MOUNT VAN HOEVENBERG RECREATION AREA UNIT MANAGEMENT PLAN

VOLUME I

.

DECEMBER 1986

MOUNT VAN HOEVENBERG

RECREATION AREA

UNIT MANAGEMENT PLAN

VOLUME I

NEW YORK STATE Department of Environmental Conservation and Olympic Regional Development Authority

Mario Cuomo Governor Henry G. Williams Commissioner, DEC Ned Harkness President, ORDA

MEMORANDUM FROM HENRY G. WILLIAMS, Commissioner

New York State Department of Environmental Conservation

DEC 23 1986

The R TO: FROM: Hank

SUBJECT: Unit Management Plan Mt. VanHoevenberg Recreation Area

The final Unit Management Plan for the Mt. VanHoevenberg Recreation Area, which has been developed in consultation with the Adirondack Park Agency, is consistent with guidelines and criteria of the Adirondack Park State Land Master Plan, involved citizens participation, is consistent with the State Constitution, Environmental Conservation Law, rules, regulations and policy, and projects stated management objectives of such area for a five-year period, accordingly is hereby approved and adopted.

Approval of this plan is given with the understanding that the implementation of the ammonia spill control program outlined in Appendix K will occur prior to December 31, 1988.

cc: L. Marsh

MOUNT VAN HOEVENBERG RECREATION AREA UNIT MANAGEMENT PLAN

AND

FINAL ENVIRONMENTAL IMPACT STATEMENT

This Unit Management Plan is also a Final Environmental Impact Statement. The complete plan is for an Intensive Use Area and consists of Volumes I and II. It has been developed jointly by the New York State Department of Environmental Conservation and the Olympic Regional Development Authority in consultation with the Adirondack Park Agency. For information, contact Mr. Thomas Monroe, Regional Director, Department of Environmental Conservation, Ray Brook, New York 12977 (telephone 518-891-1370). The Mount Van Hoevenberg Recreation Area is located in the Town of North Elba, Essex County.

Contributors to the Plan and Statement were units of the Olympic Regional Development Authority including General Counsel, and managers of the Mount Van Hoevenberg Recreation Area. Contributors within the Department of Environmental Conservation included the Regional Director's staff at Ray Brook in the Division of Lands and Forests, Division of Fish and Wildlife, and Bureau of Real Property. Contributors from the Department of Environmental Conservation headquarters at Albany included the State Environmental Quality Review Act committee and Counsel for Lands and Forests. The Adirondack Park Agency staff provided review comments. Thomas shearer, Consultant, was engaged to compile the Plan/Statement.

A public hearing of the Draft Unit Management Plan and Draft Environmental Impact Statement was held at the Olympic Center, Lake Placid, New York, on May 8, 1986, at 7:00 p.m. The Unit Management Plan and Final Environmental Impact Statement was accepted on June 20, 1986. This Plan/Statement contains a draft amendment pertaining to the Olympic Regional Development Authority's decision to construct a 16' x 40' extension to the existing cross-country ski lodge rather than construct a new 48' x 60' cross-country ski lodge situated at a new location as originally described. This amendment, in effect, will eliminate the need to remove about thirty (30) trees and will result in reduced construction costs due to the smaller area of the proposed building. This decision will still allow for an increased carrying capacity for recreational skiers although at approximately 24% compared to the initially described 40% increase.

SUMMARY

UNIT MANAGEMENT PLAN/ENVIRONMENTAL IMPACT STATEMENT

FOR

MOUNT VAN HOEVENBERG RECREATION AREA

VOLUME I

Section 816 of the Adirondack Park Agency Act directs the Department of Environmental Conservation to develop, in consultation with the Agency, individual unit management plans for each unit of land under its jurisdiction classified in the Adirondack Park State Land Master Plan. Unit plans must conform to the guidelines and criteria set forth in the State Land Master plan. The unit management plan for the Mount Van Hoevenberg Recreation Area, which is classified by the Agency as an Intensive Use Area, is in two (2) volumes. The Unit Management Plan Volume I and II also comprise an Environmental Impact Statement under Article 8 of Environmental Conservation Law pertaining to the State Environmental Quality Review Act.

The Unit Management Plan presumes continued operation of the Mount Van Hoevenberg Recreation Area by the Olympic Regional Development Authority. The Unit Plan enables assessment of the Recreation Area operation by providing the environmental setting -- Inventory of Facilities, Organizational Structure and Management Objectives. The Unit Plan identifies issues, needs and priorities for projected maintenance, operation and capital investment in the area for the next five (5) year management period.

The effect of proposed management objectives and actions include:

Effect of Objective 1: International athletes and New York State recreation users expect and must be assured that their patronage at Mount Van Hoevenberg Recreation Area is rewarded by safe use.

Effect of Objective 2: Sponsoring summer season events and activities utilizing existing facilities will contribute to increased year-round public use and revenues opportunity.

Effect of Objective 3: Should interior parcels of private owned lands be made available and acquired by the State, the acreage would be added to the Intensive Use Area to assure continuity of program at Mount Van Hoevenberg.

Effect of Objective 4: Continuation of maintenance and operation at a constant level over the management period will contribute a stabilizing effect on the Olympic region employment, economics, public use and administration.

Effect of Objective 5: The modernization of facilities at Mount Van Hoevenberg improves athlete safety, adds to quality recreation and training, increases accessibility to the handicapped and enhances the local economy.

No significant adverse environmental impacts are expected to occur through implementation of the Mount Van Hoevenberg Unit Management Plan over the next five (5) years. The construction of two (2) new buildings and extension of 200 yards of roadway will require cutting trees on lands under permanent easement. There is minimal visual impact resulting from capital construction since the location of the proposed new facilities cannot be observed from Route 73. New construction will be accomplished on less than two acres and is not expected to have a significant effect on fish, wildlife, vegetation, noise level, air quality or soil stabilization. The modernization of facilities and continuation of maintenance and operation at a constant level over the management period is viewed as having a favorable effect on the general economy of the Olympic region and public use of the Mount Van Hoevenberg Recreation Area.

For content of Draft Environmental Impact Statement see:

Foreword - Volume I

Summary - Volume I

Environmental Setting - Volume I, Sections I, II, III

Description of Action - Volume I, Sections IV, V

Significant Environmental Impacts - Volume I, Sections III, V

Unavoidable Adverse Environmental Impacts - Volume II, Appendix J

Irreversible and Irretrievable Commitments of Resources - Volume II, Appendix J

Growth Inducing Aspects - Volume II, Appendix J

Effects on the Use and Conservation of Energy - Volume I, Section III D 2 h

Mitigation Measures to Minimize Environmental Impacts - Volume II, Appendix J

Alternatives - Volume II, Appendix I

EXHIBIT 1 HIGHWAY MAP TO MOUNT VAN HOEVENBERG



INTENSIVE USE AREA BOUNDARY ON CONTOUR MAP EXHIBIT 2



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MOUNT VAN HOEVENBERG WINTER RECREATION AREA MANAGEMENT PLAN

I. ENVIRONMENTAL SETTING - INTRODUCTION

A. Overview

Mount Van Hoevenberg Recreation Area is a New York State-owned facility operated by the Olympic Regional Development Authority to provide the public with intensive forms of recreation for both the spectator and participant. It is classified as an "Intensive Use Area" under the Adirondack Park State Land Master Plan, and is located on lands which are under the jurisdiction of the Department of Environmental Conservation.

The Mount Van Hoevenberg Recreation Area currently benefits winter recreationist and competitive athletes involved in bobsledding, luge, cross-country skiing and biathlon sporting activities. It is maintained as a winter sports facility meeting international standards under developed and competitive conditions.

B. Area Description

1. General Location

The Mount Van Hoevenberg Recreation Area is located approximately seven miles southeast of the Village of Lake Placid off Route 73 in the Town of North Elba, Essex County. A paved access road about one mile long leads southwest from Route 73 to the heart of the area. See Map Exhibits 1 and 2.

2. Property Description

a. Acreage

The Mount Van Hoevenberg land area classified as Intensive Use totals 1593.8 acres. New York State title to this acreage is divided into three types:

1. Forest Preserve

Lands acquired as Forest Preserve and managed according to Article XIV of the State Constitution amount to 917.77 acres. See acreage illustrated in Exhibit 2a.

2. Permanent Easement

By deed dated November 18, 1965, the State purchased from the Town of North Elba a permanent easement covering 323.45 acres. This easement was acquired for the purpose of developing, operating and maintaining a recreational area and





facilities thereon. Acquisition is furthur described in Volume II, Appendix A.

3. Special Use

Lands purchased by the State under the 1960 and 1962 Park and Recreation Land Acquisition Bond Acts were acquired to allow special recreational uses and comprise some 352.28 acres. The Department of Environmental Conservation has administratively classified these lands as "non-forest preserve". Neither the Adirondack Park State Land Master Plan nor this plan takes a position on the constitutionality of this administrative classification. These lands are referred to in this plan as "special use lands".

b. Other Easement

A temporary easement currently exists to allow segments of cross-country ski trails to cross the privately owned land of Mr. Harry Eldridge in Sub 3 of Lot 8. This easement is shown on Exhibit 2b.

C. History of Land Unit

1. Bobsled

The Mount Van Hoevenberg Recreation Area traces its origins back to 1929 when the State Legislature passed an act authorizing the construction of a bobsled run on Forest Preserve lands situated on the Western Slopes of the Sentinel Range. This legislation was met with much opposition and litigation culminating in the so-called Crane decision which declared the 1929 act unconstitutional. Anticipating such a ruling, the Legislature, in 1930, passed a new statute setting up funds and procedures for the construction of a bobsled run on lands for which an easement might be required; this ultimately resulted in the construction of the bobrun on an easement acquired by the State on the slopes of Mount Van Hoevenberg.

The bobsled run was used five times for world championship races in addition to the III and XIII Olympic Winter Games. It was approved in 1968 by the Federation Internationale de Bobsleigh et Tobboganing for future international competition. The bobsled run was operated continuously by the State from 1932 until the winter of 1971-72, with the exception of the war years of 1942-45. In 1971, as a result of fiscal restraints, the Mount Van Hoevenberg bobsled run was shut down and did not operate for the 1971-72 winter season.

During 1972, an agreement was reached with the Essex County Committee for Economic Development, an entity funded by the Federal Office of Economic Opportunity, to enable the Committee to manage and operate the bobsled run on a year-to-year basis for the purpose of creating and maintaining employment. The run was operated since the winter of 1972-73 until the winter of 1978-79 under the sponsorship of the Committee. In 1978, the Department of Environmental Conservation resumed management of the complex, operating the facility through an annual appropriation from the Natural Heritage Trust.

The bobrun, originally opened as a 1½ mile course and was shortened in 1936 to the current one mile length. Early on, the average number of operating days per season was 28. To guarantee the 1980 Olympic bobsled event, the full mile bobsled run was completely refrigerated, extending function to about 100 days annually.

2. Cross-Country Skiing

In order to stage the Kennedy International Winter Games in 1969, a new and modern cross-country trail system was designed and constructed at the Mount Van Hoevenberg Recreation Area. This trail system was the first in the country planned for the competitor, the spectator, and the recreational skier. The cross-country race courses constructed in that period provide the excellent trails used by the recreational skier today and meet the International Ski Federation (FIS) requirements for Olympic and World Class competitions.

3. Biathlon

Due to the success of holding the 1973 National Biathlon Championships and the World Biathlon Championships on temporary ranges and the enthusiasm which was generated, the Department of Environmental Conservation made plans in the spring of 1973 to construct a permanent biathlon range and trail system. This facility, now completed, is the only fully equipped permanent biathlon complex in the United States.

4. Luge

In 1978, ground was broken for the construction of the luge run. This project was constructed using Federal Economic Development Administration funds.

5. Previous Management Planning

In 1968, a master plan for Mount Van Hoevenberg Recreation Area was produced by a consultant for the Conservation Department. This energetic plan proposed a number of improvements to the then existing facilities and creation of a number of new developments. Up to 1980, little of the 1968 master plan had been implemented.

The awarding of the bid for the 1980 winter games to Lake Placid was based on staging the Bobsled, Luge, Nordic Skiing and Biathlon events at Mount Van Hoevenberg. This resulted in an accelerated revised program for improvements to the Department of Environmental Conservation facilities at the site. This program included refrigeration of luge and bobsled runs, reconstruction of spectator stands, closed circuit television system, electronic figuregram scoreboard, service road improvement, expansion of potable water system, additional cross-country ski trails, and upgrading of electric distribution system.

6. Operation by Olympic Regional Development Authority

Immediately prior to the 1980 XIII Winter Olympics, the Mount Van Hoevenberg Area in general was thoroughly evaluated in at least three environmental documents submitted, as required, for on-going Olympicrelated development. These documents did not address the important phase of the development program(s) that provides some degree of assurance that the desired development of the Van Hoevenberg area as an integral part of a future Olympic Winter Training Complex and Public Recreation Area would be realized. A brief review of the history of Mount Van Hoevenberg operation revealed that management arrangements did not satisfactorily guarantee that facilities would continue to be operated and maintained during the post-1980 Olympic period.

In 1981, the New York State Legislature determined and declared that there was an immediate need to institute a comprehensive, coordinated program of activities utilizing the Olympic facilities in and around Lake Placid in order to insure optimum year-round operation, maintenance and use. Article Eight of the Public Authorities Law was amended (1981) by adding Title Twenty-eight effectuating declared policy and creating the "New York State Olympic Regional Development Authority". The Authority operates and manages the Mount Van Hoevenberg Recreation Area under an agreement with the Department of Environmental Conservation, entered into on October 4, 1982, pursuant to the Public Authorities Law, Section 2614.

7. Mountain Name

At the time that a bobrun site was being sought in the late 1920's, "South Meadows Mountain" was identified as a likely site. The site was later named Mount Van Hoevenberg.

II. ENVIRONMENTAL SETTING - INVENTORY OF FACILITIES, SYSTEMS AND RESOURCES

A. Inventory of Man-Made Facilities

1. Bobsled Run

a. Description of Facility

The recreation area at Mount Van Hoevenberg offers the first bobsled run in the Western Hemisphere. The run is officially listed as being 1557 meters long with a vertical drop of 148 meters. There are sixteen curves, the most famous being called Shady and Zig-Zag. The average gradient is 9.5%. The maximum gradient is 14% at the start of the run.

The run was completely rebuilt in 1978-79 and is artificially refrigerated throughout its entire length. Tangent sections of the run are approximately four and a half feet wide. The curved sections of the run reach heights up to fourteen feet. There are protective "lips" on the top of the curves which restrain a sled from leaving the run. The entire run is constructed of concrete with approximately 27 miles of refrigeration embedded in the structure.

The refrigeration is accomplished by using an ammonia system. Liquid ammonia is pumped under pressure through below-ground mains paralleling the run. At various intervals the liquid is drawn off and it's pressure is reduced allowing it to "boil" into gas. It's heat of vaporization - 317 calories per gram - makes ammonia an ideal refrigerant. The ammonia is then returned through mains to receivers and the cycle is repeated. The entire system is hermetically sealed allowing no ammonia vapor to escape into the atmosphere. However, should a leak develop, the ammonia would be greatly diluted. It's density is approximately half that of air at atmospheric pressure causing the vapors to rise. Compounds would then be formed which would fall with precipitation and would behave much like some commercial fertilizers.

The Mount Van Hoevenberg bobsled run has sufficient wire circuits to accommodate electric timing equipment used for competitions as well as telephones which are used to control the entire run from start to finish. There are seven control booths located along the run. At all times, a bobsled is visable to an attendant who has telephone communications with the run announcer.

Sleds are carried to the start of the run by trucks using a paved road. The service road is fenced to separate pedestrian traffic. See Exhibit 3 for a layout of the bobsled run.

b. Spectator Accommodation

The present accommodations for spectators include viewing stands at the start, zig-zag and finish curves. A pedestrian walkway parallels the entire one mile length. Up to 10,000 spectators, mostly standing, may be accommodated. Three pedestrian bridges at strategic locations allow for a complete separation of vehicular and pedestrian traffic. A public address system is audible for the entire length of the run. Passenger rides are offered to the public from the half-mile start when the run is not in use for competition or for official training.

c. Parking

Exhibit 4 shows parking facilities near the bobsled run which are capable of handling 1275 vehicles (assuming 90% cars, 10% buses). This central parking location provides for the combined parking requirements for the entire complex including crosscountry, biathlon, luge and bobsled. Parking is divided into five (5) lots which are numbered for administrative purposes.

d. Buildings

There are a total of twenty-four buildings on the site which serve various needs at the bobsled run complex. These buildings enable such functions as refrigeration, snow making, water pumping, storage, maintenance, administration, race starting, race timing and announcing, public observation, warm-up, cafeteria and lounge. Appendix B lists the location, purpose and dimensions of these buildings.

e. Water

Potable water is furnished to the public by means of a drilled well located near the clubhouse. The yield of this well is 25 gpm. Peak consumption is 10,000 gallons/day or 28% of potential yeild. There is also a drilled well which yields 6 gpm at the maintenance shop. Peak consumption of this water supply is 250 gallons/day (3% of potential yield).

Water is also taken from North Meadow Brook and pumped to a 16,000 gallon reservoir where it is used to ice the bob and luge runs. It requires three hours at a pumping rate of .2 cubic feet/second (89 gallons/minute) to fill this reservoir.

f. Sanitary-Wastewater

There are public restrooms in the bobsled mile and half mile start buildings as well as the clubhouse. The disposal systems are as follows:

1. Mile start - 550 gallon tank with 450 sq. ft. of drain field constructed in 1960 and is in fair condition



EXHIBIT 3



- 2. Half mile start 1000 gallon tank with 1000 sq. ft. of drain field constructed in 1960 and is in fair condition
- 3. Clubhouse 5000 gallon tank and 32,000 gallon holding tank with 6400 sq. ft. of drain field constructed in 1977 and is in good condition
- 4. Total public facilties men's 6 toilets, 6 urinal, 4 sinks - women's - 8 toilets, 4 sinks

There are additional rest rooms for employees in the sled-shed and maintenance shop. These are served by individual 500 gallon tanks each with disposal fields of 450 sq. ft. constructed in 1960 and are in fair condition.

Exhibit 5 shows the location of water supply and wastewater disposal facilities.

2. Luge Run

a. Description of Facility

This is the only luge run in the Western Hemisphere. The luge run is constructed of concrete and rests on piers which protrude above ground. The run is 1,000 meters long with a vertical drop of 96 meters. A separate starting position for the ladies' events is located to provide a run of 749 meters with a vertical drop of 59 meters.

The run has fourteen curves with an average gradient of 9.35%. The maximum gradient is 30%.

The run is refrigerated in a manner similar to that used on the bobrun. The major difference being that the pressure and return mains lie above the ground rather than being completely buried.

Athletes are carried to the starting positions by trucks using the same road that serves the bobrun. Control towers and closed curcuit television allow for 100% surveillance of the athlete during a descent on the run. See Exhibit 3 for layout of the luge run.

b. Spectator Accommodation

There are pedestrian walkways along the run which will accommodate up to 8,500 standing spectators.

c. Parking

Exhibit 4 shows the location of the central vehicle parking facility near the luge run which is capable of handling 1275 vehicles.

EXHIBIT 5



d. Buildings

There are nine structures which serve the luge operation. These structures provide such functions as starting, finishing, observation and weighing of sleds. There are, in addition, other buildings which serve both the luge and bobsled runs. These other buildings are inventoried under "Bobsled Run" and include such functions as refrigeration and maintenance. Apendix B lists the location, purpose and dimension of structures.

e. <u>Water</u>

Refer to Section II, A, 1, e, for association with the bobsled run.

f. Sanitary-Wastewater

There are two chemical toilets at each of the following: men's start house, women's start house and luge finish tower.

3. Cross-Country Skiing

a. Description of Facility

The cross-country ski trail system at Mount Van Hoevenberg totals approximately 50 kilometers of well-maintained and graded trails, which require a minimum of snow cover. While these trails have been designed to meet the public demand and offer varying degrees of difficulty, they also meet Federal Internationale de Ski (FIS) specifications for international competition.

The loop or cloverleaf design directs the skiers through the start-finish stadium several times during a race. For spectator viewing, interval times, and food stations, this system is invaluable. For recreational skiers, the system allows great variety of length and degree of difficulty. During competitions, choice of loops can provide a Chief-of-Course with any combinations to suit the particular race or class of competition.

b. Spectator Accommodation

Standing area for spectator viewing will accommodate 5,000 persons at the start-finish line near the Nordic Lodge and along the trails.

c. Parking

Exhibit 4 shows the location of the central vehicle parking facility which is capable of handling up to 1275 vehicles.



EXHIBIT 6

Page 8a

d. Buildings

There are eleven buildings associated with the Cross-Country Ski Trails Complex. These buildings function for ticket sales, race timing, race administration, warming, food service and rest rooms. Appendix B lists the dimensions and use of each structure.

e. Water

Water is taken from North Meadow Creek and pumped to the 16,000 gallon bobrun icing reservoir, thence to the cross-country warming building 300 gallon retention reservoir where the water is chlorinated for drinking purposes. Peak consumption is 2000 gallons/day or 9% of capacity. It requires about 20 minutes to fill the 300 gallon reservoir. New York State Health Department reports pertaining to this potable water supply may be reviewed in Appendix H.

f. Sanitary-Wastewater

The cross-country ski lodge building contains 2 lavatories, 2 toilets, 2 urinals and 4 showers for men and 2 lavatories, 2 toilets, and 4 showers for women. Treatment is by a 2000 gallon tank with 1620 sq. ft. of disposal field constructed in 1982 and in good condition.

4. Biathlon

a. Description of Facility

Biathlon competition consists of a combination of cross-country skiing and periodic rifle target shooting during the distance skied.

The biathlon facilities at Mount Van Hoevenberg, located just north of the access road, include over 20 kilometers of trail which has been approved for international competition. Seven different combinations of loops make it possible to create internationally certified courses for the 7.5 kilometer, 10 kilometer, and 20 kilometer events. The complex of ski trails and firing range have been designed and constructed to complement the Mount Van Hoevenberg Recreation Area for use by both the competitor and the recreational skier.

The firing range itself is 50 meters long. The bore of the rifles currently used is .22 caliber. The firing range faces north for best shooting light and provides thirty-six targets in the "pits" area. This range is reserved for competitive use only as use by the general public would not be compatible with recreational skiing.

In direct connection with the range there is a 250 meter (820 feet) start-finish area. The penalty loop connects with the range

in this same area. From this start-finish stadium, there are three major loop-type cross-country ski trails, thereby providing recreational skiing for the public during a competition on either system.

Each of these trails is bisected with six cut-off loops which may be used to provide varying length courses as demanded by the competitions. The 20 kilometer course has a vertical difference of 190 meters, a maximum climb of 55 meters, and a total climb of 560 meters.

A complete communications system has been installed using underground circuits, which connect the scoring facility (in the pits), the range officers building, the timing calculations unit, and the competitors' lodge and several critical points on the trail system to assure control throughout the entire biathlon complex.

There is also a timing system for use during competitions and a public address system which covers the range and the start-finish area.

b. Spectator Accommodation

The spectator standing area for viewing at the start-finish line of the biathlon will accommodate 3,000 persons.

c. Parking

Exhibit 4 shows the location of central vehicle parking near the bobsled run which will accommodate 1275 vehicles.

d. Buildings

Structures associated with the biathlon total twelve. Functions include event timing, targeting, storage, maintenance, warming and rest rooms. The dimensions and usage for each building is shown in Appendix B.

e. Water

The biathlon team building is served by a drilled well yielding 30 g.p.m. Peak consumption is 2000 gallons/day or 5% of capacity.

f. Sanitary-Waste Water

The biathlon team building contains the following for men: 2 lavatories, 3 toilets, 2 urinals and 4 showers; and for women: 2 lavatories, 4 toilets, and 4 showers. Disposal is by a 1,000 gallon septic tank with 850 sq. ft. of disposal field constructed in 1970 and in good condition. The maintenance building at the biathlon is served by a 500 gallon tank and 750 sq. ft. of leach field constructed in 1978 and in good condition.

5. Access Road

The New York State Department of Transportation has responsibility for maintaining the one mile access road from its intersection with Route 73 to the entrance to the parking areas.

6. Electric Distribution

Electrical energy is presently supplied by Lake Placid Municipal Electric via a three-phase 13,200/7,620 volt line. Individual major buildings are metered separately. Taps are as follows:

a. Three phase primary tap to biathlon

- b. Three phase primary tap to cross-country stadium
- c. Single phase primary tap to pump house
- d. Single phase primary tap to clubhouse and sled shed
- e. Three phase primary tap to refrigeration plant and maintenance shops
- f. Single phase primary tap to top of bob run

Existing demand is approximately 1500 kw in winter and 40 kw in the summer. Exhibit 7 illustrates primary electric distribution.

7. Solid Waste

Solid waste from Mount Van Hoevenberg is disposed (by use of a dump truck) at the Town of North Elba sanitary landfill. Annual volume of solid waste totals approximately 38 tons. The North Elba landfill is not currently an operating landfill under DEC permit. It's life expectancy is approximately 2-3 years, at which time an approved landfill site for Essex County will serve Mount Van Hoevenberg as well as county-wide needs. As recent as May 1986, a public hearing has been held directed to resolution of sanitary landfill needs on a county-wide basis for the future.

8. Gravel Pit

A gravel pit is located on "Special Use Land" on the roadway to the water pumphouse northerly of the biathlon range. Gravel is removed for on-premise use continuously at all seasons as demand dictates. Approximately 250 tons of gravel is used annually.



B. Inventory of Systems

1. Program Direction

a. The Authority

The New York State Olympic Development Authority was created by the State Legislature (see Appendix C) to institute a comprehensive, coordinated program of activities utilizing Olympic facilities, such as Mount Van Hoevenberg, in order to insure optimum year-round use and enjoyment. The Authority consists of ten members who shall be the Commissioners of Environmental Conservation, Commerce, and Parks and Recreation, and seven appointed by the governor, by and with the advice and consent of the Senate.

b. Mount Van Hoevenberg Management

The Department of Environmental Conservation is responsible for the application of the Adirondack Park State Land Master Plan and the relevant Unit Management Plan with respect to administration and management of the State lands under its jurisdiction.

The Authority operates and manages the Mount Van Hoevenberg Recreation Area under an agreement with the Department of Environmental Conservation. This agreement was entered into on October 4, 1982 pursuant to the Public Authorities Law, Section 2614. It terminates on March 31, 1992. The Authority also manages the Whiteface Mountain Ski Center and Memorial Highway under this agreement. See Appendix D for a description of this agreement.

c. United States Olympic Committee

Under an agreement entered into in October 1982, the Authority permitted the United States Olympic Committee the use of the Mount Van Hoevenberg Recreation Area facilities, along with other Authority facilities, for its training and competition needs in connection with the Olympic Training Center located in Lake Placid, NY. The United States Olympic Committee has no management authority under this agreement and cannot make any capital improvements to the premises. This agreement will terminate on December 31, 1992 (assuming no conflict with DEC-ORDA agreement).

2. Organization

a. Functions

The Olympic Regional Development Authority will to operate Mount Van Hoevenberg as necessary and in keeping with established legislation, plans and agreements (also see Appendix C.)

EXHIBIT 8

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

ADMINISTRATIVE DIVISION



b. Administration

Administrative functions are centralized for the Olympic Regional Development Authority. Programs of the Authority are directed by the president, two assistants and general counsel working through department heads. Exhibit 8 illustrates the administrative organization over and above all Olympic venues including the Mount Van Hoevenberg facility.

c. Mount Van Hoevenberg Staff

Personal service at Mount Van Hoevenberg is comprised of twenty-one (21) permanent staff and fifty-two (52) seasonal staff (see Exhibit 9). Two seasonal employees are hired in the summer to supplement the permanent staff.

d. Security

Security is provided by fencing around the bobsled, luge and cross-country areas. The dense woods bordering these areas also contribute to security. At the bobsled and luge area, there is an entrance gatehouse manned 24 hours daily. The maintenance garage has a locked gate entrance.

3. Equipment

The equipment assigned to Mount Van Hoevenberg consists of automotive (such as trucks, tractors) and non-automotive (such as tables, chairs). The 1985 equipment inventory is found in Appendix E.

4. Contractural

a. Concessionaire

On June 1, 1983, the Authority entered into an agreement with Servomation Coporation whereby the Authority granted Servomation a license consisting of exclusive rights to provide concession and retail services at all ORDA facilities. The agreement will terminate on March 31, 1992. Under the terms of the agreement, Servomation's exclusive rights are subject to certain other contracts existing with the Authority, including, in the case of the Mount Van Hoevenberg Recreation Area, a contract for the crosscountry skiing concession due to expire on March 31, 1986.

Marketing-related functions are conducted through the Departments of Marketing & Advertising, Public Relations, Corporate Marketing, and Events Management. While there are marketing and promotional efforts focused on specific activities and events, the concentration of operations and disbursements are generic: aimed at attracting people to the Lake Placid Region.

EXHI	ΒI	Т	9

ROSTER OF PERMANENT STAFF POSITIONS AT MOUNT VAN HOEVENBERG		
NUMBER OF POSITIONS	POSITION TITLE	
3	Administration	
7	Maintenance Assistant	
5	General Mechanic	
1	Electrician	
1	Refrigeration Mechnic	
3	Labor Supervisor	
1	Labor 1	
21	Total	

	ROSTER OF SEAS	ONAL STAFF POSITIONS	
ADMINISTRATION LUGE			UGE
NUMBER	TITLE	NUMBER	TITLE
1	Clerk Typist	8	Labor 1
1	Ticket Clerk	7	Labor 2
2	Total	15	Total

CROSS-COUNTRY		BOBS	LED RUN
NUMBER	TITLE	NUMBER	TITLE
1	General Mechanic	12	Labor 1
1	Equipment Oper. 1	3	Labor 2
1	Equipment Oper. 2	6	Driver
2	Labor 1	6	Brakeman
1	Ski Patrol 1		
1	Ski Patrol 2		
1	Ticket Clerk 1		
8	Total	27	Total

a. Annual Maintenance and Operation

The 1984/85 fiscal year expenditures at Mount Van Hoevenberg total approximately \$912,000. Such expenditures include routine costs which do not extend or change the life or usefulness of the capital facility such as personal service, supplies, materials, utilities and contractual services.

Annual routine operation expenditures are allocated approximately as follows:

Expenses (\$912,000) by Expense Category

Payroll and payroll added costs	71%
Utilities	12%
Supplies and materials	9%
Contractual	8 %
Total	100%

Expenses (\$912,000) by Organizational Unit

Bobsled Run	28%
Administrative	21%
Refrigeration Plant	19%
Luge Area	18%
Cross-Country Ski Area	10%
Motor Vehicle Maintenance	2%
Time Keeping/Scoring	1%
Medical	1%
Total	100%

b. Rehabilitation and Improvement

Rehabilitation and Improvement expenditure at Mount Van Hoevenberg in fiscal year 1983/84 was \$99,000 and for 1984/85 was \$233,200. Rehabilitation and Improvement expenditures may be defined as those which extend or change the useful life of existing capital facilities.

c. Capital

Capital expenditures may be defined as the initial construction, development and acquisition costs of new facilities, resources and furnishings or for major reconstruction of facilities. During fiscal year 1983/84, capital expenditures were \$55,500 and for 1984/85, \$127,000.
d. Revenues

Revenues generated at Mount Van Hoevenberg are used directly to defer annual maintenance and operation costs of the Recreation Area. Total revenue and revenue source is illustrated below:

Revenue Total by Fiscal Year

1982/83	\$125,963	
1983/84	212,978	
1984/85	208,000	(estimated)

Revenue Sources

Cross-Country Skiing	44%
Area Admissions	37%
Sliding Fees	15%
Concessions	<u> </u>
Total	100%

e. Summary

Fiscal year 1984/85 may be summarized as follows:

Operation Expenses	\$	912,000
Total Capital Expenses	_	360,200
Total Costs	-1	,272,200
Less Total Revenues		208,000
Legislative Appropriations	\$1	,064,200

C. Inventory of Natural Resources

1. Physical Resources

a. Climatology and Air Quality

The mean annual temperature of the base elevation at Mount Van Hoevenberg is judged to be approximately 40°F, with a December average of 15°F and a July average of 65°F.

The average annual precipitation is 39 inches, including the 120 inches of annual average snowfall.

The prevailing wind direction is northwest in winter and westsouthwest in the summer. Average wind speeds are estimated to be 8-12 mph for the summer and slightly higher for the winter.

The average percent of possible sunshine for the summer is 60% and drops to 33% for the winter. The average relative humidity is approximately 70%.

EXHIBIT 10

FEES - PARTICIPANTS AND SPECTATORS

WINTER USE FEES - COMPETITION PARTICIPANTS

- Bobsled \$3.50/person from mile start - 2.00/person from 1/2 mile start
- Luge \$3.50/person from men's and women's start - 2.00/person from curve #5 or #10
- Cross-Country fee depends on number of racers as determined by Vice President for Events
- Biathlon fee depends on number of racers as determined by Vice President for Events

GENERAL PUBLIC AND SPECTATOR USE FEES

Winter Spectator* and Summer Tours Bobsled & Luge - \$2.50 Adult - 1.50 Child & Senior Citizen - 1.00 Group (25 or more) Tour Package -\$10.00 Adult - 7.00 Child & Senior Citizen - 6.00 Groups (25 or more) Winter - Bobsled Rides - \$7.00 Adult - 6.00 Child & Senior Citizen - 5.50 Group (25 or more) Cross-County General Public Winter Use - \$5.00 Adult - 3.00 Child & Senior Citizen - 3.00 Adult 1/2 Day - 2.50 Group (20 or more)

*Race admission fee may be higher for some winter racing events.

Monitoring was conducted in July of 1976 at Mount Van Hoevenberg to obtain ambient air quality data with emphasis on peak period vehicle emission of carbon monoxide. It is concluded that the impact of pollutant emissions should be low as the ambient concentrations are very low. Fugitive dust may be produced during certain construction and maintenance activities at the facility. Under normal construction practices, this dust will be held to a minimum and the increase in particulate levels will be negligible.

Refrigeration of the bob and luge runs includes the use of ammonia. Ammonia is a colorless gas and is readily detected by its sharp, irritating and suffocating odor. If pure ammonia is breathed, it is very toxic; but, when greatly diluted with air, it appears to have no serious effects. The refrigeration system is under constant surveillance and monitoring. It is, therefore, concluded that ammonia leakage is limited by system construction and monitoring practices and the environmental impacts controlled thereby. Appendix K contains the emergency spill management plan for liquid ammonia.

Water within the structure containing the refrigeration plant at Mt. Van Hoevenberg drains primarily to a sump within the building. Water used to control ammonia vapors or spills, or resulting from incidental contact with ammonia will drain to this area first. ORDA will undertake one of the following alternatives as soon as feasible, and before the expiration of this plan: 1) ammonia-contaminated water used in spill control will be contained in the structure through the use of barriers and suitable control of the sump drain; or 2) ammonia-contaminated water will be directed to the sump with suitable barriers and from the sump will be held in a lined pond, otherwise kept drained and dry; or 3) such other management techniques recommended by competent engineers to contain ammonia and contaminated water.

The selected control measure will be adequate to allow authorities to remove or neutralize ammonia-contaminated water prior to its release to nearby aquatic environments.

Appendix K will be updated to reflect the spill control strategy selected by ORDA.

b. Terrain

Topography at Mount Van Hoevenberg ranges from generally flat in the area of the biathlon and cross-country ski stadium area to steep on the upper slopes of the mountain itself. Elevation ranges from 1,900 to 2,830 feet.

c. Geology and Soils

Bedrock formations at Mount Van Hoevenberg consist primarily of anorthosite on the upper slopes and gneiss east and north of the bobsled run. Both rock types are very hard, tough crystalline



- 16a-EXHIBIT 11

EXHIBIT 12



EXHIBIT 12

WETLANDS OF THE MT. VANHOEVENBERG RECREATION AREA

Freshwater Wetlands for the Mt. VanHoevenberg Recreation Area were identified and prepared utilizing a number of sources including the New York State Wetland Inventory prepared by the Resource Informaton Laboratory, Cornell University, recently completed Freshwater Wetlands Inventory Maps prepared by the Adirondack Park Agency from aerial photography, and on-site field inspections. All wetlands are associated with the North Meadow Brook Watershed and are shown on Map W-1. The wetlands and their known characteristics are listed below:

WETLAND	CODE	DESCRIPTION	SIZE	(Coverage)
A-1		Palustrine flooded coniferous swamp dominated by spruce and fir. Soils are semipermanently saturated with water.		8.6
A-2		Palustrine flooded coniferous swamp dominated by spruce and fir. Soils are semipermanently saturated with water.		15.7
A-3		Lineal scrub/shrub wetland associated with the North Meadow Brook drainage system. This wetland consists primarily of an alderstrip running along both stream banks.	v	7,500 lineal feet
A-4	to A-7	Palustrine flooded coniferous swamp pockets of spruce and fir resulting from areas of sem permanently saturated soils	Ĵ ==	A-4 7.2 A-5 2.9 A-6 2.1 A-7 1.5
A-8		Open water and associated wetlar associated with Mud Pond.	nd	1.4

The wetlands noted as A-1 and A-2 are actually intrusions into the Mt. VanHoevenberg Recreational Area of a single large wetland known as the North Meadow Wetland. Mud Pond exhibits a pattern of zones which begin at the center as open water and develop shoreward first as a mixture of flooded emergents and then into flooded or seasonably flooded coniferous trees. The boundary of each zone and the acreage of each have not been mapped for Mud Pond.

-16c-

rocks. Above an elevation of 2,100 feet soils form a very thin veneer over the bedrock. Below this elevation, soils have been mapped as glacial till, comprised of well-drained, moderately coarse-textured soils, most of which have a sandy fragipan which restricts drainage at a depth of 0.5 to 1.0 meter below ground .pa surface. This material provides a satisfactory foundation for most types of construction. However, in the design of septic systems, it is necessary to consider the tendency of the fragipans to retard drainage.

Between the existing parking area and the North Meadow Brook, a large area of till without fragipan has been mapped. The biathlon and cross-country stadiums are located on this terrain. It is an area where suitable conditions for ground water development may be possible. Closer to the brook, sand deposits have been mapped which may be a source of ground water. Exhibit 11 is a soils map of the area.

d. Water

The only major water course in the Mount Van Hoevenberg Recreation Area consists of North Meadow Brook which flows approximately 1.2 miles from east to west across the northern part of the area. A small tributary of the brook crosses the southeastern part of the Recreation Area. The brook is classified trout stream (CT) upstream to the State line boundary and for the most part has well-defined banks. A small portion of Mud Pond extends on State owned land in the southeastern portion of the Recreation Area. (See II.C.2.c.)

e. Wetlands

There are eight small wetlands within the boundaries of the Mount Van Hoevenberg Recreation Area. The placement of ski trails and the construction of various structures has not impacted upon these wetlands. Exhibit 12 shows the location of the wetlands which total more than 39 acres.

2. Biological Resources

a. Vegetation

Due to the variety of drainage and elevation conditions prevalent, five typical Adirondack forest covertypes are found on the Mount Van Hoevenberg Recreation Area. The map in Exhibit 13 traces the approximate boundaries of these forest types which are described as follows:

1. <u>Spruce-Fir</u>: Composed of red and black spruce and balsam fir with areas of tamarack or wetland hardwoods such as yellow birch or elm. Found mainly in low, wet areas or high on mountains where soil is shallow.



Forest Types

Key:

1. Spruce-Fir

- 2. Spruce-Fir-Pioneer Hardwood
- 3. Spruce-Fir-Northern Hardwood
- 4. Northern Hardwood
- 5. Open
- New York's Largest Red Spruce Tree

Approximate Scale: 1" = 2,250 feet

- 2. <u>Spruce-Fir-Pioneer Hardwood</u>: Composed of red spruce, balsam fir, white or gray birch and aspen with occasional pin cherry and yellow birch.
- 3. <u>Spruce-Fir-Northern Hardwood</u>: Composed of red spruce, balsam fir, hard and soft maple, beech and yellow birch with occasional associated species such as hemlock, black cherry and white ash. Usually found on lower slopes and is quite often a transition forest type between the spruce-fir type and the northern hardwood type.
- 4. <u>Northern Hardwood</u>: Composed of soft and hard maple, beech, yellow birch and associated species such as black cherry, white ash and white pine. Found on well-drained side slopes and heavier, better soils.
- 5. <u>Open</u>: Open field or those areas which have filled with brush species such as spirea but lack significant woody growth.

b. Wildlife

Considering the present degree of development and intensive use, Mount Van Hoevenberg supports a wide variety of wildlife species. Appendix G identifies seventy-six different 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.

The distribution and abundance of wildlife species are determined by physical and biological factors such as elevation, topography, climate, vegetation, land use, and the habitat requirements and population dynamics of each species. Five major wildlife habitats can be identified at the Mount Van Hoevenberg Recreation Area: Northern Hardwood, Spruce-Fir-Hardwood, Spruce-Fir, Grassland-Brushland, and Wetland. The types listed above generally represent differences in wildlife habitat and, therefore, may not conform to the more technical descriptions of forest types as detailed in paragraph 2a above. Other significant habitats are the freshwater wetlands. Appendix G gives a description of the wildlife habitat types and additional information about wildlife at Mount Van Hoevenberg.

The harvest records for big game (deer and bear) and furbearers are listed in Appendix G of volume II. The records indicate the presence of the species on the Mount Van Hoevenberg Intensive Use Area. The figures cannot accurately be translated to the number harvested on the 1,593.8 acres of the intensive use area. The number of each species of wildlife actually harvested on the area would be a small fraction of those listed in Appendix G.

The maintenance of trails and the periodic large numbers of people that congregate at a sporting event does affect the behavior of wildlife. Trimming shrubs to groom cross-country ski trails helps maintain early successional vegetation thereby contributing to more food for herbivores such as snowshoe hare and white-tail deer. The large crowds at sporting events probably cause a variety of wildlife to seek shelter on the edge of the highly active portions of the site.

c. Fisheries

North Meadow Brook flows westerly into the West Branch of the Ausable River, and a 1.2 mile section flanks the Mount Van Hoevenberg Recreation Area on the north. Streambed components are dominated by gravel and sand along with limited boulders and rubble. Water color is clear. Estimated autumn stream flow is 4 cubic feet per second which is considered minimum flow present in this stream 75% of the time. Average stream width at this time of the year is 8 feet. Peak flows of 25 cfs are possible during rainy periods and may reach 50 cfs for a few days during the spring runoff. Division of Fish and Wildlife concern is that aquatic life in this stream would be subject to high mortality if the volume of flow should fall below 3 cfs.

Water quality is ample for the support of aquatic organisms in the section of stream nearest the Mount Van Hoevenberg Recreation Area. No evidence of floating or settleable solids, toxic wastes, or other substances dangerous to aquatic life was discovered. Sufficient shade provided by the forest cover keeps the area of the stream under assessment below 70°F during warm summer months.

Chemical analysis on December 1, 1975 of a water sample collected from North Meadow Brook revealed a pH of 6.9. Methyl orange alkalinity was low at 12.5 and the conductivity at 20°C was 37 micromhos.

North Meadow Brook is a soft water stream with minimal dissolved nutrients available for plant growth. Primary producers in this aquatic food web consist of various forms of algae. Small invertebrates consisting of larval forms of aquatic insects comprise the second trophic level. Secondary consumers in the next trophic level are fish and carnivorous insects. Various avian and mammalion predators, including man, represent the top level in the food web.

The stream was being stocked (prior to 1980) with 1260 brook trout fingerlings annually. Stocking was discontinued since the stream presently supports a self-sustaining brook trout population.

Although only one species of fish was discovered in the 1975 electrofishing survey of North Meadow Brook, it is probable that the 1975 survey failed to document the presence of several fish species which inhabit North Meadow Brook since this stream is part of the Ausable River drainage. It is likely that this stream also supports the family groups of Cyprinidae, Catastomidae, and Cottidae in addition to the trout family Salmonidae. (See Appendix H)

Aquatic plant life in North Meadow Brook consists of the following:

Phylum Chrysophyta (Diatoms) <u>Nayicula spp.</u> <u>Frustulia spp.</u> Phylum Chlorophyta (Green Algae) <u>Cladophera glomorata</u> <u>Scapania spp.</u> Leavy Liverwort

The fish population of Mud Pond is currently unknown. The preponderance of this pond is located on private owned land and no survey data has been assembled.

III. ENVIRONMENTAL SETTING-INVENTORY OF ISSUES AND CONSTRAINTS

This section pertains to an inventory-evaluation of issues relevant to administration and operation of the Mount Van Hoevenberg Recreation Area. Impacts which may be of a public, environmental and/or management concern are identified. Fundamental criteria relevant to evaluation of the issue is also identified.

A. Article XIV, New York State Constitution

1. Criteria for Evaluation

Article XIV of the State Constitution specifically states that the timber on the Forest Preserve shall not "...be sold, removed or destroyed". In the interest of public safety and in consideration of the development of protective and recreational use facilities, it has been necessary for the Department of Environmental Conservation , as the managing authority for Forest Preserve lands, to periodically ascertain, from the State Attorney General, limitations

pertaining to the cutting, removal and destruction of trees.

One such Attorney General opinion, dated January 18, 1934, pertaining to ski trails construction, stated: "Ski trails (crosscountry) may be constructed by the Conservation Department in the Forest Preserve when cutting trees 'to any material degree' will not be necessary and the wild forest character of the Preserve will not be impaired". (Refer to Appendix A for a description.)

2. Issues, Impacts

Lands acquired as Forest Preserve and managed according to Article XIV of the State Constitution amount to 917.77 acres. Additional lands purchased by the State under the 1960 and 1962 Recreation Land Acquisition Bond Acts comprise 352.58 acres. This acreage was acquired to allow special recreational uses and facilities development. A permanent easement covering 323.45 acres, purchased from the Town of North Elba, allows the State to develop, operate and maintain a recreational area and facilities thereon.

Extensive improvements were made to the facilities at Mount Van Hoevenberg prior to the 1980 Olympic Winter Games.

B. Policy and Standards

1. Criteria for Evaluation

Administrative policy for the operation of Mount Van Hoevenberg is based on powers of the Authority established under the Public Authorities Law and in accordance with agreement with the Department of Environmental Conservation. Other standards may be developed from professional libraries and practices, such as engineering specifications used to prepare designs, budgets and implement schedules. Generally, certain policy of the Department of Environmental Conservation will apply to all Forest Preserve lands.

2. Issues, Impacts

Policy developed by the Olympic Regional Development Authority for the day-to-day operation of Mount Van Hoevenberg includes, but is not limited to: employment and personnel matters; scheduling and booking of events; undertaking plans, surveys, analyses to effectuate objectives; development of contracts to promote, publicize, operate, maintain and manage facilities; fix and collect fees for use of facilities; organize and manage internal affairs to the fulfillment of its goals and purposes.

The Department of Environmental Conservation provides technical assistance and assures implementation of policy matters pertaining to Environmental Conservation Law and protection of natural resources, including stream protection, wetlands, forests, and fish and wildlife communities. (See Appendix F for policy pertaining to the protection of trees and other vegetation on Forest Preserve lands.)

C. Laws and Regulations

1. Criteria for Evaluation

Pursuant to Section 2611.4, Public Authorities Law, the Olympic Regional Development Authority is granted power "to make and alter by-laws for its organization and internal management, and rules and regulations governing the exercise of its powers and the fulfillment of its purposes under this title. Such rules and regulations must be filed with the Secretary of State and the town clerk of North Elba."

Promulgated under Environmental Conservation Law, Part 6 of the Official Compilation of Codes, Rules and Regulations of New York (6NYCRR 190.8), contain regulations pertaining to public use of Forest Preserve land. State laws and regulations administered under the authority of other State agencies, including Departments of Health, Labor, and the Adirondack Park Agency, influence and impact on the management of Mount Van Hoevenberg. A summary of the State

Land Master Plan requirements pertaining to development of the Mount Van Hoevenberg Unit Management Plan is presented in Appendix C.

2. Issues, Impacts

The legislature has established a two-tiered structure regarding State lands in the Adirondack Park. The Agency is responsible for long-range planning and the establishment of basic policy for State lands in the park, in consultation with the Department of Environmental Conservation. Via the Master Plan, the Agency has the authority to establish general guidelines and criteria for this management of State lands. On the other hand, the Department of Environmental Conservation has responsibility for the administration and management of State lands in compliance with the guidelines and criteria laid down by the master plan.

Laws and regulations of various State departments, agencies and authorities pertaining to recreational uses and facilities are periodically amended. Management must assure compliance and be continuously aware of requirements to upgrade facilities and systems to assure public health, safety and environmental security. This Unit Management Plan is initiated to comply with the Adirondack Park Agency Act. The Adirondack State Land Master Plan States that the Mount Van Hoevenberg Intensive Use Area should be maintained as a "day use" winter sports facility meeting international standards for bobsled, luge, biathlon and improved cross-country skiing under developed, competitive conditions.

D. Public Use

1. Criteria for Evaluation

a. Evaluation Defined

Among the lists of subject material that unit management plans shall contain, the Adirondack Park State Land Master Plan requires: 1) an inventory of the types and extent of actual and projected public use of the area; 2) an assessment of the impact of actual and projected public use on the resources, ecosystems and public enjoyment of the area with particular attention to portions of the area threatened by overuse; 3) an assessment of the physical, biological and social carrying capacity of the area with particular attention to portions of the area threatened by overuse in light of its resource limitations and its classification under the master plan; and, 4) the regulation of public use such that the carrying capacity of the area is not exceeded.

The Adirondack Park State Land Master Plan classifies Mount Van Hoevenberg as an "Intensive Use" area. The master plan states that such classification has been based on physical, biological and social characteristics of the area. The master plan describes the above factors as "...obviously complex and their application is, in certain circumstances, subjective, since the value of resource quality or character cannot be precisely evaluated or measured. Nonetheless, the agency believes that the classification system described below (including the Mount Van Hoevenberg Intensive Use Area) reflects the character and capacity to withstand use of all State lands within the Adirondack Park in conformity with the provisions of the (Adirondack Park Agency) Act".

Mount Van Hoevenberg is defined by the Agency as a Day Use Area designed to accommodate a significant number of visitors on a day.

use basis. "Human use and enjoyment should be permitted and encouraged, so long as the resources in their physical and biological context and their social or psychological aspects are not degraded."

This unit management plan considers two related but distinct terms pertaining to the subject of public recreational use of Mount Van Hoevenberg. These terms are hereby defined for understanding and use of this management plan and by the management of Mount Van Hoevenberg.

<u>Capacity of the Resources to Withstand Use</u> - This is an examination of the effect of public recreational use upon the existing physical and biological characteristics of the land, water, vegetation and biological community of a location while being mindful of the viewpoint of varying public interest pertaining to use of the location. The capacity is exceeded and degredation of resources may exist or occur when examination shows that irreparable damage occurs to such tangibles as the soil, slopes, waterway, vegetation, fish and wildlife. Damage of an intangible nature may be present when in the opinion of the majority of "public interests" the facilities, public presence and/or the use being made or intended of a State land area is unsatisfactory.

<u>Carrying Capacity</u> - This is the maximum number of persons which will be permitted to participate in or view established recreational activities as determined in the judgement of the managing authority. This limit is established to eliminate the chance of degredation and unnecessary damage to the physical, biological and psychological characteristics being mindful of the master plan classification of the area. In establishing the carrying capacity, management must consider providing recreational use opportunity for the benefit of a quantity of people within the capacity and suitability of management's fiscal and administrative means to implement.

It is management's option, by way of the astute design and construction of intensive use aea facilities, to address "the capacity of the resource to withstand use" and establish the "carrying capacity. This is meaningful when the design and placement of facilities confines and minimizes physical, biological and psychological impacts to a comparatively small portion of the classified area. Appropriate design and placement of facilities may also be used as a method to increase the carrying capacity of a site. Over the long term, the conscientious removal of trees and movement of soil to construct vehicle parking, walkways and buildings will subject the area to less environmental disturbance than permitting random trampling of soil and vegetation over a broad area.

Management must pursue the establishment of the site carrying capacity followed by the design and construction of the facility(s) to accommodate the established capacity. Conversely,

establishment of facility design criteria (such as health standards and building codes) may be viewed as a contributor to fixing carrying capacities and enhances resource protection.

Overuse and misuse of sites, if permitted to occur, would become apparent from environmental impact indicators such as soil compaction, soil erosion, water pollution, unsanitary conditions, unusual loss of vegetation and unusual fish and wildlife problems. Management, however, is also concerned with other aspects of public use, overuse or misuse in addition to environmental impacts. These include dealing with indications of excessive public accident rates, vandalism, vehicular traffic problems, public, athlete and employee suggestions or complaints.

Ticket sales is the primary system used for determining and monitoring public use at Mount Van Hoevenberg. The redesign of facilities, the level of maintenance, protective measures incorporated, and day to day managerial actions adopted are used to correct public use problems.

The "Inventory of Man Made Facilities" (Section II A) and "Inventory of Natural Resources" (Section II C) may be reviewed in conjunction with the presentation of facility designs and carrying capacities which follow.

b. Lodges, Capacity to Withstand Use

The basis for size of buildings to be occupied by the public is generally fifteen (15) square feet per person. Pursuant to health codes, sanitary facilities, specifically the number of lavatories and toilets, control calculated carrying capacity. Approximately one lavatory and toilet should be provided for every 100-175 persons of anticipated daily use. (See Section IIA for size and description of buildings, water supply and sanitary accommoda.pa tions. Calculations of building public use carrying capacities are made using the quantity codes stated above.)

c. Vehicle Parking, Capacity to Withstand Use

The main parking lot plus five (5) numbered lots at Mount Van Hoevenberg currently have a combined total design carrying capacity for 1,275 vehicles (assuming 90% cars, 10% buses). Conversion factors of 2.5 persons per car and 40 persons per bus are used to determine total persons that can be accommodated by present parking. Even though parking facilities will accommodate 7-8,000 persons, a greater number can be accommodated by shuttle busing as was practiced during the 1980 Olympics. Care in the scheduling of cross-country, biathlon, luge and bobrun events minimizes conflicting demand for use of parking facilities.

d. Competitive Participants, Capacity to Withstand Use

The number of competitive participants, starting intervals, and timing of events are established according to Olympic, World or other event standards. The bobsled, luge, cross-country and biathlon at Mount Van Hoevenberg are designed according to these established world-wide standards.

e. Recreation Cross-Country Skiing, Capacity to Withstand Use

The design of 50 kilometers of skiing trails with a double track width will accommodate over 20 recreational skiers per kilometer per moment. In applying this carrying capacity, it must be remembered that approximately 20 percent of the recreational skiers daily admissions are not on the cross-country trails at any given moment due to lodge use, meals, rest breaks, loading and unloading.

f. Spectators, Capacity to Withstand Use

The carrying capacity of facilities to withstand use by spectators standing is established as follows: Bobsled run area -10,000 persons; Luge run area - 8,500 persons; Cross-country ski area - 5,000 persons; Biathlon area - 3,000 persons. These limits were established for the 1980 Olympics based on paved walkways and standing locations which provide satisfactory viewing opportunity. The limits have since proven manageable and without environmental degradation effect.

g. Fishing, Capacity to Withstand Use

The carrying capacity of North Meadow Brook is based on the consideration of aesthetics and biological protection among other factors. The carrying capacity for this stream is established in the range of 100-150 angler trips/acre/year. For this purpose, North Meadow Brook is estimated to occupy two (2) acres through the Mount Van Hoevenberg Recreation Area. At or below this level, the stream will restock naturally. Since the preponderance of Mud Pond is located on private land, no attempt has been made to determine the carrying capacity of this water body.

h. Wildlife, Capacity to Withstand Use

The capacity of the wildlife resource to withstand non-consumptive use is extremely variable, depending upon the species involved, the season, and the nature and extent of the use. It is not known what effect observation has on the wildlife that occurs in this area. For example, observations of distant wildlife should have little impact whereas, regular movement of people near a nest, standing deer or snowshoe hare may cause the animals to retreat. The total 2.5 square miles of the Mount Van Hoevenberg Recreational Area may be considered deer range with the exception of the area occupied by roads, buildings, the bob run and luge. As a modest example of the consumptive use of wildlife as applied to wildlife's capacity to withstand use, an estimated minimum of 35 hunters per square mile would be required to take 80 percent of the bucks and 30 percent of the females on one square mile of land to obtain herd control that would lead to a healthy deer population in the area. This number of hunters or deer harvest cannot be attained under the present bucks-only hunting. Deer hunting on this Unit is based upon low hunting pressure and, due to maturing forest conditions, low deer populations.

It is thought that snowshoe hare have a virtually unlimited capacity to withstand hunting pressure under the habitat conditions generally available in the Adirondacks (Brocke, 1977). The best snowshoe hare habitat is associated with the spruce-fir habitats, especially along the Nordic ski trails.

Beaver populations, in contrast, can be overharvested. An entire colony can be trapped out, but, normally, trapping pressure is distributed lightly over the area as a whole so that potential beaver colony sites are reoccupied by beaver at an acceptable rate on this Unit. It is not known to what extent either snowshoe hare, beaver or other wildlife are utilized on this Unit.

2. Inventory of Recreation Area Use

a. Bobsled Run

The sport of bobsledding involves only a small number of athletes. The sport, however, attracts a large number of spectators. The number of spectators is related to the number, size and caliber of competitive events scheduled at the facility.

Through the late 1970's, the average number of daily spectators was 208. During World Class, National and North American events, crowds have reached 6,000-7,000 persons over the period of an event. During the 1980 Olympic Winter Games, daily attendance for the bobsled event was limited to 10,000 persons.

Total Spectators for the Bobsled and Luge Combined

1980-81	34,445
1981-82	29,115
1982-83	30,506
1983-84	40.327

Bobsled Passenger Trips

Year	Trips	Passengers
1980-81	75	220
1982-82	240	708
1982-83	91	272
1983-84	607	1,822

Bobsled Trips of Participants Racing Sleds

1980-81	2,850
1981-82	2,985
1982-83	3,343
1983-84	3,435

b. Luge

The sport of luge involves only a small number of athletes. The sport attracts spectators related to the number, size and caliber of competitive events scheduled at the facility. During the 1980 Olympic Winter Games, daily attendence for the luge event was limited to 8,500 persons.

The Number of Luge Trips by Participating Athletes

1980-81	4,550
1981-82	6,430
1982-83	8,790
1983-84	10,541

c. Cross-Country Skiing

Cross-Country Skiing is an event that attracts competitors, public spectators and recreation users. During the 1980 Winter Olympic Games, Nordic ski events attracted up to 4,000 spectators daily.

<u>Cross-Country Area Use</u> 50 Kilometers of Trails

Year	Recreation	Spectators	Racers
1980-81	7,460	26,000	640
1981-82	14,064	450	1,875
1982-83	3,108	0	0
1983-84	15,503	520	3,110

d. <u>Biathlon</u>

The biathlon is one of the most demanding of all competitive events at Mount Van Hoevenberg. Spectators get a unique appreciation of the dedication necessary for those who participate in the sport.

Biathlon Area Use

	Racer		
Year	Training Days	Spectators	Racers
1980-81	520	7,500	210
1981-82	225	120	260
1982-83	20	40	50
1983-84	340	180	43

e. Summer

There is a pattern of increased visitor use of Mount Van Hoevenberg during the summer or "off-season" months. Guided tours, audio and visual interpretive aids, and passive recreation are popular with off-season visitors. A summer visitor program initiated in 1980 featured guided tours, movies and static displays enjoyed by 60,000 visitors to the area that summer. During the summer months, many persons hike along the bobsled and luge well-maintained pathways.

f. Fishing

Angling in North Meadow Brook at Mount Van Hoevenberg has not been documented by creel census, but it is presumed to be moderate, approaching 50 seasonal angler trips per acre/year.

g. <u>Wildlife</u>

In addition to the recreational uses for which Mount Van Hoevenberg was designed, hunting and trapping are popular activities within the immediate vicinity. Neither the current degree of development nor the influx of winter recreationalists have hindered the presence of game species and the enthusiasm exhibited by area sportsmen.

There is no measure available for the number of consumptive and passive users of the wildlife resource on the Mount Van Hoevenberg Recreational Area. Harvest levels and license sales (hunting and trapping) are often used as indicators of the potential number of consumptive users. Since harvest data is collected by township and license sales is tabulated by county, neither offers an appropriate indicator of use on as small a land unit as the Recreation Area.

The number of passive users could include every visitor that actively uses the facilities. Specifically, only the visitors using the Nordic cross-country ski trails for leisure, as opposed to competition, may readily enjoy observing wildlife. Some of the summer tourists may also take the time to observe birds while walking along the bobsled and luge runs. The winter spectators observing a competitive event are probably the least interested in wildlife. In addition, the variety and visibility of wildlife during the winter months is considerably less than the variety present during the rest of the year.

h. Annual Energy Consumption

The annual energy required to operate and maintain the Recreation Area is as follows:

1. Electric (kilowatt hours, kwh) -

Bobsled and Luge Areas	=	1,293,325	kwh
Nordic Area	=	80,280	kwh
Biathlon Area	=	47,160	kwh
Maintenance	=	66,365	kwh
Snowmaking Machinery	=	2,780	kwh

Annual Total = 1,489,910 kwh

2. Fuel Oil (heating) = 16,000 gallons

3. Diesel Fuel (machinery) = 3,200 gallons

4. Gasoline = 17,000 gallons

i. Potable Water Consumption

The inventory of potable water consumption is discussed for the bobsled, luge, cross-country skiing and biathlon in Section II A. Water consumption is far below the design criteria (carrying capacity).

3. Issues, Impacts

Maximum spectator attendance does not occur except as might be expected on occasion of scheduled Olympics such as in 1980. Generally, a world event at the bobrun is scheduled so as not to conflict with attractions at the biathlon, cross-country or luge. Furthermore, events which attract a large number of spectators usually last only a few hours. Therefore, the 10,000 person maximum carrying capacity at the bobrun, 8,500 persons at the luge, 5,000 persons at the cross-country, and 3,000 persons at the biathlon does not occur at the same moment in time. Conscientious scheduling of events and use of shuttle busing allows the vehicle parking area to accomodate 8,000-10,000 daily visitors without conflict.

The carrying capacity earmarked for spectator attendance for each of the four events at Mount Van Hoevenberg has been observed since 1980. During this five year period, there is not evidence of portions of the area being threatened by overuse or misuse in light of the area's resource limitations and its classification under the Adirondack Park State Land Master Plan. The established public use carrying capacities are such that there have not been incidents of environmental stress, water pollution, loss of fish and wildlife, wetland destruction, and soil erosion. Other observations of concern to management have been made with the finding that there has not been observed increases in the rate of public accidents, vandalism, and public complaints.

Mount Van Hoevenberg Recreation Area has been developed as an Intensive Use Area. Socially, high intensity public use is expected and planned for. Current use of the Area by the general public is well within the capacity of the resource to withstand use.

Cross-country skiers are required to pay an area use fee. This serves to control the number of persons using the trails. Spectator control is accomplished by the use of fencing. A bobsled or luge event is completed in less than three hours time. Because of the short term, concentration of people on a relatively small area results in minimal impact. The soil and resulting vegetation susceptible to compaction by large crowds is protected by frozen ground and snow, thereby reducing habitat destruction. The existing sanitary facilities are numbered to accommodate moderate size crowds. When a World Class event is scheduled, portable sanitary facilities are Calculation of the number of required temporary sanitary used. facilities is obtained by using the health code standard found in paragraph III.D.1.b.

In spite of the intensive use of the area during the winter and with increased summer visitors, enjoyment of wildlife resources is minimal. The capacity of the wildlife resource to withstand passive use far exceeds the level of actual use. The current level of the wildlife resource to withstand consumptive use by hunters and trappers is also below the carrying capacity. The existence of productive wildlife habitats and the presence of a variety of wildlife species within the area is an excellent indicator of their ability to withstand intensive visitor use days of the recreation area. The unique wildlife habitat adjacent to the intensive use area is not expected to be influenced or altered by the recreation area activity.

Aside from the above discussion of effects, the need exists to improve upon the safety and comfort of competition participants, recreation users, and physically handicapped persons by making modifications and additions to modernize facilities. Attention is directed to the need for improved safety of athletes using the bobsled and luge, skiers' safety crossing the access road, sanitary facilities for the handicapped, improved comfort and service facilities for cross-country skiers and year-round user protection at the bobsled clubhouse.

Competitors at the finish line of the luge currently must stand and wait for transportation back to the starting position. Clad in skin suits, athletes are frequently uncomfortable and overexposed in cold weather. A similar situation exists at the Luge Curve #5 where athletes wait their turn for training runs.

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There is a need to improve the quality of the bobsled finish, enhancing the experience of althletes and riders at the exit or offramp of the bobsled run.

During scheduled biathlon and cross-country competition, skiers must cross the main access road into the Mount Van Hoevenberg Recreation Area. Vehicular traffic problems result at the point of crossing during such events.

The clubhouse at the bobrun currently has an open deck. If covered, additional spectators could be provided shelter during periods of inclement weather.

There has been an upward trend in the number of recreational skiers at Mount Van Hoevenberg. The present size of the crosscountry lodge is inadequate to accomodate skiers wanting rest, shelter, food and ski maintenance. During competitive events, athletes are required to use the same lodge facilities as recreational skiers.

E. Critical Fish and Wildlife

1. Criteria for Evaluation

The distribution of fish and wildlife species on the 1593.8 acres of the Mount Van Hoevenberg Recreation Area is characteristic of much of the Adirondack region. The existence of occasional deer wintering along North Meadow Brook within the Recreation Area is implied, since a portion of the "North Meadows" deer wintering area to the west may penetrate the boundary of Mount Van Hoevenberg.

2. Issues, Impacts

No critical fish or wildlife management issues pertaining to the operation of the Mount Van Hoevenberg Recreation Area have been identified. No endangered or threatened wildlife species have been identified on the area.

The expansion of Nordic ski trails prior to 1980 and their continued maintenance is probably beneficial to insectivorous birds, birds of prey, and herbivorous animals by expanding their feeding opportunities on the open trails.

Mount Van Hoevenberg is managed to allow hunting, trapping and fishing.

Endangered species are being monitored throughout New York State. All sightings of the bald eagle, osprey, peregrine falcon, Indiana bat and yellow-nosed vole are recorded by regional personnel. Although none have been sighted on the Recreation Area, any observation of an endangered species will be investigated to determine whether it is transient or has become a resident. If an endangered species is found to be a resident, a plan will be prepared to effectively protect any critical habitat.

A bird-breeding atlas project has been completed under the direction of the DEC Non-Game Unit and the Federation of New York State Bird Clubs. Under this project, volunteers traversed the Mount Van Hoevenberg Recreation Area as part of a single nine (9) square mile block, during the spring of 1985 to record all observed bird species and assess their breeding status. The information will expand the list of birds known to reside on Mount Van Hoevenberg during the summer months.

F. Unique Ecosystems

1. Criteria for Evaluation

The predominate forest cover on the Mount Van Hoevenberg Recreation Area is the usual and typical forest cover for much of the Adirondack Region. Wetlands are protected under Environmental Conservation Law which, in the Adirondack Park, are administered by the Adirondack Park Agency.

The Mount Van Hoevenberg land form can be viewed from approximately 2,000 feet of Route 73 and from approximately one-half the length of the Recreation Area entrance road.

New York State's largest recorded red spruce (Picea rubra) is located 400 yards above the current starting area of the bobsled run. The tree is 102 feet tall and has a circumference of 7 feet 7 inches and a crown spread of 35 feet.

2. Issues, Impacts

New York's largest recorded red spruce is unique. The State Department of Environmental Conservation maintains a record of the largest known trees of all species throughout the State. This particular tree is protected from acts of humans by being located on Forest Preserve land.

Activities undertaken in a wetland generally require a freshwater wetlands permit from the Adirondack Park Agency. However, actions .pa proposed in Section V of this unit management plan will not take place in a wetland and will not effect any wetlands.

There are no forest types nor fish and wildlife habitats in the area which may be considered unique. A diversity of wildlife may reside or utilize this area due to early stages of vegetation succession and expanded feeding opportunity on the trail openings.

The existing buildings and facilities can only be viewed by the immediate sports participant and spectators and cannot be seen from

Route 73. Exceptions to this statement include a potential glimpse of cross-country ski trails in a mature hardwood timber stand on the easterly portion of Mount Van Hoevenberg bordering Route 73 and the view of bridge abutments from Route 73 at the intersection of the Mount Van Hoevenberg entrance road. At this same entrance road intersection, a view of what appears to be a small, open field may be seen on the toe of Mount Van Hoevenberg on State land about one mile in the distance. This small opening in the forest might be taken by the uninformed daytime motorist or traveller to be a clearing similar to other privately owned clearings bordering Route 73 both easterly and westerly of the Mount Van Hoevenberg entrance road. As the motorist approaches the entrance road from either the east or west. private houses and structures are encountered which may mislead the unsuspecting to the fact that Mount Van Hoevenberg Recreation Area nestles beyond these structures to the south. The first hint as to the exact location is given by observing and reading the advertizing entrance sign.

The visual impact from Route 73 is minimized by the forest cover and the background and horizon. The contrast between foreground of private owned land and the background of State-owned land tends to accent the overall naturalness of the Mount Van Hoevenberg Area.

Within the Mount Van Hoevenberg Recreation Area, travelling southerly on the entrance road, the biathlon range facilities can be viewed for a few hundred feet. As one travels further, private inholding residences may be viewed bordering the entrance road.

A nighttime lighting system has been installed to enhance the quality of the ice maintenance and workmanship on the bobrun and luge. The quality of ice maintenance on the bobsled and luge has a direct relationship to the sled speeds and excellence of athlete competition events. Also, the quality of ice has a bearing on the safety of athletes and public riding the track. Track ice is maintained at night to avoid conflict with schedules and daytime use of the luge and bobsled runs. It is also advantageous to maintain the track ice at night to avoid the effects of sunshine.

An improved nighttime lighting system was installed prior to the 1980 Olympic Winter Games to enhance the quality of the ice maintenance workmanship and to allow night-time bobsled and luge training and competition. Inasmuch as maintenance takes place almost every night during winter months, lighting is visible to nearby areas throughout this season. Night operation for the luge is also required by international standards. Night operation of the bob run depends upon scheduling and programming for particular events.

The light is highly visible to motorists approaching Mount Van Hoevenberg on Route 73 from either direction. It is visible to a lesser extent from other areas, including the vicinity of the lower golf course adjacent to Route 86 (Wilmington Road) and to a still lesser extent from Main Street in the village of Lake Placid. The lighting system is in operation only during the winter season, approximately December to early March.

A range of public acceptability may exist pertaining to the aesthetics or visibility effect of lighting at Mount Van Hoevenberg. In any event, this must be judged in context of the area's "Intensive Use" classification under the Adirondack Park State Land Master Plan.

The practice of repairing the bobsled and luge runs at night, and conducting training with the assistance of lighting, has occurred over many years, with few compalints from the public being registered. There were not, in fact, any comments on this subject at the public hearing on the draft plan. The Program Director of the Adirondack Council, however, did submit a written comment objecting to the lighting.

G. Adjacent Lands

1. Criteria for Evaluation

a. Private Owned Land

Sixteen (16) private land owners border the Mount Van Hoevenberg Recreation Area. Lands owned by all but two of these private owners are bordered on two or more sides by State land. Seven parcels of private land are so-called "interior parcels" enclosed by State owned land. Private lands on the north and west sides of Mount Van Hoevenberg are classified "Resource Management" by the Adirondack Park Agency. Private owned lands on the east side are classified "Rural Use". Six of the seven interior parcels are classified Resource Management.

Mount Van Hoevenberg is serviced by an entrance road running southerly from New York State Route 73 providing access to the area. Along this road there are six privately owned interior lots. Two of these lots are presently vacant, two lots have camps, one of which is occupied year round, and two lots have all season residents.

A temporary trail easement for crossing private owned lands of H. Eldridge has permitted the State to maintain approximately 3,250 feet of cross-country ski trails, fifteen feet wide, since 1978.

b. State Lands

South of the Mount Van Hoevenberg Recreation Area are State owned lands classified "wilderness" by the Adirondack Park Agency and named, "The High Peaks Wilderness Area". A Unit Management Plan for management of this wilderness area will be prepared pursuant to the Adirondack Park Agency Act. The State Department of Environmental Conservation has an on going program for the acquisition of private lands for addition to the Forest Preserve. Adirondack Park Agency policy recommendations for the acquisition of State lands is found in Appendix C.

c. Socio-Economics

The Lake Placid-Saranac Lake Area may be characterized as a summer and winter sports center with employment heavily dependent upon recreation and tourism. State and local government as well as research and educational institutions also employ many local residents.

National surveys show that for every dollar spent by the public for user fees and services at a recreational facility (ski areas, campgrounds, etc.) the local economy is benefitted by \$2-\$5 spent on support services including gasoline, food, motels, etc.

2. Issues, Impacts

The interspersion of State and private owned land at the Mount Van Hoevenberg Recreation Area has necessitated the construction of Nordic and biathlon ski trails on private land to meet International grade standards. While continuation of the temporary easement with H. Eldridge is satisfactory, there is no long-term assurance that International Nordic Ski Competition will continue. Post-Olympic use of the cross-country ski trails on private land has not differed from use of trails on State land as to the wildlife species or their respective habitats. During the spring, summer and fall months, when the establishment of territories, breeding, and rearing of young is critical to the majority of the resident wildlife species, off-season trail use will be virtually non-existent.

The revenue received at Mount Van Hoevenberg for tickets has averaged 182,000 over the past three years. The estimated effect that recreational attendance at Mount Van Hoevenberg has on the local economy is $182,000 \ge 2$ and 5 or in the range of 364,000 to 910,000.

Annual payroll expenditures at Mount Van Hoevenberg are nearly 100% directed to employees living in the local area. Payrolls, therefore, have a direct (primary) effect in the amount of \$650,000.

Annual construction expenditures including labor together with utilities, materials and supplies expenditures at Mount Van Hoevenberg total approximately \$597,000. In developing the primary economic effect, the assumption is made that 20% of this amount will accrue to the local economy, thus the calculation, \$597,000x.20 = \$119,000.

For purposes of estimating the secondary impact of dollars infused into the local economy, the Department of Environmental Conservation used a multiplier of 1.67. This value was developed by the Department in 1971 from an input-output model of employment in Essex and Franklin Counties and is, therefore, an employment multiplier. Since employment multipliers tend to be lower than monetary multipliers, the use of the 1.67 value is an attempt to be conservative in the economic evaluation. The estimate of the economic effect of annual payroll and construction (primary plus secondary) is, therefore, \$1,284,000. This, plus the effect of recreational user fees, results in an impact of between 1.6 and 2.2 million dollars.

The Mount Van Hoevenberg Recreation Area has long had a positive economic effect on adjacent private land and the local area. The staging of the 1980 Winter Olympics attracted many visitors and furnished world-wide publicity for the area. Television coverage brought the name "Mount Van Hoevenberg" before millions of viewers. This has aided in producing a long-term, positive economic impact to the surrounding area. There are a number of privately owned crosscountry ski rental businesses in the Lake Placid and adjoining communities area. These outlets are benefitted by the Mount Van Hoevenberg Recreation Area. At least two privately owned locations, which have cross-country skiing trails, promote the sale of Mount Van Hoevenberg cross-country skiing tickets to their patrons for diversified skiing on adjoining lands.

There is no evidence that indicates that the location and operation of the Mount Van Hoevenberg Recreation Area aggravates or contributes to the problems of overuse in the adjoining High Peaks Wilderness Area.

The Public Authorities Law has assured the continued operation of the unusual winter sports activities at this location to the economic, social and recreational benefit of the Olympic Region and the people of New York State.

H. General Operation, Mount Van Hoevenberg

1. Criteria for Evaluation

Throughout Sections I, II and III of this Unit Management Plan, data, references and other information is given relevent to overall operation of the Mount Van Hoevenberg Recreation Area. The combined descriptions of organization, staffing, functions, facilities, publicity, fiscal, constitutional, legal, public use, and issues form the basis for overall operation evaluation.

The Adirondack Park State Land Master Plan gives a basic guideline for management and use which states that "the Mount Van Hoevenberg Intensive Use Area should be maintained as a winter sports facility meeting international standards for bobsled, luge, biathlon and improved cross-country skiing under developed, competitive conditions."

2. Issues, Impacts

The public generally perceives the quality of recreation offered at the Mount Van Hoevenberg Recreation Area as they experience events, efficiencies, surroundings, upkeep of facilities, and the conduct of employees.

The rate of inflation is cause for concern over the cost of operation and maintenance. Public perception includes those who want a balanced budget and those who do not feel that government must provide services in accordance with a balance of expenditures and revenues.

Operation of the Mount Van Hoevenberg Recreation Area has fulfilled a need for unusual winter sports facilities and events in New York State. The area's operation has been a benefit to the Olympic region both economically and socially. The area's facilities give opportunity to improve physical fitness and athlete and recreational users education.

I. Capital and Rehabilitation Spending

1. Criteria for Evaluation

Rehabilitation and Improvement expenditures which extend or change the useful life of facilities have ranged between \$99,000 and \$233,000 over the past two years. Capital expenditures for new facilities have ranged between \$55,000 and \$127,000 over the same two year period. There is no legal mandate requiring a course of action which balances costs with revenues.

Basic guidelines for the management and use of Intensive Use Areas, as classified in the State Land Master Plan, state that priority should be given to the rehabilitation and modernization of existing intensive use areas and the complete development of partially developed existing intensive use areas.

2. Issues, Impacts

Buildings and grounds require periodic maintenance to safeguard the investment in the physical plant. Mount Van Hoevenberg is often the site for World and National class competitions. For these reasons, the plant should be maintained as a first class facility. The public also should be offered well-maintained and safe facilities for recreational enjoyment. Some new capital construction is needed where safety, public use, and modernization issues have been identified. These needs are explained in Section III.D.3. The improvements made to facilities will result in quality athlete experience and improved public recreational enjoyment which should also increase the economic benefit to the area.

IV. DESCRIPTION OF ACTION-MANAGEMENT OBJECTIVES

A. Orientation

This section outlines management objectives for the ensuing five (5) year period which are based on issues identified in Section III of this Unit Plan. Adopted objectives set the stage for projected management actions which follow in Section V. The overall goal for the Mount Van Hoevenberg Recreation Area has been established under which individual management objectives follow.

B. Goal

The Olympic Regional Development Authority shall continue to institute comprehensive activities utilizing the Mount Van Hoevenberg Recreation Area to insure optimum year-round use and enjoyment of the Area's facilities to the economic and social benefit of the Olympic region and to extend opportunity to improve the physical fitness, athletic education and recreational education of the people of New York State and the United States pursuant to the Public Authorities Law, the Adirondack Park Agency Act, and the Environmental Conservation Law, in harmony with the Adirondack Park.

C. Management Objectives

1. Objectives Pertaining to Article XIV of New York State Constitution

No special objectives have been scheduled for the ensuing five year period.

2. Objectives Pertaining to Policy and Standards

No special objectives have been scheduled for the ensuing five year period.

3. Objectives Pertaining to Laws and Regulations

a. Safety Codes and Standards

Conduct an annual inventory of facilities to determine corrective or upgrading measures required to maintain facilities in compliance with New York State Safety Codes and Standards.

4. Objectives Pertaining to Public Use

a. Summer Program

Sponsor an annual activity or event during the summer season which will increase year-round public use and revenue opportunity.

b. Capital Construction

Refer to the objective pertaining to capital improvements which enhance public use safety, accessibility to the handicapped, and quality recreation use (IV.C.9).

5. Objectives Pertaining to Critical Wildlife

Hunting, fishing and trapping are permitted recreational activities on the Mount Van Hoevenberg Recreation Area.

No special objectives have been scheduled for the ensuing five year period.

6. Objectives Pertaining to Unique Ecosystems

No special objectives have been scheduled for the ensuing five year period.

7. Objectives Pertaining to Adjacent Lands

a. Land Acquisition

Adjacent and interior parcels of private owned land bordering the Mount Van Hoevenberg Recreation Area should be acquired by the Department of Environmental Conservation by gift, fee title, or by permanent easement (as appropriate), if made available to the State, and approved by the Conservation Commissioner, to assure continuity of purpose and use of the area.

8. Objectives Pertaining to General Operation

a. Maintenance and Operation Level

Annual budgets, schedules and project plans will be prepared in support of continued management of the Mount Van Hoevenberg Recreation Area at an intensity or level equivalent to the 1984-85 inventory of facilities and systems.

9. Objectives Pertaining to Capital and Rehabilitation Spending Plan

a. Rehabilitation and Modernization Spending

Prepare annual budgets for six (6) Capital Improvements to facilities. Begin construction and reconstruction with emphasis on modernization, user safety, quality recreation, athlete training, program accessibility to handicapped, and increasing revenues, while minimizing adverse environmental impacts.

V. PROPOSED MANAGEMENT ACTIONS AND IMPACTS

A. Section Introduction

Pursuant to issues identified in Section III of this Unit Plan and the five year objectives set forth in Section IV, this section elaborates on the selected management actions which are directed toward the stated goal. A summary of alternative actions and impacts is found in Volume II, Appendix I.

B. Management Actions

- 1. Action #1
 - a. Objective Short Title

Safety Codes and Standards

b. Description of Proposed Action

Annual examination will be made of facilities to review compliance with provisions of New York State's Health Law, ANSI Safety Standards, New York State Safety Standards and the New York State Safety in Skiing Act. Implementation of any changes or modification of facilities as required will be given the highest priority in the managerial processes to assure the health and safety of patrons.

c. Impact

The sponsors of international competition, athletes and recreation users expect and must be assured that their patronage at Mount Van Hoevenberg is rewarded by safe use. This is accomplished through exemplary facilities and conditions. Periodic capital expenditures must be anticipated to make necessary changes in accordance with safety codes. It is not anticipated that such changes will cause significant adverse impact on the physical and biological elements in the environmental setting. Implementation of codes and standards will generally complement the environmental setting by protecting against improper acts, water discharge, refuse disposal and erosion.

2. Action #2

a. Objective Short Title

Summer Program

b. Description of Proposed Action

The development and scheduling of future summer events should be of the type that maintains Mount Van Hoevenberg as a "Day Use Area" as it has been identified in the Adirondack State Land Master Plan. The selection and planning events should be based on the adaptability of the site and use of existing facilities. Existing parking lots, lounge, cafeteria, first aid, sanitary and gathering areas would serve day use events.

c. Impact

Day Use events should not require new construction or site distress, but will make use of existing facilities within established public use carrying capacities.

Additional water, electricity or sanitary facilities needs, if required, may be prepared on a temporary basis and installed to minimize site impact. Temporary lighting, water and chemical toilets will be removed from the area upon termination of an event. Revenues realized from an event off-set expenditures and will benefit both the Olympic Authority and local commercial interests. Improved utilization of the facilities at Mount Van Hoevenberg will be realized as future summer day use projects are implemented.

3. Action #3

a. Objective Short Title

Land Acquisition

b. Description of Proposed Action

The acquisition of lands where the temporary ski trail easement is presently located and interior parcels of private land are of a high priority interest to management and the continued operation of Nordic and Biathlon skiing events at Mount Van Hoevenberg. Implementation of this action hinges on the interest and willingness of private land owners at some future time to make their lands available to the State. When private lands are offered to the State, two types of ownership may result: fee title and easement. Under the Environmental Quality Bond Act of 1972, proposed acquisitions must be budgeted, appraised and scheduled for processing. Fee acquisition can not exceed the appraised fair market value of a property. To accelerate acquisitions, it is possible to grant certain continued uses to the grantor of the acquired lands for over a period of several years. Thus a family can continue to utilize their property while the State owns or gains permanent rights to the property.

c. Impact

Provision was made in 1972 by public referendum to acquire lands for addition to the Forest Preserve. Such lands include adjacent and interior parcels which, when acquired, will block in State land holdings to reduce boundary line maintenance and enhance public use, administration and management of State holdings.

An Environmental Impact Statement for the State Environmental Quality Bond Program has been filed by the State Department of Environmental Conservation.

The interspersion of State and private owned land at Mount Van Hoevenberg necessitated the construction of Nordic and biathlon ski trail on private land without benefit of a long-term assurance that these ski trails will remain. Lack of long-term assurance could effect the scheduling of international events at Mount Van Hoevenberg.

A review of "Land Acquisition Policy Recommendations" prepared by the Adirondack Park Agency and found in the Adirondack State Land Master Plan (see Appendix C) does not conflict with the proposed action.

4. Action #4

a. Objective Short Title

Maintenance and Operation Level

b. Description of Proposed Action

During the ensuing five year period, Olympic Regional Development Authority management of Mount Van Hoevenberg shall continue to provide essentially the same level of recreation opportunity and public service as was conducted during fiscal year 1984-85. The aforementioned operation level is as inventoried in Section II and III of this Unit Management Plan. ORDA will continue to analyze and review facility utilization. This will include, but not be limited to: revenues generated, population served, relationship of utilization to weather patterns, relationship of utilization to marketing efforts and relationship of utilization to facility development.

c. Impact

Continuation of the 1984-85 maintenance and operation level will contribute a stabilizing effect on the Olympic region employment, economics, public use and administration.

A gradual decrease of New York State appropriations for the operation of Olympic venues is possible as earned revenues increase. Increased revenues are expected from ORDA marketing efforts. Increased expenses are mostly a function of inflation. Projected revenues are:

1985-86	699	\$230,000
1986-87	P160	\$237,000
1987-88	610-02	\$244,000
1988-89	1000	\$251,000
1989-90	**548	\$258,000

Cooperation with local government and chambers of commerce to stabilize and strengthen area economics will continue.

Probable impact of the operation phase of Mount Van Hoevenberg including expenditures, revenues, spectators, season competitors, world races and local economics is further described in the Environmental Impact Assessment, New York State, Volume II, as prepared for the XIII Winter Olympics 1980.
5. Action #5

a. Objective Short Title

Rehabilitation and Modernization Spending

b. Description of Proposed Action

To achieve the stated objective, capital construction for modernization and expansion is required in the following six priority arranged areas:

Luge Finish Building - Construct a new building containing 280 square feet with a capacity for 20 athletes at the terminus of the luge run to provide shelter while athletes wait for transportation back to the starting position. Restrooms will be provided supported by the construction of a tile field of approximately 500 square feet and installation of a 500 gallon septic tank. Potable water is not planned for this building. Electric service already exists at the site. The building will be heated electrically.

Luge Curve 5 Building - Construct a three-sided shelter containing approximately 200 square feet for the protection from the elements of up to 12 athletes while standing and awaiting their turn for training runs. No potable water or sanitary facilities will be constructed. Electrical service already exists at the site.

Bobrun Finish Road Extension - Construct 200 yards of roadway at the finish of the bobsled run to allow sleds more "braking" distance, reduce the chance of accidents, and minimize daily repair on the "out run". Move the existing finish hut and warm-up hut to the end of the new road. This project consists of constructing a road to a point about 25 feet higher on the counter-slope finish ramp. The road extension will be paved to match the existing road.

Biathlon Bridge Over Access Road - Construct a bridge across the main access road at the point of crossing during the 1980 Olympics, to assure biathlon and cross-country skiers safe crossing of the road and to eliminate vehicular traffic problems during scheduled competition events. This bridge will utilize the existing abutments which were constructed for the 1980 Olympics. The 75 foot span will be made of laminated support timbers (Glu-Lam timbers). Support timbers will be in excess of 14 feet above the access road pavement.

Bobrun Deck Enclosure - Construct a roof over the open deck which tops the timing, first aid, and press rooms at the bobsled clubhouse. Approximately 1,500 square feet of the existing clubhouse deck will be covered to provide additional sheltered viewing by spectators during periods of inclement weather. The enclosure will be designed and constructed to utilize passive solar energy. An electrical heating back-up system will be provided. <u>Cross-Country Building Expansion</u> - Construct a 16'x40' addition to the existing cross-country ski lodge consisting of two floor levels, including a sundeck at the roof level. The resulting square footage will house a ski shop and increase total lodge carrying capacity for recreational skiers in the range of 25%-33% or by approximately 110 skiers/moment. Potable water, electric service and sewage disposal will be furnished by extending these existing systems from the present lodge to the lodge addition. Services will meet DEC and DOH standards for sanitary waste and potable water respectively, and will be modified or replaced if required by those agencies. The projected five (5) year Capital Construction Management Action is summarized as follows:

	Year of	Estimated
Project Title	Construction	Cost
Luge Finish Building	1986	18,000
Curve #5, Luge, Warm-up Bldg.	1986	5,000
Bobrun Finish, 200 yd. Road	1986	6,000
Biathlon Bridge Over Access R	d. 1 <u>9</u> 86	20,000
Bobrun, Deck Roof & Heating	1986	100,000
Cross-Country Building	1987	125,000
TOTAL CAPITAL CONSTRUCTION BUDGET		\$274,000

REHABILITATION

Rehabilitation includes maintenance of grounds and physical plant over the next five (5) years and will require the following expenditure plan:

> 1985/86 - \$103,700 1986/87 - \$93,200 1987/88 - \$188,900 1988/89 - \$140,500 1989/90 - \$150,000

Typical expenditures include: repair to electric lines servicing the bobsled and luge; new roof on maintenance garage; bobsled and luge transportation road annual maintenance; replacement of chemical toilets serving the luge; maintenance and replacement of security fencing. A ramp will be constructed for the convenience of handicapped and elderly spectators so they will be able to get from ground level to the bobrun lounge deck for watching races. Rest rooms at this location will be modified to accommodate handicapped women and men.

c. Impact

The projected rehabilitation and capital expenditure plan is in line with average annual expenditures experienced during the past five years. New construction will be located on permanent easement and special use land. While future attendance can be expected to rise slightly due to the modernization of facilities, the greatest beneficial effect will be improved athlete safety, quality recreation, athlete training, program accessibility to handicapped persons and enhancement of the local economy.

The luge finish building, when completed, will provide shelter for up to 20 athletes. The building, when completed at curve 5 of the luge, will shelter 12 athletes. The result in completion of these structures is improved safety and comfort of athletes wearing skin suits. Soils at these sites are a thin glacial till with some boulders. This condition does not present construction problems. Construction sites will be seeded following construction to stabilize soil and add to the already present productive wildlife habitats.

Extension of the bobrun finish road will modernize and enhance the quality of the exit at the off-ramp and allow sleds more "braking distance". Daily repair on the "out run" will be reduced. Shoulders and slopes will be mulched to prevent erosion during construction. It is estimated that about 77 trees must be removed to allow this construction. Requests for approval to cut, remove or destroy trees for the purpose of new construction, expansion or modification projects must be submitted to DEC Director of the Division of Lands and Forests in writing and shall include specified information. (See Appendix F) This is normally accomplished as part of the management plan implementation described in Section V C.

The natural wood used in support of the proposed biathlon bridge across the access road will harmonize with the environmental setting. A brief glimpse of the bridge, when completed, may be seen by motorists from Route 73 only at the point of intersection of the highway with the access road. The visual impact from Route 73 at this point would be consistant with facilities development crieteria due to the acknowledged character of the site. To the visitor and users of Mount Van Hoevenberg, such structures are part of the recreational experience and enjoyment. Existence of the bridge will eliminate skier intersection with vehicular traffic during use of the biathlon and crosscountry ski trails. The potential of skiers being hit by passing vehicles and the vehicles themselves being stopped and unable to use this point in the access road will be eliminated.

Completion of the roof over the bobrun clubhouse deck will not increase the total public spectator capacity for the bobrun but will provide standing room shelter while viewing activities for a few hundred visitors. This may tend to encourage repeat visitations by the handicapped and elderly persons seeking recreation experiences. There will not be a need for additional land area or soil or site disturbance for this project.

The proposed cross-country building addition, when completed, will increase total lodge carrying capacity at any given moment to approximately 483 skiers. As skiers move between the ski trails and lodge seeking and satisfying the need for rest and shelter, this building addition will facilitate such movement in view of the observed upward trend of recreational skiers at Mount Van Hoevenberg (see paragraph III.D.2.c.). The lodge building addition will be for use by recreational skiers and will free the existing structure, when required, for exclusive use by athletes and competitors. Construction costs are minimized by utilization of the present water, electric and sewer systems of the existing lodge structure. The peak water consumption, for example, is currently at 9% of carrying capacity; see II.A.3.e and f. Furthermore, water demand will be at a time when source stream flow is above 4cfs (during winter months). Stream water flow downstream of the pumping facility will be maintained at a flow rate exceeding 3 cubic feet/second (the minimum flow rate designated by the Division of Fish and Wildlife to protect stream aquatic life; see paragraph II.A.1.e).

No blasting is anticipated for preparation of construction sites. However, such assurance has not been determine for the construction of footings and cannot be determined until excavation is initiated. During construction and post-construction periods, the air quality, noise levels, traffic patterns and effect on adjoining lands are not expected to change significantly from customary, anticipated and experienced levels for the Lake Placid regional area. New construction (except the biathlon bridge) cannot be seen from Route 73. New facilities when completed are not expected to change the physical, biological and social character of the recreation area. Spectator and athlete use is not expected to change significantly due to new construction. Therefore, existing carrying capacities will remain valid except for the increase noted as a result of completion of the cross-country lodge extension.

Since new construction proposed in this five year plan is in the immediate vicinity of existing structures, there will be no increased loss of hunting areas. The wildlife habitat adjacent to the construction sites may be temporarily affected but they are not expected to be permanently influenced or altered by the placement of the proposed improvements. Construction sites will be seeded following construction to stabilize the soil. This will enhance the already present productive wildlife habitats (see II.C.2.b).

C. Management Plan Implementation, Projects

Over the next five years, project plans may be needed to implement management actions (objectives) identified in the approved and adopted Unit Management Plan for Mount Van Hoevenberg Recreation Area. Project planning is accomplished by Olympic Regional Development Authority employees in the ordinary day-to-day fulfillment of their duty assignments. It involves a series of administrative or managerial steps leading to the installation and completion of the adopted action (project).

Depending on the complexity of the project, project planning may be simplistic involving two or more steps. More steps or procedures are required as the complexity, impact and cost of projects increase. A project plan may include two or more of the following steps or procedures:

Directives and memorandum;

Statements of policy and procedures;

Promulgation of legislation and regulations;

Architectural or engineering designs and surveys;

Cost analysis;

Annual budget for the Unit;

Assessment of environmental effects and impacts;

Educational brochures and news releases;

Work Plan;

Schedule;

Procurement of manpower, supplies and equipment;

Field inspection reports;

Progress reports.

Project planning does not generally involve direct public participation except as may be required by provisions of the State Environmental Quality Review Act. Files relevant to specific projects are generally available for public review in accordance with the Freedom of Information Law. SUBJECT INDEX

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