot maintenance building would provide for equipment storage and increase the length of Snow Cat and equipment life spans.



LEGEND

1. Main Lodge
2. Mid-Mountain Lodge
3. Kids Kampus Lodge
4. Vehicle Maintenance Garage
5. Alpine Training Center
6. Race Building Ladies SG & Downhill Start
7. Butler/First Aid Building
8. Bus Lot Ticket Booth
9. Don Straight's Building (Not Shown)
10. Pole Barn Fox
11. Pole Barn Lot #5
12. First Aid
13. Race Building Men's GS and S Start
14. Race Building Ladie's GS and S Start
15. Race Building Downhill Finish
16. Race Building Slalom Finish
17. Snowmaking Pump House #1
18. Snowmaking Pump House #2
19. Snowmaking Pump House #3
20. Snowmaking Pump House #4
21. Snowmaking Valve House A
22. Snowmaking Valve House B
23. Snowmaking Valve House C
24. Snowmaking Valve House D
25. Snowmaking Valve House E
26. Snowmaking Valve House F
27. Snowmaking Valve House G
28. Snowmaker's Warming Hut

WHITEFACE

Prepared For:

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY
LAKE PLACID, NEW YORK

Prepared By:

SE GROUP

the LA group

IZA Engineering & Planning
Ivan Zdrahal Associates, PLLC

COMPREHENSIVE MANAGEMENT AND PLANNING REVIEW AND UNIT MANAGEMENT PLAN

600 0 300 600 1200 2400

Scale: 1" = 1200' Contour Interval = 5 Feet

NORTH

TITLE:

BUILDING LOCATION MAP

DATE: March 2002

FIGURE #: II-11

PROJECT NUMBER: 01102 FILE: [whiteface]

d) Snowmaking Buildings

The snowmaking buildings are limited to the pumphouse and valve houses located at various locations on the mountain. The pumphouses are typically constructed using pre-engineered metal buildings and are in good condition. Some of the metal panels have been dented while others have developed minor leaks, both of which can be easily repaired. The valve houses vary in size, construction, and condition. The valve houses are in fair condition, requiring some maintenance. However, because the use of the buildings is critical to the efficient operation of the ski center, those in the worst condition should be repaired immediately and the remainder repaired on a regular maintenance schedule.

In general, the buildings at Whiteface Mountain Resort are in good condition requiring only maintenance and other minor repairs. Where more extensive repairs are required, for instance at the pole barns, the importance and the value of the structure should be considered prior to commencing design and construction.

2. Visitor Services and Ski Center Operations

a) Facilities Overview

Existing visitor services and Ski Center operations are provided in the main base area, as well as at Easy Acres and in the Mid-station Lodge. The following discussion outlines the general function and layout of the base area and on-mountain buildings and their relationship to the ski activities.