

# **Draft Environmental Impact Statement**

## **For:**

**Belleayre Resort at Catskill Park  
Towns of Shandaken and Middletown  
Ulster and Delaware Counties  
New York**

## **Prepared For:**

**Crossroads Ventures, LLC  
PO Box 267  
Mt. Tremper, NY 12457**

## **Lead Agency:**

**New York State Department of Environmental Conservation  
21 South Putt Corners Road  
New Paltz, NY 12561-1696  
Contact: Mr. Alexander F. Ciesluk, Jr.  
(845) 256-3014**

## **Prepared By:**

**The LA Group  
Landscape Architecture and Engineering, P.C.  
40 Long Alley  
Saratoga Springs, NY 12866  
Attn. Mr. Jeff Anthony**

**Delaware Engineering, P.C.  
28 Madison Ave Ext.  
Albany, NY 12203  
Attn. Ms. Mary Beth Bianconi**

*September 2003*

**Whiteman Osterman & Hanna  
One Commerce Plaza  
Albany, NY 12260  
Attn. Daniel Ruzow, Esq.**

**Creighton Manning Engineering, P.C.  
4 Automation Lane  
Albany, NY 12205-1683  
Attn. Mr. Chuck Manning**

**Allee King Rosen & Fleming, Inc.  
34 South Broadway  
White Plains, NY 10601  
Attn. Mr. Peter Liebowitz**

**HVS Consulting Services  
372 Willis Avenue Mineola, NY 11501  
Attn. Mr. Stephen Rushmore**

**Alpha Geoscience  
679 Plank Road  
Clifton Park, NY 12065  
Attn. Mr. Sam Gowan**

**Hartgen Archeological Associates, Inc.  
1744 Washington Avenue  
Rensselaer, NY 12144  
Attn. Ms. Karen S. Hartgen**

**Rettew Engineering and Surveying, P.C.  
PO Box 808  
Margaretville, NY 12455  
Attn. Mr. Robert Allison**

**SE Group  
156 College Street  
Burlington, VT 05401  
Attn. Ms. Claire Humber**

**ENSR International  
6601 Kirkville Road  
East Syracuse, NY 13057  
Attn. Mr. Scott C. Manchester**

**Love Enterprises and Associates  
215 Anguilla Street  
St. Simons Island, Georgia 31522  
Attn. Mr. Paul Cowley**

**Emilio Ambasz  
8 East 62<sup>nd</sup> Street  
New York, NY 100271  
Attn. Mr. Emilio Ambasz**

**Hart Howerton/Robert Lamb-Hart  
10 East 40<sup>th</sup> Street  
New York, NY 10016  
Attn. Mr. Dean Webb**

**Blue Dog Design  
1701 East Washington St.  
Orlando, FL 32803  
Attn. Mr. Doug Kleppin**

**Date of Acceptance of DEIS: November 26, 2003**

**Date of Public Hearings: January 14, 2004 Margaretville High School  
Margaretville, NY &  
January 15, 2004 Oteora High School  
Boiceville, NY**

**Close of Comment Period: February 24, 2004**

**Address Comments to: New York State Department of Environmental Conservation  
21 South Putt Corners Road  
New Paltz, NY 12561-1696  
Contact: Mr. Alexander F. Ciesluk, Jr.  
(845) 256-3014**

**Submitted September 2003**

*September 2003*

# Belleayre Resort at Catskill Park

---

## *Executive Summary*

### **I. Introduction**

This Draft Environmental Impact Statement (“DEIS”) was prepared on behalf of the New York State Department of Environmental Conservation (“NYSDEC”), the lead agency for this project under the New York State Environmental Quality Review Act, Environmental Conservation Law Article 8 and implementing regulations as set forth in 6 NYCRR Part 617 (“SEQRA”) (see Appendix 1, “SEQRA Documentation.”) by the project sponsors, Crossroads Ventures LLC (“Crossroads”). The proposed project, which is the subject of this DEIS, is the construction and operation of a four season world-class recreation resort, the Belleayre Resort at Catskill Park (the “project”) located immediately east and west of the New York State Belleayre Mountain Ski Center (the “Belleayre Mountain Ski Center”) in the Towns of Shandaken and Middletown in the Central Catskill region of New York State. The project has been designed to work in concert with local and regional economic development plans while blending with the environmental and historic fabric of the Central Catskills. The DEIS identifies potential impacts and effective mitigation measures to enable the development of an economically viable project based on sound environmental principles.

### **II. Project Description**

#### **A. Project Location**

The proposed Belleayre Resort at Catskill Park is located in the Central Catskill region of New York State near the intersection of the boundaries of Delaware, Ulster and Greene Counties. The project encompasses two assemblages (i.e. the properties owned by the project sponsor) of property south of NY Route 28 both east and west of the State owned and operated Belleayre Mountain Ski Center. The area to be developed is comprised of 573± acres. Crossroads’ assemblage is 1,960± acres in total, and through deed restrictions or conservation easements the remaining 1,387± acres or 71% of the total assemblage of properties owned by Crossroads, will be preserved. The project site includes lands in the Town of Shandaken in Ulster County and lands in the Town of Middletown in Delaware County.

#### **B. Big Indian Plateau -- The Eastern Site Description and Project Components**

Crossroads proposes to develop approximately 331± acres of an assemblage of 1,242± acres east of the Belleayre Mountain Ski Center. This includes the Big Indian Country Club, including the Big Indian Resort and Spa consisting of a 150-room hotel with two restaurants, a ballroom, and a spa, designed by Emilio Ambasz, a world-renowned architect known for his environmentally-sensitive architecture.

Adjacent to the hotel an 18-hole championship golf course Big Indian Country Club, designed by Davis Love, III, is proposed. The golf course is located on the plateau along the ridge as well as on flatter “benches” moving down from the top to the north. Fifty-five buildings containing 95 detached lodging units are also proposed to be built around the golf course east of Giggle Hollow. In addition, a golf course maintenance building complex, a satellite golf maintenance building and a wastewater treatment facility will be constructed.

Belleayre Highlands, to the west of Giggle Hollow, includes 22 four-unit buildings containing a total of 88 detached lodging units associated with the Resort. An existing mansion, the Brisbane (Turner) Mansion, will be preserved and used as a social and activities center. Recreational amenities such as tennis and swimming are also proposed for this area. Existing outbuildings associated with the mansion will be maintained and adaptively reused as offices and storage areas.

C. Wildacres Resort and Highmount Golf Club--The Western Site Description and Project Components

Development west of the Belleayre Mountain Ski Center will encompass 242± acres of a total of the 718± acre assemblage owned by Crossroads. The development on this portion of the site will be known as the Wildacres Resort. The hotel complex has been designed by Robert Lamb Hart, recipient of the 1998 AIA Award for Environmental Excellence and Highmount Golf Club designed by Davis Love, III. This golf course is an 18-hole championship golf course offering a different level of play than the golf course proposed at Big Indian Country Club. The Resort will include a hotel building with 250 rooms, related hotel shops and two restaurants, a conference center and a spa. Twenty-one buildings will contain 168 detached lodging units. In addition, a Children’s Center, lodging unit clubhouse, a golf course maintenance buildings complex, satellite golf maintenance building and a wastewater treatment facility will be constructed. An existing house built in 1904 for the famous Shakespearean actress, Julia Marlowe (the “Marlowe Mansion”) will be renovated and adaptively re-used as a restaurant. A 21-lot residential subdivision, with lots ranging in size from 2-16± acres, to be known as Highmount Estates is proposed on the Leach property west of the former Highmount Ski Area. The former Highmount Ski Area itself will be used as the project’s Wilderness Activity Center.

**III. Project Purpose, Need and Benefits**

A. Purpose and Need

The Belleayre Resort at Catskill Park will bring to fruition the creation of a four season world-class Resort associated with the Belleayre Mountain Ski Center as contemplated in State and regional planning studies prepared over the last 40 years. The project is designed to complement both the active and passive recreational opportunities provided by the Belleayre Mountain Ski Center and surrounding New York State Forest Preserve lands. The Wildacres Resort and Highmount Golf Club situated across from the main

(upper) entrance to the Belleayre Mountain Ski Center will provide lodging and amenities not available at the Belleayre Mountain Ski Center itself. The design of buildings at the Wildacres Resort draws upon the architecture of the great Catskill Mountain resorts of the late 1800's. By contrast, but nevertheless consistent with its surroundings, the Big Indian Resort and Spa has been designed by Emito Ambarz to blend into its surroundings so that it is virtually invisible from hiking trails in the adjacent Forest Preserve.

Of the 1,960± acres owned by Crossroads, approximately 1,387± acres (71%) will remain undeveloped and will be protected from future development by legal restrictions (likely in the form of conservation easements or deed covenants) and enhance access to, yet serve to buffer, adjacent Forest Preserve Lands. The Belleayre Resort at Catskill Park, as envisioned, will marry the physical assets of the Belleayre Mountain Ski Center and the Catskill Forest Preserve with new facilities and programs that will enhance the experience of both visitors to the Resort and the general public.

A strong public-private partnership is at the core of the project sponsor's Vision Statement: an opportunity to assist the State of New York in realizing its original dream of the Belleayre Mountain Ski Center as a major contributor to the economy of the region and the State. Essential to the success of any resort is a critical mass of first-class and family accommodations, year-round activities, event excitement and an extensive menu of recreational amenities, which, taken together, define the area and provide for a range of recreational experiences. The Belleayre Resort at Catskill Park is intended as a major contributor in the provision of such an ambience and renewed regional image.

In addition to its own on-site programs, the Resort will utilize programs of local providers, guides, instructors, outdoor outfitters, etc., as well as governmental and not-for-profit entities including, but not limited to, the NYSDEC, the New York City Department of Environmental Protection (NYCDEP), the YMCA facility at Frost Valley, the Empire State Railway Museum, the Catskill Center, the Watershed Museum and the Phoenicia Fish and Game Association.

The Resort is intended to be the catalyst, that will drive the revitalization of year-round tourism and provide improvements to the quality of life for those who live in, as well as those who visit, the Catskill Park.

## B. Project Benefits

An extensive analysis of the economic effects of the construction and operation of the Belleayre Resort at Catskill Park was undertaken and is included in the DEIS. (See DEIS Sections 1.3.4, 3.10 and Appendix 26, "Economic Benefits and Growth Inducing Effects"). The study contains a detailed analysis of existing economic conditions of the region surrounding the proposed project. This analysis reveals that the average household income of \$39,524 in the area is approximately \$26,600 less than the New York State overall average and has declined by 2.8% in the period 1990-2000. Moreover, 54% of the households earn less than \$40,000 annually. The study, which

includes Delaware, Greene and Ulster Counties, concludes that the area continues to suffer from the recession of the late 1980's and early 1990's.

Tourism remains a critical element of the tri-county region with approximately \$395 million spent in 1997 with nearly 70% of the tourist dollars spent in Ulster County.

In addition to these economic benefits, Crossroads has already shown its commitment to the Catskill Region. Crossroads Ventures LLC created the Crossroads Foundation ("Foundation") which exists to enhance the cultural, health, youth, and education programs in the Towns of Shandaken and Middletown including the Village of Fleischmanns. The Foundation is a not-for-profit corporation which will receive one-third (1/3) of all of the profits from their ventures. The project sponsor has already vested the Foundation with cash contributions totaling \$235,000 and initial grants have been made to the Margaretville Memorial Hospital, the Belleayre Conservatory, the Skene Memorial Library, the Neal Grant Foundation, and the Catskill Watershed Museum. The Foundation initiated a series of community forums entitled "Vision Quest 2010" to elicit from the community a list of community causes which future gifts by the Foundation should most appropriately target on a priority basis.

#### 1. Construction Phase

Construction of the Belleayre Resort at Catskill Park is expected to take a period of approximately eight years with completion of one and one half of the golf courses and hotels anticipated by the middle of the third year. During the eight year period of time the project is expected to result in the following levels of employment, wages and economic output:

- 2,114 full-time person years of employment over the eight year construction period
- 1,765 additional person years of employment in indirect or generated employment
- direct wages and salaries of \$81.09 million
- indirect wages and salaries of \$64.40 million
- tax revenues of \$11.40 million for Ulster County, Delaware County and New York State
- Total economic output or demand of \$451.08 million

#### 2. Operation Phase

Once the Belleayre Resort at Catskill Park is fully operational it is expected to have the following direct and indirect economic benefits:

- direct full-time employment for 542
- direct part-time and seasonal employment for 330
- direct total annual payroll of \$20.5 million, average full-time salary of \$27,272
- 211 indirect jobs in region
- indirect wages and salaries of \$7.43 million

- annual property tax revenue increase of \$1,503,154 in the Town of Shandaken and Ulster County allocated as follows:

Ulster County General	\$ 186,777
Shandaken Town General	\$ 148,277
Shandaken Highway	\$ 176,656
Hightmount Fire	\$ 92,217
Big Indian Oliverea Fire	\$ 23,512
Pine Hill Fire	\$ 11,330
Pine Hill Light	\$ 5,242
Onteora Central School	\$ 745,546
Onteora School Library	\$ 623
Margaretville School	\$ 112,961

- annual property tax revenue increase of \$526,472 in the Town of Middletown and Delaware County allocated as follows:

Delaware County General	\$ 158,013
Middletown Town	\$ 74,103
Highway Outside Village	\$ 33,155
General Outside Village	\$ 2,072
Middletown FD #1	\$ 23,243
Margaretville School	\$ 235,883

- annual sales tax revenues allocated as follows:

Ulster County	\$ 718,016
Delaware County	\$ 238,404
New York State	\$1,210,692

- annual off-site Visitor Spending of \$11.81 million mostly in village and hamlet centers along the NY Route 28 corridor.

The project will have few, if any, impacts or increased demand on community resources. The roadways will be private with private security. The vacation Resort will add few, if any, students to the local school systems which are not running at capacity in any case.

#### **IV. Approvals and Permits**

In addition to reviewing the project as involved and interested agencies under SEQRA, those agencies from which permits, approvals or recommendations are being sought will

also have separate review processes for the proposed project. The following permits and approvals are being sought at various levels of jurisdiction:

Town of Shandaken Planning Board	Special Use Permit. Site Plan Review and Approval. Subdivision Approval.
Town of Middletown Planning Board	Special Use Permit. Site Plan Review and Approval. Subdivision Approval.
Ulster County - Health Department	Review and approve portions of project pertaining to water supply, wastewater disposal and food services. Hotels. Swimming Pools. Subdivisions.
- Bridges and Highways	Review and approve the plans for the realignment of County Road 49A and entrances onto County Road 49A., including proposed grading, signage, and signaling.
Ulster and Delaware County Planning Departments	Gen. Mun. Law § 239-m and 239-n review.
NYCDEP	Wastewater Treatment Plant and Subsurface Disposal. Stormwater Pollution Prevention and Impervious Surface.
NYSDEC	Protection of Waters Permit/Water Quality Certification. SPDES Wastewater Disposal Permits. Water Supply Permit – Big Indian Plateau. SPDES Stormwater Discharge from Construction.  SPDES Industrial Discharge from Operations. Petroleum Bulk Storage. Chemical Bulk Storage. Public Water Supply Permit Modification for Village of Fleischmanns. Water Supply Permit for Wildacres.

NYSDOH	Wastewater Disposal Permit. Water Supply Permit. Food Service Permit. Hotels. Swimming Pools. Subdivisions.
NYSDOT	Right-of-way work permits for work within NY Route 28.
NYS Offices of Parks Recreation And Historic Preservation	Cultural Resources Consultation.
US Army Corps of Engineers (ACOE)	ACOE (wetlands) Nationwide Permits (issued July 18, 2003).

**V. Key Issues: Impacts and Mitigation**

A. Soils and Erosion Control

1. On-Site Soils

The properties on and around the project site are mostly areas of shallow to moderately deep, very stony soils formed in glacial till soils derived from red shale and sandstone. There are some areas of deep glacial till soils that are highly dense, slowly permeable and contain little organic matter. At the base of steep slopes along the outlet of small streams coming off the upper slopes, there are some broad areas of very gravelly glacial outwash. On the nearly level terraces along Birch Creek the soil is mostly well drained and extremely stony.

2. Erosion Control

As a result of the site's topographical and drainage characteristics and its location within the New York City Watershed, an extensive study of on-site soils, drainage patterns, and planning for construction activities was undertaken and numerous control measures have been investigated and analyzed to ensure that erosion will be kept to a minimum. Grading of the site will cause the disruption of soils and the increased potential for erosion during construction. In addition, the short-term removal of vegetation, and especially root systems from portions of the site, will create a greater susceptibility to exposed soils to erosive factors such as wind, rain and surface runoff. Soil transported by surface runoff could potentially find its way into nearby surface waters where it may settle out as sediment. To avoid and mitigate these potential impacts and assure that downstream waterways are not adversely impacted, an extensive sediment and erosion control plan has been developed and will be implemented and maintained under the supervision of a Certified Professional Erosion Control Specialist.

The sediment and erosion control plan will implement several measures during the construction phase to ensure that erosion is kept to a minimum. It is designed to take advantage of the fact that the project site is divided into two separate watersheds (Ashokan and Pepacton Reservoirs) and is at a great distance from these reservoirs (20 miles and 14 miles, respectively). Moreover, construction areas are located at relatively large distances from receiving streams. All erosion control measures will be checked regularly for proper functioning during construction and maintained as needed by two teams of 4-6 persons under the direction of a Certified Professional Erosion Control Specialist who will oversee day-to-day activities on the east and west portions of the site, including making at least weekly inspections, and immediately following any storm event of 0.5 inch or greater, to check the erosion control device's effectiveness and prescribe additional maintenance measures, as necessary.

Section 3.2.2 and Appendix 11 describe how the approach to sediment and erosion control has been revised to address previous questions on this topic. Phase 2 of the Big Indian Country Club is used as an example of how this new approach will be employed project-wide. New Plan Sheets CP-1 through CP-18 illustrate in great detail how this new approach will be implemented. Generally speaking construction is broken up into Phases, Subphases and Subcatchments within Subphases. Extensive temporary stabilization and rapid permanent stabilization will be employed during the construction process so that no more than 25 acres of unstabilized soils will occur at any given time within either reservoir watershed. Final stabilization will utilize large amounts of sod, including 100 acres of sod on the Big Indian Country Club and 50 acres of sod on the Highmount Golf Club. During construction, all subphase subcatchments, almost all of which are less than 5 acres in size, will each have temporary retention basins capable of capturing and holding runoff from a ten-year (6") storm on bare soils. Runoff captured in the retention basins will be treated with an environmentally-friendly flocculant to reduce stormwater turbidity before the stormwater is discharged primarily to the irrigation ponds, with some clarified stormwater discharged via level spreaders located in nearby undisturbed wooded areas. These discharges will be made at rates that are the same or less than under existing conditions in order to avoid downhill erosion.

#### B. Geologic and Topographic Resources

Construction on the project site will require grading for the various components including access roads, building locations and the proposed golf courses. Geotechnical and hydrogeological investigations on the site revealed that the depth to bedrock on the project site at higher elevations ranges from 12 to 22 inches, while in the valley along NY Route 28 indicate that bedrock is 80 to 100 feet below existing grade.

Given the bedrock depth, it will be necessary to perform some limited blasting to accomplish some of the proposed grading. The irrigation ponds near the Big Indian Resort and Spa are likely to be blasted as well as the foundations of both hotel buildings. Refer to Section 2.3, 3.1, 3.2.2, 3.5.2 and 3.7.2 of the DEIS for details regarding blasting, grading, cutting and filling.

### C. Surface Water Resources

Limited surface waters in two different watersheds exist on the project site. Surface water resources consist of intermittent and perennial streams that originate in the higher elevations of the site, or above the site, and flow in a generally northerly direction in well-defined stream channels. None of the waters on the site are listed by the USEPA as “impaired” waters under Section 303(d) of the Clean Water Act.

Neither the Big Indian Country Club nor the Highmount Golf Courses front on any perennial streams. Two (2) intermittent streams run through Wildacres. The closest fairway to a watercourse feeding Birch Creek is 1,000 feet away; one fairway on Highmount is 300 feet from a perennial tributary to Emory Brook, while the remaining fairways average a 1,500-foot distance from the Brook itself.

Site configuration assures that no existing surface waterbodies will be impounded. The ponds used to store irrigation water will be isolated dug and lined ponds and not associated with any of the streams or brooks on the project site, nor will there be any potential overflow from the ponds. In addition to well water, the ponds will be fed by treated wastewater effluent, captured runoff from the roof of the Big Indian Resort and Spa and associated parking, as well as the Wildacres Resort detached lodging units south of Gunnison Road.

The project includes stormwater management facilities that are designed to control a twenty-five (25) year storm event while withstanding the discharge from a one hundred (100) year event. The stormwater management system for the project has been designed in accordance with the NYSDEC Stormwater Management Guidelines and the requirements of the NYCDEP.

In order to mitigate potential impacts to drinking water, surface water and aquatic biota as a result of pesticide runoff, an Integrated Turf Management Plan was prepared based upon the results of a Fertilizer and Pesticide Risk Assessment. The results of the Risk Assessment were used to eliminate from consideration numerous potential pesticides due to a combination of their runoff potential and toxicity to aquatic invertebrates and fish as well as their leaching potential in relation to State drinking water standards.

Additionally, the results of the Risk Assessment were used to design a fertilizer program that would result in healthy golf course turf, without resulting in significant phosphorus and nitrogen transport off-site. The Turf Management Plan and Fertilizer and Pesticide Risk Assessment were prepared in consultation with Dr. A. Martin Petrovic, a professor of Turf Grass Science at Cornell University. Refer to Sections 2.4.8, 3.2, 3.3 and 5.7 as well as Appendices 14 and 15 for detailed information.

## D. Groundwater Resources

The principal aquifers of the region are contained in gently folded continental red, gray and gray-green sandstones, siltstones, and shales of Late Devonian age and stratified drift of Pleistocene age. Most of the local wells tap bedrock aquifers in the vicinity of the project site which reportedly yield as high as 550 gpm (gallons per minute), although most are less than 50 gpm. Much groundwater discharges naturally from springs that have been historically and continue to be utilized for individual and public supply systems. Reported spring yields of 5 to 10 gpm are common and many range upward to 100 gpm.

### 1. Potable Water

An extensive and extended study (see Appendix 7, "Water Supply Report") of available water sources was undertaken by Delaware Engineering and Alpha Geoscience for the project. On the basis of these studies, the Big Indian Plateau portion of the project will take its potable water from two sources: the primary source will be the bedrock Rosenthal Well #2, located northeast of NYSDEC's Belleayre Beach at Pine Hill Lake; and the back-up source will be Silo A Spring located on Bonnie View Avenue, northwest of the Hamlet of Pine Hill.

The Big Indian Country Club and Belleayre Highlands will require a combined average daily flow of 91,854 gallons taking into account use of water saving devices. Rosenthal Well #2 has a projected capacity of 118,080 gpd. Silo A Spring has a projected capacity of 99,792 gpd. These capacities exceed the requirements set forth by New York State Department of Health. Additionally, water quality analytical results reveal that minimal treatment for disinfection and corrosion will be needed.

Irrigation water needs for the eastern portion of the project will be satisfied through the use of Rosenthal Well #1 located 170 feet north of Rosenthal Well #2, as well as supplemental input of effluent from the wastewater treatment facility and from stormwater and precipitation. Well #1 has a recognized capacity of 57 gpm or 82,080 gpd.

The Wildacres Resort portion of the project requires an average daily demand of 109,308 gallons of potable water and will obtain its potable water supply from the Village of Fleischmanns public water supply system. The Village water system has sufficient excess capacity with which to serve the project's combined potable and irrigation water needs. Water would be purchased from the Village and treated to the extent required prior to distribution on-site. Water conserving devices will be utilized throughout the Wildacres Resort.

During operation of the golf course, irrigation water needs for the western portion of the project can be satisfied by use of treated wastewater, supplemented as needed by existing on-site wells and the Village of Fleischmanns water supply.

## 2. Wastewater

An extensive study of on-site soils and alternative wastewater treatment options was undertaken by Delaware Engineering for the Belleayre Resort at Catskill Park. See Appendix 8, “Conceptual Design Reports for Wastewater Treatment and Disposal”, and Appendix 12, “Soil Test Results”. With respect to the Big Indian Country Club and Belleayre Highlands, the proposed wastewater treatment plan includes a single regional treatment facility located in the north central part of the development. The treated effluent may be discharged to the on-site lined storage ponds for irrigation or discharged to a surface outfall into Birch Creek. See Sections 2.2.4 and 5.5.1.

The NYCDEP wastewater treatment facility, Pine Hill Wastewater Treatment Plant, currently has sufficient capacity to treat the wastewater from Big Indian Plateau. Discussions with NYCDEP during the preparation of this report resulted in the City of New York stating that treatment of the wastewater flow from Big Indian Plateau is not allowable at this time due to liability concerns.

For the Wildacres Resort, a single regional treatment facility is proposed in the northwest corner of the development. The treated effluent may be discharged to an on-site lined storage pond during the growing season and used for irrigation or to a surface outfall at an unnamed tributary to Emory Brook when not needed for irrigation. See Sections 2.2.4 and 5.5.2.

### E. Air Quality and Sound

#### 1. Air Quality

The project is located in Ulster and Delaware Counties, which are both classified as attainment areas for carbon monoxide and ozone. Based upon a screening analysis, a detailed microscale air quality analysis is not necessary since this project will not increase traffic volumes, reduce source-receptor distances or change other existing conditions to such a degree as to jeopardize attainment of the national and New York State ambient air quality standards for carbon monoxide. See Section 3.4. Construction air quality is addressed in Appendix 22A, “Air Quality Assessment of Construction Activities”.

#### 2. Sound

A comprehensive sound study is included in the DEIS (see Appendix 22, “Sound Impact Study”). Identification of potentially significant noise impacts is a function of the relative change in noise levels based on acoustical modeling of the project’s major noise sources (construction equipment) and the location of receptors (residences). The study examined potential sources of noise from blasting activities as well as general construction activities planned throughout the project site. The study concludes that noise impacts from blasting will be brief and relatively infrequent. Blasting will be

limited to weekdays between the hours of 9 a.m. and 5 p.m. Accordingly, blasting is not expected to significantly contribute to overall project construction noise.

Potentially significant short-term noise impacts associated with construction of the Big Indian Country Club and Belleayre Highlands are solely related to construction of particular length of the access road located near the sensitive receptor. The related construction work is scheduled for the first year of construction and is expected to involve earthmoving and other heavy construction equipment for approximately two weeks. Recommended mitigation includes using the minimal equipment necessary. Additional heavy equipment operation to construct and then shortly thereafter remove earthen noise barriers would only serve to increase potential sound impacts.

Potentially significant noise impacts associated with the Wildacres Resort include construction of an access road, a portion of the Highmount Golf Course, golf maintenance facilities and the Wilderness Activity Center. The access road construction is scheduled for year 1 with all other identified construction work occurring in portions of years 1 and 2. Intermittent construction activity near receptors are expected to last 6-24 months depending on the receptor. Recommended mitigation includes minimizing equipment use and the erection of temporary earthen berm barriers to reduce sound levels to acceptable levels.

#### F. Vegetation

The proposed site is almost completely covered with a second growth forest dominated by sugar maple, beech, hemlock, yellow birch, oak and ash. All of the tree stands observed on the site, even on the steepest slopes and in the wetlands, are secondary growth less than 100 years old. In the eastern portion of the project site there is an extensive network of logging roads and logging skid trails that provide access to essentially all of the 1,242± acres that comprise the assemblage.

As previously stated, the project site will affect 573± acres. Within these developed acres there will be pockets of untouched vegetation totaling 44 acres. Hence, the proposed project will result in the disturbance of only approximately 529± acres of vegetation, or approximately 27% of the 1,960 acres that comprise the assemblage. Approximately 73% of the land area and, therefore, existing vegetation in the assemblage will remain undisturbed.

The largest amount of disturbance will take place in the beech-maple mesic forest ecological community. Clearcutting of vegetation beyond the proposed clearing limits illustrated on the accompanying site plans will not be permitted. In order to create views, only selective cutting of trees less than six inches dbh (diameter at breast height) and pruning up of limbs on larger trees will be permitted. This clearing of forest represents a short-term, local, adverse impact. Once hotels, detached lodging units and other buildings along with the associated infrastructure, are constructed (covering only 85.16 acres within the project site), natural regrowth and landscaping will occur, returning the vast majority of the cleared area to a vegetated state. Areas disturbed outside of building

sites will also be revegetated as soon as practicable. The planting plans included with the accompanying site plans call for the planting of over 4,100 indigenous trees on the project site plus a substantial amount of ornamental trees and shrubs in the formal landscape.

#### G. Wetlands

A detailed wetland delineation report was prepared for the proposed site and submitted to the ACOE. Several different types of wetland plant communities exist on the property owned by the project sponsor. These areas occupy approximately 6 acres on the eastern portion of the project site and 11 acres on the western portion of the project site, for a total of 17 acres. Some of these areas that contain wetland plant communities are wetlands that are protected by federal regulations administered by the ACOE. The NYSDEC has not mapped any wetlands on these properties, and all of the wetlands are below the minimum size (12.4 acres) for regulation by the State. The entire project requires placement of clean fill in jurisdictional wetlands only totaling 0.09 acres. All activities proposed in the wetlands will be in conformance with the terms and conditions of the ACOE Nationwide Permit Program and a Pre-construction Notification was submitted to the ACOE (see Appendices 17A and 17B). On July 18, 2003 the ACOE issued a letter stating that an individual permit is not required for the project and that the jurisdictional activities proposed could be accomplished under Department of the Army Nationwide Permit Number 14. (See Appendix 6, Letters of Record.) No further authorizations are required from the ACOE.

#### H. Wildlife

Detailed surveys of wildlife on and around the assemblage were performed in 1999 and 2000 by LA Group biologists. Wildlife surveys focused on the bird, mammal, reptile, and amphibian inhabitants. In addition to on-site wildlife surveys, review of database surveys of both the US Fish and Wildlife Service and NYSDEC's Natural Heritage Program confirmed the absence of any rare, threatened or endangered species, or significant wildlife habitats on or near the project site. No threatened or endangered amphibians or reptiles, including the state-listed timber rattlesnake were observed during field surveys. No rare mammals were observed during site visits by LA Group biologists.

Impacts to wildlife on the proposed Belleayre Resort project site may include both direct and indirect impacts to common species of amphibians, reptiles, birds and mammals. In order to mitigate potential impacts to wildlife, habitat fragmentation will be kept to a minimum. Over 73% of the 1,960± acre assemblage will remain undeveloped and protected from future development by deed restriction or other similar manner. Much of the land that will be protected from future development is in close proximity to State lands or adjacent to State lands. In effect, this will result in an increase of area to remain undeveloped and act as a buffer to the Forest Preserve. See Section 3.5.3.

I. Traffic

The Traffic Impact Study (see DEIS Sections 2.2.7, 3.7 and Appendix 25) was prepared evaluating the existing condition of NY Route 28 as well as county and local roads in the vicinity of the site. An evaluation of the additional traffic generated by the project (trip generation) was undertaken considering both data from the Institute of Transportation Engineers and traffic counts from similar resort facilities. An evaluation of existing conditions led to the selection of a worst-case winter peak hour traffic condition derived from the Martin Luther King, Jr. holiday weekend of Saturday, January 15, 2000, with record attendance at Belleayre Mountain Ski Center.

The traffic impact study used a 3% background growth rate to reflect in part the planned expansion of skier visits to the Belleayre Mountain Ski Center and analyzed impacts with and without the project for both the year 2006 when the facility will first be opened and 2008 when all new facilities are expected to be in use.

The major conclusions of the traffic impact study include:

- (1) Traffic in the area varies significantly by season, time of day and day of the week.
- (2) On a typical winter weekend the project will generate 139 peak hour trips (2.32 vehicles per minute).
- (3) The impact from the traffic volume increases on NY Route 28 from the proposed project will likely be between 3 and 4 vehicles a minute during the maximum peak hours. For example, the project generated trips at the NY Route 28/County Road 49A intersection for the peak periods are shown below:

	<u>Peak Design Saturday AM</u>	<u>Peak Design Saturday PM</u>	<u>Typical Saturday AM</u>	<u>Typical Saturday PM</u>
NY Route 28/ County Road 49A	202	198	76	76
Approx. trips/min. (Total trips ÷ 60 min.)	3.4	3.3	1.3	1.3

Similar results are found at the other study area intersections in the project corridor. An increase in traffic of this magnitude will typically not be noticeable.

- (4) The combined existing and additional Resort traffic flow at typical fall and winter traffic peak hours will utilize 30% of the rated capacity of NY Route 28.

- (5) The traffic impact study is based on worst-case traffic operations during the peak seasonal and daily traffic volume conditions in the area.
- (6) Various transportation management initiatives are planned and will reduce traffic impacts. These include the use of a shuttle bus for guests and employees, remote park and ride lots for employees and scheduling check-in/out times at the resorts to occur during off-peak times.
- (7) The development of the proposed project has the potential for the background traffic to decrease through a shift in employment opportunity within the project area.
- (8) The project has the potential to reduce the longer distance daily commuting traffic coming to Belleayre.
- (9) The report recommends the following mitigations:
  - NY Route 28/Friendship Road (east) - The construction of a westbound left-turn lane on NY Route 28 at its intersection with the easterly leg of Friendship Road. If the operation of Friendship Road is changed to provide one-way traffic (from west to east) the location of the left turn lane on NY Route 28 should be moved to the western leg of Friendship Road.
  - NY Route 28/County Road 49A - A fair share contribution towards the construction of a westbound left-turn lane on NY Route 28 and the construction of a northbound right-turn lane on County Road 49A. A fair share contribution towards the installation of a three-phase traffic signal at the NY Route 28/County Road 49A intersection. It is anticipated that this signal would operate during the winter months and would be on flash mode during the other months.
  - To maintain smooth travel of vehicles on all the study area roadways, it is recommended that information signs be placed on the main roadways guiding patrons to their proper destination.

## J. Land Use and Community Character

### 1. Land Use

The project site includes lands in Shandaken that are zoned R-1.5, R-3, and R-5, with the great majority being located in R-5. The proposed project qualifies as a “Vacation Resort” under the Town of Shandaken Code. A Special Use Permit is required for Vacation Resorts in Shandaken. The project site also includes lands in Middletown that

are zoned R5 and R3, with most of the land located in R5. “Resorts” in Middletown require a Special Use Permit in R3 and R5 zones. The proposed uses are allowed by both Towns’ zoning ordinances and are consistent with the other provisions and requirements of such ordinances.

## 2. Community Character

The general character of the area is low-density development within a mountainous region, with much of the surrounding lands being undeveloped and owned by New York State as part of the Catskill Forest Preserve. The existing community character reflects a mix of land uses associated with historical land uses within the Central Catskill Region including agriculture, forestry, tourist related land uses, and residential uses.

The area has a significant amount of land use associated with the tourism industry. Most of the developed land uses serving tourism are concentrated in the hamlets along the NY Route 28 corridor including Phoenicia, Pine Hill, the Village of Fleischmanns, Arkville and Margaretville. The popularity of fishing in the area is evidenced by a number of small parking areas available to anglers fishing the Esopus Creek as it generally parallels NY Route 28 in the area.

Concentrated commercial development to serve the daily needs of local residents, i.e., convenience stores and gas stations are scattered through some of the hamlets and along NY Route 28, but the areas where commercial development is concentrated is in Boiceville and Margaretville. It is there that services such as supermarkets, hardware stores, banks, etc. are located.

Residential use is also concentrated in the hamlets and along NY Route 28, but also occurs in lower densities further removed from the highway corridor. Generally speaking, the zoning ordinances of the Towns of Shandaken and Middletown have residential zones that increase in minimum lot size the further removed the lands are from major roads.

The proposed project will involve development of approximately 29% of the assemblage, or only approximately 573 acres. The project will provide for most of the needs of its guests, including lodging, dining, recreation, spa facilities, etc. Because the Resort will be fairly self-contained there will not be an affect on community character. The proposed project will re-introduce resort development into an area that historically supported such development locally and on a large scale. Re-introducing the project in the vicinity of Belleayre Mountain Ski Center consolidates recreation oriented land use in the same general location within the community.

## K. Visual Resources

### 1. Project Visibility

The existing visual character of the project site and environs consists of the wooded portions of the project site, located on the flanks of Belleayre Mountain. The sites are fairly heavily wooded, and have a number of logging trails crossing them. The railroad right-of-way located at the base of the mountain (off of the project site) is apparent due to the break in vegetation that exists in a linear trace. The ski trails at the former Highmount Ski Area are a prominent feature in the landscape from some vantage points, but not as prominent as the ski trails at the Belleayre Mountain Ski Center which are generally only visible from lands to the north of the NY Route 28 corridor.

NY Route 28, the main travel corridor in the area, is in many locations within a steep-walled valley. Views from the NY Route 28 corridor are confined in the project area by several large landforms including Mount Pleasant, Tremper Mountain, Romer Mountain, Garfield Mountain, Sheridan Mountain, Rose Mountain, Belleayre Mountain, Monka Hill, Brush Ridge, Fleischmann Mountain, Hog Mountain, Dry Brook Ridge, and Morris Hill. Housing and commercial land uses border the highway. These uses are generally limited to the valley floors due to increasing slopes, often times immediately above. Views of the assemblage from NY Route 28 are generally limited to a small westbound section in Big Indian where on a long sweeping turn there would only be views of the edge of the clearing in the canopy (the upper side of the tress which remain) on the eastern portion of the Big Indian Plateau. Otherwise, NY Route 28 parallels the ridgeline of Belleayre Mountain.

Visual impact analysis (see DEIS Section 3.8.4 and Appendix 21, “Visual Impact Study”) conducted in accordance with NYSDEC guidelines for performing such analyses of the proposed project layout demonstrates that no structures or other development components will be visible from this area.

Views into the project site are limited primarily to a few locations from the north of NY Route 28, including views from the currently closed Owl’s Nest Restaurant as well as views from the low-density residential area on Wood Road.

Visual simulations from the closed Owl’s Nest Restaurant, located north of NY Route 28 across from Belleayre Mountain Ski Center, show that the clearing for fairways and residential units in the area of the Brisbane Mansion will be visible. Five to six of the 22 quadplex units at Belleayre Highlands may be partially visible, and seven to eight of the detached lodging units south of the clearing for holes 12, 13 and 14 of the Big Indian Country Club will be all or partially visible. The areas cleared for the fairways and detached lodging units will be visible, but not to the degree of current visibility of Belleayre Mountain Ski Center. Simulations from Wood Road, located north of NY Route 28, show that the clearing for the development of the Wildacres site will be visible from Wood Road, and will be back-dropped by the existing Belleayre Mountain Ski

Center ski trail/lift clearings and Highmount Ski Area ski trail/lift clearings. The Wildacres Hotel will be visible as will five octoplexes at the northwest corner of the site, and seven octoplex units to the southeast will be partially visible. Portions of the Highmount Golf Club will also be visible.

With the exception of Balsam Mountain, which is less than five miles from Belleayre Mountain, views to Belleayre Mountain consisted of distant views where the ridge forming Belleayre Mountain was discernable as one of the high points in the overall landform.

Visual simulation of views from Balsam Mountain indicate that from certain vantage points on Balsam Mountain, the site clearing created for the 2<sup>nd</sup> and 3<sup>rd</sup> fairway will likely be visible as a linear feature, the edge of canopy and the fairways, and that it is possible that one or two of the detached lodging units to be situated proximate to the golf course planned for the eastern portion of the site may also be visible. Three to four detached lodging units may be visible during leaf off conditions. The Big Indian Resort and Spa building is not visible.

The project will not be visible from the “Reisser Farm” property recently acquired by New York State with Bond Act monies.

#### L. Community Services

The project site falls under the jurisdiction of three fire departments, these include the Fleischmanns’ Fire Department, Big Indian Fire Department, and Pine Hill Fire Company. The Town of Shandaken ambulance service is New York State certified and approved to operate at the paramedic level. The Margaretville Memorial Hospital is located approximately 7 miles from the site and contains 221 beds and operates a 24-hour emergency room. Kingston Hospital and Benedictine Hospital are located in Kingston, approximately 35 miles east of the project site. Correspondence, including interviews with emergency services providers, indicate that all emergency service providers have adequate capacity to serve the project with its existing resources. Additionally, correspondence with the police indicate that they have the capacity to serve the project. These providers include the Shandaken Police Department, Ulster and Delaware County Sheriffs Departments, and the New York State Police. See Appendix 6, “Letters of Record”.

The local school systems are not operating at capacity. Correspondence with the schools demonstrates that they have sufficient excess capacity to serve the very limited number of children who may be added to the system.

#### M. Solid Waste

Ulster County administers two solid waste transfer stations that collect waste for ultimate transportation and disposal of waste in Keystone, Pennsylvania or Ontario, Canada.

Existing service providers have indicated that they have sufficient capacity to serve the project. See Appendix 6, “Letters of Record”.

N. Power

Correspondence from NYSEG, the provider of electricity transmission services, indicated that sufficient capacity exists to fully serve the project. See Appendix 6, “Letters of Record”.

O. Growth Inducting, Secondary and Cumulative Impacts

1. Induced Commercial Demand

As previously noted, the project is projected to generate significant economic benefits to the region. The potential increase in consumer spending from both visitors and employees generated by the proposed project can be expected to induce secondary demand for commercial development. Based on research regarding typical expenditures of visitors to other resorts, it is estimated that about \$11.81 million will be spent annually by Resort visitors and guests within the NY Route 28 corridor.

Initially, the new demands for goods and services resulting from the Resort would tend to stimulate additional commerce in existing businesses, especially among gas stations, food and lodging establishments, general merchandise, as well as recreational facilities. However, there appears to be adequate available capacity among existing businesses to accommodate significant new retail demands as would be generated by the Resort’s employees and visitors. To the extent that the Resort directly stimulates new business growth, the analysis shows that it could be expected to generate a need for an additional 76,700 square feet of commercial development in the area. This need may be accommodated by improvements to existing businesses, re-occupancy of existing vacant or under utilized structures or in-fill development in hamlets and villages. It is not anticipated that there will be a significant amount of new construction. See DEIS Section 7 and Appendix 26.

2. New Residential Development

The proposed project is expected to have a negligible effect on year-round residential development in the study area. The Resort itself is not designed to accommodate year-round residential occupancy, although it is possible that the 21 Highmount Estates single-family homes could become year-round homes.

Any increase in year-round residents would be derived from the project’s employment of new workers in the area. An analysis of the projected employee profile and employment opportunities shows, however, that the vast majority of the year-round and seasonal jobs created by the Resort would be filled by local residents or people within a commuting radius, currently living in the outlying areas of Ulster, Delaware, Greene and Schoharie Counties. Therefore, there will be a minimal new burden on local school systems, roads,

and infrastructures. The Resort would provide a small number of mid- and upper-management jobs, however, that may be filled by non-residents. These positions would have salaries in the approximate \$50,000 to \$150,000 range. Approximately 16 to 20 such positions would fall into this category. Very few, if any, new employees would be expected to construct new year-round housing. No other potential new housing construction is anticipated as a result of resort development and operations. See DEIS Section 7 and Appendix 26.

P. Alternatives

1. Alternative Locations

Prior to proposing the Belleayre Resort project at the project site the Applicant considered other lands in the area that could have potentially met the Applicant's objectives of providing a high quality resort to complement the existing recreational facilities at Belleayre Mountain Ski Center and accommodate a four-season destination resort. Such sites were not suitable for a variety of reasons including: reluctance of property owners to sell property; presence of extensive freshwater wetlands; and presence of flood prone areas on another alternative site as well as its proximity to the Ashokan Reservoir. Alternative parcels of suitable size identified in higher elevations were either unavailable lands owned by New York State or were private lands unsuitable for development because of topographic constraints.

2. Alternative Layouts

The original layout consisted of three 18-hole golf courses and an additional 9-hole par three golf course. This layout was abandoned, however, in response to environmental and local concerns and attempts to purchase additional properties were abandoned.

The golf course layouts are dictated by site topography, therefore limiting the number of alternative layouts for the courses. The Big Indian Country Club golf course layout has been closely scrutinized. The tee location on hole 18 was moved slightly to the west to avoid a potential archeological feature. Alternative golf layouts for the Highmount Golf Club were developed as a result of adding more lands to the project site. Changes made between earlier layouts and the final layout include the movement of hole 17 to the south and slightly moving the 13<sup>th</sup> green and 16<sup>th</sup> tees to avoid potential archeological sites.

The proposed Resort and Spa building at the Big Indian Country Club is the third of three building designs for the same location, while the proposed hotel at Wildacres Resort represents the fusion of a number of buildings that were one time separate buildings. A previous alternative site plan consisted of separate upper and lower lodges, and additional stand alone buildings for the conference center and the golf clubhouse. This alternative layout was replaced by the current single hotel building in order to improve the ease and efficiency of operations of the various resort functions and to lessen construction impacts. At one time up to 100,000 square feet of retail space was considered at the Wildacres Resort. Over time the design of the retail area was modified to decrease the amount of

retail square footage to 60,000, then 20,000 and finally to the currently proposed 13,000 square feet of strictly hotel-related shops. The downscaled retail space is in direct response to concerns raised by area businesses in relation to competition.

In response to inquiries by local groups and State agencies, the project sponsor evaluated the feasibility of scaling back the project site to contain the development only within the boundaries of the eastern portion or western portion of the project assemblage. The various land use and economic analyses conducted, determined that to have an overall project that will be economically feasible, and actually be constructed and operated, the proposed project cannot consist of solely either the eastern portion of the project or the western portion of the project. The Resort must be of sufficient size and variability to generate enough interest to attract a broad range of new visitors to the region during the spring, summer and fall. The availability of two golf courses is viewed as an essential factor or “critical mass” for economic viability as has been attested to by the National Golf Foundation, HVS Consulting, RCI and others. (See DEIS Section 5.3 and Appendix 27, “Fiscal and Marketing Information”).

The primary factor in limiting alternative development scenarios is topography. The components of the project that require the greatest amount of land with the suitable topography are the two golf courses. The siting of two golf courses together on either the eastern area of the proposed project or the western side of the proposed project is not feasible given the slope constraints of the overall assemblage. As discussed previously, another limitation affecting potential alternatives is the availability of privately owned lands in the vicinity of Belleayre Mountain Ski Center. With almost three-fourths of the Town of Shandaken owned by either the State of New York or the City of New York, alternative locations or alternative layouts are limited.

### 3. No Action Alternative

The no-action alternative of leaving the lands in their present state will have a number of impacts, including impacts on the land itself, impacts on the realization of regional land use plans, and unrealized positive socioeconomic impacts. The no-action alternative will continue to allow the lands to be logged as they have been for over the past fifty years. The Brisbane Mansion and Wildacres Hotel would continue to be used as rental property and for seasonal occupation.

The no-action alternative would result in the local and regional planning goals of the Towns of Shandaken and Middletown not being realized. As recent as May 1999 the Town of Shandaken passed a resolution and position paper that supports the development of the Belleayre Gateway through an ongoing, established pattern of citizen based, inter-municipal planning. See Appendix 29, Shandaken Town Board Documents”. Finally, the no-action alternative would result in a substantial loss of tax revenue and visitor spending in the region.

The heritage of the Central Catskills is a blend of recreational tourism and environmental preservation. The proposed Belleayre Resort is the fusion of this heritage with the vision of a vibrant economy grounded in 21<sup>st</sup> Century environmental control technology. This

proposal hinges on the attractiveness of both the natural and built environmental; therefore, it is paramount that the project is based in sound environmental principals and practices. The natural environment of the Central Catskill attracted the original “tourists” over a century ago, including artists, visionaries, purveyors, and transporters. The Belleayre Resort will continue this venerable tradition.

03006/wp/Executice.Summary(July28).doc

# TABLE OF CONTENTS

DRAFT ENVIRONMENTAL IMPACT STATEMENT  
BELLEAYRE RESORT AT CATSKILL PARK  
SEPTEMBER 2003

---

Cover Sheets  
Executive Summary  
Table of Contents  
List of Figures  
List of Tables  
List of Appendices  
List of Acronyms

	Page
<b>SECTION 1 INTRODUCTION .....</b>	<b>1-1</b>
1.1..... Project Location .....	1-1
1.2..... General Project Description.....	1-2
1.2.1 Lands East of the Ski Center .....	1-2
A. Big Indian Country Club .....	1-3
B. Big Indian Resort and Spa .....	1-3
C. Belleayre Highlands .....	1-3
1.2.2 Lands West of the Ski Center .....	1-3
A. Wildacres Resort.....	1-4
B. Highmount Estates.....	1-4
C. Wilderness Activity Center .....	1-5
1.3..... Project Purpose, Need and Benefits .....	1-5
1.3.1 Background and History .....	1-5
A. Resort Destination History.....	1-5
B. Belleayre Mountain Ski Center .....	1-6
C. Local Land Use Regulations, Regional Land Use and Comprehensive Plans.....	1-7
1. Local .....	1-7
2. County.....	1-8
3. Regional .....	1-9
1.3.2 Public Need for the Project .....	1-17
A. Vollmer Associates, 1963 .....	1-19
B. Sno-engineering, 1988.....	1-19
C. Route 28 Corridor Committee Study.....	1-19
D. The Central Catskills Planning Alliance.....	1-20
E. West of Hudson Economic Development Study.....	1-21
1.3.3 Objectives .....	1-21

1.3.4	<b>Benefits of the Proposed Action</b> .....	1-21
	A. <b>Roadway Improvements</b> .....	1-22
	B. <b>Employment</b> .....	1-22
	C. <b>Tax Revenues</b> .....	1-22
	D. <b>Crossroads Foundation</b> .....	1-23
	E. <b>Recreation</b> .....	1-24
	F. <b>Cultural Amenities</b> .....	1-24
1.4.....	<b>Environmental Review, Permits and Approvals</b> .....	1-25
1.4.1	<b>Local</b> .....	1-25
	A. <b>Shandaken</b> .....	1-25
	B. <b>Middletown</b> .....	1-26
1.4.2	<b>County</b> .....	1-26
1.4.3	<b>Regional (NYCDEP)</b> .....	1-27
1.4.4	<b>State</b> .....	1-28
	A. <b>NYSDEC</b> .....	1-28
	B. <b>NYSDOH</b> .....	1-29
	C. <b>NYSDOT</b> .....	1-29
1.4.5	<b>Federal</b> .....	1-30

**SECTION 2 DESCRIPTION OF THE PROPOSED ACTION..... 2-1**

2.1.....	<b>Overall Project Design and Layout</b> .....	2-1
2.1.1	<b>East of Ski Center-Big Indian Plateau</b> .....	2-1
	A. <b>Big Indian Country Club</b> .....	2-1
	1. <b>18-hole Championship Golf Course</b> .....	2-1
	2. <b>Practice Range and Practice Green</b> .....	2-1
	3. <b>Clubhouse Connected to Hotel</b> .....	2-1
	4. <b>Thirty-five 4-bedroom Detached Lodging Unit Buildings</b> .....	2-1
	5. <b>Sixty 3-bedroom Detached Lodging Units in 20 Triplex Buildings</b> .....	2-1
	B. <b>Big Indian Resort and Spa</b> .....	2-1
	1. <b>150-room Luxury Hotel</b> .....	2-1
	2. <b>Two Restaurants of 75 and 150 Seats</b> .....	2-1
	3. <b>50 Seat Beverage Lounge</b> .....	2-1
	4. <b>Ballroom for 200 People</b> .....	2-1
	5. <b>Four Meeting Rooms</b> .....	2-1
	6. <b>Full Service Spa</b> .....	2-1
	C. <b>Belleayre Highlands</b> .....	2-1
	1. <b>Eighty-eight 2-bedroom Detached Lodging Units In 22 Quadplex Buildings</b> .....	2-1
	2. <b>Social Activities Center at Brisbane (Turner) Mansion</b> .....	2-1
	3. <b>Outdoor Swimming Pool and Cabana</b> .....	2-2
	4. <b>Four Tennis Courts</b> .....	2-2

2.1.2	West of Ski Center-Wildacres Resort .....	2-2
A.	Wildacres Resort.....	2-2
1.	250 Room Hotel.....	2-2
2.	Existing Marlowe Mansion .....	2-2
3.	Highmount Golf Club .....	2-2
4.	168 2-bedroom detached lodging units .....	2-3
5.	Clubhouse for octoplex detached lodging units.....	2-3
6.	Children’s Center.....	2-3
B.	Highmount Estates-21 Lot Subdivision .....	2-3
C.	Wilderness Activity Center .....	2-3
1.	Four Season Facility .....	2-3
2.	Utilize Existing Buildings/Highmount Ski Center .....	2-3
3.	New Warming Hut.....	2-3
4.	Limited Parking .....	2-3
2.2.....	Project Components .....	2-4
A.	Total Land Areas .....	2-4
B.	Existing Development/Historic Use of Property .....	2-4
1.	East of Ski Center .....	2-4
2.	West of Ski Center .....	2-5
3.	Historic Use/Potential for Site Contamination.....	2-5
C.	Proposed Development .....	2-5
1.	East of Ski Center – Big Indian Plateau .....	2-5
2.	West of Ski Center – Wildacres Resort.....	2-6
D.	Undeveloped Lands.....	2-7
2.2.1	Golf Facilities .....	2-7
A.	Golf Course Design Considerations .....	2-7
B.	Site Suitability for Golf.....	2-8
C.	The Big Indian Country Club.....	2-10
1.	Golf Course.....	2-10
2.	Amenities .....	2-11
3.	Maintenance Facilities .....	2-11
4.	Irrigation.....	2-12
D.	The Highmount Golf Club .....	2-12
1.	Golf Course.....	2-12
2.	Amenities .....	2-13
3.	Maintenance Facilities .....	2-13
4.	Irrigation.....	2-14
2.2.2	Buildings .....	2-14
A.	Catskills Architecture.....	2-14
B.	Big Indian Plateau.....	2-16
1.	Big Indian Resort and Spa .....	2-16
2.	Single Detached Lodging Units.....	2-17
3.	Triplex Detached Lodging Units.....	2-17
4.	Belleayre Highlands Detached Quadplex Units .....	2-18

	C.	Wildacres Resort.....	2-18
		1. Hotel and Golf Clubhouse.....	2-18
		2. Octoplex Detached Lodging Units.....	2-19
		3. Lodging Unit Clubhouse.....	2-19
		4. Children' Center .....	2-19
2.2.3		Potable Water Supply.....	2-19
	A.	Big Indian Plateau.....	2-19
		1. Demand .....	2-19
		2. Water Supply Sources .....	2-20
	B.	Wildacres Resort, Highmount Estates, Wilderness Activity Center .....	2-22
		1. Demand .....	2-22
		2. Water Supply Source.....	2-23
2.2.4		Wastewater Treatment and Disposal.....	2-26
	A.	Big Indian Plateau.....	2-26
		1. Hydraulic Loading .....	2-26
		2. Treatment and Disposal .....	2-27
	B.	Wildacres Resort, Highmount Estates, Wilderness Activity Center .....	2-29
		1. Hydraulic Loading .....	2-29
		2. Treatment and Disposal .....	2-30
2.2.5		Irrigation Water Supply.....	2-31
	A.	Big Indian Country Club .....	2-33
	B.	Highmount Golf Club .....	2-34
2.2.6		Site Drainage and Grading .....	2-35
	A.	Drainage .....	2-35
	B.	Grading .....	2-36
		1. Drainage Patterns .....	2-36
		2. Balanced Cuts and Fills.....	2-36
	C.	Impervious Areas .....	2-38
	D.	Stormwater .....	2-39
2.2.7		Traffic, Parking and Pedestrian Circulation.....	2-40
	A.	Project Generated Traffic .....	2-40
	B.	Access .....	2-43
	C.	Parking and Pedestrians.....	2-44
		1. Wildacres Resort.....	2-44
		2. Big Indian Resort and Spa and Belleayre Highlands .....	2-45
		3. Special Event Parking.....	2-45
		4. Employee Parking.....	2-45
	D.	Internal Vehicle Circulation .....	2-46
	E.	Recreational Vehicle Use.....	2-46
	F.	Road Maintenance .....	2-47

	<b>G.</b>	<b>Pedestrian Circulation.....</b>	<b>2-47</b>
	1.	<b>Golf Carts and Walking Golfers.....</b>	<b>2-47</b>
	2.	<b>Non-golf Pedestrians.....</b>	<b>2-48</b>
	3.	<b>Pedestrian Connections.....</b>	<b>2-48</b>
	<b>H.</b>	<b>Shuttle Bus Service.....</b>	<b>2-48</b>
<b>2.2.8</b>	<b>Lighting</b>	<b>.....</b>	<b>2-49</b>
<b>2.2.9</b>	<b>Landscaping and Open Space Management.....</b>	<b>2-50</b>	
	<b>A.</b>	<b>Landscaping.....</b>	<b>2-50</b>
	<b>B.</b>	<b>Open Space Management.....</b>	<b>2-51</b>
<b>2.2.10</b>	<b>Signage</b>	<b>.....</b>	<b>2-51</b>
<b>2.2.11</b>	<b>Utilities</b>	<b>.....</b>	<b>2-52</b>
<b>2.3.....</b>	<b>Construction Activities.....</b>	<b>2-53</b>	
<b>2.3.1</b>	<b>Construction Schedule.....</b>	<b>2-53</b>	
	<b>A.</b>	<b>Eastern Portion.....</b>	<b>2-54</b>
	1.	<b>Big Indian Country Club, Resort and Spa – Year 1/Phase 1.....</b>	<b>2-54</b>
	2.	<b>Big Indian Country Club, Resort and Spa – Year 2/Phase 2.....</b>	<b>2-56</b>
	3.	<b>Big Indian Country Club, Resort and Spa – Year 3/Phase 3.....</b>	<b>2-57</b>
	4.	<b>Big Indian Country Club, Resort and Spa – Years/Phases 4-8, Future Phases.....</b>	<b>2-57</b>
	5.	<b>Belleayre Highlands – Year 1/Phase 1.....</b>	<b>2-57</b>
	6.	<b>Belleayre Highlands – Year 2/Phase 2.....</b>	<b>2-57</b>
	7.	<b>Belleayre Highlands – Year 3/Phase 3.....</b>	<b>2-58</b>
	8.	<b>Belleayre Highlands – Years/Phases 4-8, Future Phases.....</b>	<b>2-58</b>
	<b>B.</b>	<b>Western Portion.....</b>	<b>2-58</b>
	1.	<b>Wildacres Resort – Year1/Phase 1.....</b>	<b>2-58</b>
	2.	<b>Wildacres Resort – Year 2/Phase 2.....</b>	<b>2-59</b>
	3.	<b>Wildacres Resort – Year 3/Phase 3.....</b>	<b>2-59</b>
	4.	<b>Wildacres Activity Center – Years 1 and 2, Phases 1 and 2.....</b>	<b>2-60</b>
	<b>C.</b>	<b>General Erosion Control-All Areas.....</b>	<b>2-60</b>
<b>2.3.2</b>	<b>Construction Stage Activities.....</b>	<b>2-61</b>	
	<b>A.</b>	<b>Construction Sequencing.....</b>	<b>2-61</b>
	<b>B.</b>	<b>On-Site Material Processing.....</b>	<b>2-62</b>
	<b>C.</b>	<b>Construction Waste Management.....</b>	<b>2-63</b>
	<b>D.</b>	<b>Construction Inspection.....</b>	<b>2-63</b>
<b>2.4.....</b>	<b>Operational Stage Activities.....</b>	<b>2-64</b>	
<b>2.4.1</b>	<b>Building Functions.....</b>	<b>2-64</b>	
	<b>A.</b>	<b>Big Indian Country Club, Resort and Spa.....</b>	<b>2-64</b>
	1.	<b>Big Indian Resort and Spa.....</b>	<b>2-64</b>
	2.	<b>Detached Lodging Units.....</b>	<b>2-64</b>
	3.	<b>Golf Maintenance Facility.....</b>	<b>2-65</b>
	4.	<b>Satellite Golf Maintenance Facility.....</b>	<b>2-65</b>

B.	<b>Belleayre Highlands</b> .....	2-65
1.	<b>Detached Lodging Units</b> .....	2-65
2.	<b>Brisbane Mansion</b> .....	2-65
3.	<b>Existing Caretaker's House</b> .....	2-65
4.	<b>Existing Carriage Barn</b> .....	2-65
5.	<b>Cabana</b> .....	2-65
C.	<b>Wildacres Resort/Highmount Golf Club</b> .....	2-66
1.	<b>Wildacres Resort Hotel</b> .....	2-66
2.	<b>Detached Lodging Units</b> .....	2-66
3.	<b>Existing Marlowe Mansion</b> .....	2-66
4.	<b>Lodging Unit Clubhouse</b> .....	2-66
5.	<b>Golf Maintenance Facility and Satellite Golf Maintenance Facility</b> .....	2-67
6.	<b>Children's Center</b> .....	2-67
D.	<b>Wilderness Activity Center</b> .....	2-67
1.	<b>Existing Buildings</b> .....	2-67
2.	<b>Warming Hut</b> .....	2-67
E.	<b>Highmount Estates</b> .....	2-67
F.	<b>Other-Existing Highmount Post Office</b> .....	2-68
2.4.2	<b>Employment</b> .....	2-68
2.4.3	<b>Employee Housing</b> .....	2-68
2.4.4	<b>Homeowners Association</b> .....	2-69
2.4.5	<b>Site Control and Management</b> .....	2-70
2.4.6	<b>Energy and Materials Management</b> .....	2-71
A.	<b>Energy</b> .....	2-71
B.	<b>Water Use and Conservation</b> .....	2-71
C.	<b>Recycling</b> .....	2-72
D.	<b>Project Purchasing</b> .....	2-72
2.4.7	<b>Deliveries of Goods and Services</b> .....	2-73
2.4.8	<b>Golf Course Integrated Pest Management</b> .....	2-73
A.	<b>Introduction</b> .....	2-73
B.	<b>Assessing Potential Pesticides</b> .....	2-73
C.	<b>Curative Not Preventative</b> .....	2-74
D.	<b>Integrated Management Plans</b> .....	2-75
1.	<b>Grass Selection</b> .....	2-76
2.	<b>Cultural Management</b> .....	2-78
3.	<b>Pest Monitoring and Treatment Thresholds</b> .....	2-82
4.	<b>Biological Pest Control</b> .....	2-83
5.	<b>Fertilizer and Pesticide Risk Assessment</b> .....	2-85
6.	<b>Prioritization of Non-Chemical and Chemical Control Options</b> .....	2-88
7.	<b>Inert Ingredients in Pesticides</b> .....	2-89
8.	<b>Use of Effluent for Irrigation</b> .....	2-91

**SECTION 3 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATION MEASURES ..... 3-1**

<b>3.1.....</b>	<b>Geologic and Topographic Resources.....</b>	<b>3-1</b>
<b>3.1.1</b>	<b>Existing Conditions .....</b>	<b>3-1</b>
<b>A.</b>	<b>Geologic Resources .....</b>	<b>3-1</b>
<b>B.</b>	<b>Topography .....</b>	<b>3-2</b>
<b>3.1.2</b>	<b>Potential Impacts .....</b>	<b>3-3</b>
<b>A.</b>	<b>Geologic Resources .....</b>	<b>3-3</b>
<b>B.</b>	<b>Topographic Resources .....</b>	<b>3-5</b>
<b>3.1.3</b>	<b>Mitigative Measures .....</b>	<b>3-7</b>
<b>A.</b>	<b>Geologic Resources .....</b>	<b>3-8</b>
<b>B.</b>	<b>Topographic Resources .....</b>	<b>3-9</b>
<b>3.2.....</b>	<b>Surface Water Resources .....</b>	<b>3-10</b>
<b>3.2.1</b>	<b>Existing Conditions .....</b>	<b>3-10</b>
<b>A.</b>	<b>Mapped Surface Waters.....</b>	<b>3-11</b>
<b>B.</b>	<b>Catskill Watershed.....</b>	<b>3-11</b>
<b>C.</b>	<b>Delaware Watershed.....</b>	<b>3-13</b>
<b>D.</b>	<b>Unmapped Drainages .....</b>	<b>3-14</b>
<b>E.</b>	<b>Water Quality – Outside Sources .....</b>	<b>3-15</b>
<b>F.</b>	<b>Water Quality – Project Related Data .....</b>	<b>3-17</b>
<b>G.</b>	<b>Water Budget .....</b>	<b>3-18</b>
<b>1.</b>	<b>Big Indian Plateau.....</b>	<b>3-19</b>
<b>2.</b>	<b>Wildacres Resort.....</b>	<b>3-19</b>
<b>H.</b>	<b>Existing Water Withdrawal and Discharges.....</b>	<b>3-19</b>
<b>I.</b>	<b>Snowmaking Withdrawals .....</b>	<b>3-20</b>
<b>J.</b>	<b>Wastewater Discharges .....</b>	<b>3-20</b>
<b>K.</b>	<b>Historic Flows.....</b>	<b>3-21</b>
<b>L.</b>	<b>Floodplains .....</b>	<b>3-21</b>
<b>3.2.2</b>	<b>Potential Impacts .....</b>	<b>3-22</b>
<b>A.</b>	<b>Physical Disturbance .....</b>	<b>3-22</b>
<b>B.</b>	<b>Diversion and Impoundment .....</b>	<b>3-24</b>
<b>C.</b>	<b>Erosion and Sedimentation .....</b>	<b>3-24</b>
<b>1.</b>	<b>Introduction.....</b>	<b>3-24</b>
<b>2.</b>	<b>Construction Sequencing .....</b>	<b>3-28</b>
<b>3.</b>	<b>Construction Phasing.....</b>	<b>3-29</b>
<b>4.</b>	<b>Sizing of Temporary Stormwater Basins.....</b>	<b>3-31</b>
<b>5.</b>	<b>Stormwater Capture, Treatment and Discharge .....</b>	<b>3-32</b>
<b>D.</b>	<b>Construction Phase Industrial Activities .....</b>	<b>3-33</b>
<b>E.</b>	<b>Operation Phase Stormwater – Water Quantity .....</b>	<b>3-33</b>
<b>F.</b>	<b>Operational Phase Stormwater – Water Quality.....</b>	<b>3-36</b>
<b>G.</b>	<b>Golf Course Pesticide Use .....</b>	<b>3-40</b>
<b>H.</b>	<b>Golf Course Fertilizer Use.....</b>	<b>3-41</b>
<b>I.</b>	<b>Golf Course Irrigation .....</b>	<b>3-41</b>
<b>J.</b>	<b>Petroleum and Chlorine Storage .....</b>	<b>3-42</b>

	K.	Springs as Water Sources.....	3-42
3.2.3		Mitigative Measures .....	3-42
	A.	Physical Disturbance .....	3-42
	B.	Diversion and Impoundment .....	3-43
	C.	Construction Phase Sediment and Erosion Control.....	3-44
	D.	Construction Phase “Industrial” Activities .....	3-46
	E.	Operational Phase Stormwater – Water Quantity .....	3-47
	F.	Operational Phase Stormwater – Water Quality.....	3-49
	G.	Golf Course Pesticide Use .....	3-50
	H.	Golf Course Fertilizer Use.....	3-54
		1. Nitrates.....	3-57
		2. Phosphorus .....	3-57
	I.	Golf Course Irrigation.....	3-58
	J.	Petroleum and Chlorine Storage .....	3-58
	K.	Springs as Water Sources.....	3-58
3.3.....		Groundwater Resources .....	3-59
3.3.1		Existing Conditions .....	3-59
	A.	Published Reports – Delaware County .....	3-59
	B.	Village of Fleischmanns’ Water Supply System .....	3-60
	C.	Published Reports – Ulster County .....	3-60
	D.	Pine Hill Water Company Water Supply System.....	3-60
	E.	Existing Wells on the Crossroads Assemblage and in the Vicinity of the Crossroads Assemblage.....	3-61
3.3.2		Potential Impacts .....	3-63
	A.	Water Use .....	3-63
	B.	Irrigation Water.....	3-63
	C.	Wastewater Disposal.....	3-66
	D.	Stormwater Control.....	3-67
	E.	Grading .....	3-67
	F.	Maintenance and Operations Practices .....	3-67
	G.	Operational Phase Water Budget.....	3-68
3.3.3		Mitigation Measures .....	3-68
	A.	Potable Water Supply.....	3-68
	B.	Irrigation Water Supply.....	3-69
	C.	Wastewater Disposal, Stormwater Control, Sediment and Erosion Control .....	3-70
	D.	Golf Course Maintenance.....	3-70
	E.	Fertilizer – Groundwater Risk Assessment.....	3-70
	F.	Pesticide – Groundwater Risk Assessment.....	3-72
	G.	Proposed Groundwater Monitoring Program .....	3-73
		1. Pesticide Application Records .....	3-74
		2. Groundwater Quality Testing Program .....	3-74
	H.	Petroleum and Chlorine Storage .....	3-76
3.4.....		Climate and Air Resources .....	3-76
3.4.1		Existing Conditions .....	3-76

3.4.2	Potential Impacts .....	3-77
A.	Vehicle Emissions.....	3-77
1.	Microscale Air Quality .....	3-77
2.	Mesoscale Air Quality.....	3-79
3.	Other Pollutants .....	3-79
B.	Wood Burning Fireplaces.....	3-80
C.	Fugitive Dust .....	3-80
D.	Blasting .....	3-81
3.4.3	Mitigation Measures .....	3-81
3.5.....	Terrestrial and Aquatic Ecology .....	3-81
3.5.1	Vegetation .....	3-81
A.	Existing Conditions.....	3-81
B.	Potential Impacts .....	3-85
C.	Mitigation Measures .....	3-85
3.5.2	Wetlands .....	3-89
A.	Existing Conditions.....	3-89
1.	Western Portion .....	3-91
2.	Eastern Portion .....	3-92
B.	Project Impacts .....	3-92
C.	Mitigation Measures .....	3-94
3.5.3	Wildlife .....	3-96
A.	Existing Conditions.....	3-96
1.	Special Concern, Rare, Threatened and Endangered Wildlife Species .....	3-97
2.	Birds .....	3-99
3.	Reptiles and Amphibians .....	3-100
4.	Mammals .....	3-101
5.	Aquatic Biota.....	3-102
B.	Potential Impacts .....	3-103
1.	General.....	3-103
2.	Potential Bird Impacts Associated with Golf Course Pesticide Use .....	3-104
3.	Potential Waterfowl Impacts Associated with Stormwater Basins .....	3-107
4.	Blasting Impacts.....	3-107
C.	Mitigation Measures .....	3-107
3.6.....	Soils .....	3-110
3.6.1	Existing Conditions .....	3-110
A.	General Soil Descriptions.....	3-111
B.	Site Specific Soil Descriptions.....	3-112
C.	Test Pits, Percolation Tests and Soil Sample Analyses.....	3-114
3.6.2	Potential Impacts .....	3-115
3.6.3	Mitigation Measures .....	3-115
3.7.....	Traffic Patterns .....	3-117
3.7.1	Access to the Site and Existing Conditions .....	3-117

3.7.2	Potential Impacts and Mitigation Measures.....	3-121
A.	Trip Generation .....	3-122
B.	Trip Distribution.....	3-125
C.	Traffic Assignment.....	3-125
D.	2008 Build Traffic .....	3-126
E.	Accident Analysis .....	3-126
F.	Sight Distance Analysis.....	3-127
G.	Capacity/Level of Service Analysis.....	3-128
H.	Blasting.....	3-130
I.	Conclusions.....	3-131
3.8.....	Land Use and Community Character.....	3-133
3.8.1	Existing Use of Site .....	3-133
A.	Existing Conditions.....	3-133
B.	Potential Impacts .....	3-135
C.	Mitigation Measures .....	3-135
3.8.2	Adjacent Land Uses and Community Character.....	3-135
A.	Existing Conditions.....	3-135
1.	Adjacent Land Use.....	3-135
2.	Community Character.....	3-136
B.	Potential Impacts .....	3-139
C.	Mitigation Measures .....	3-140
3.8.3	Local and Regional Land Use Plans.....	3-140
A.	Existing Conditions.....	3-140
B.	Potential Impacts .....	3-140
C.	Mitigation Measures .....	3-140
3.8.4	Visual Resources and Aesthetics.....	3-141
A.	Visual Resources .....	3-141
1.	Summary of Visual Resources Assessment.....	3-141
2.	Existing Conditions.....	3-151
3.	Potential Impacts .....	3-155
4.	Mitigation Measures .....	3-167
B.	Lighting .....	3-169
1.	Highmount Estates.....	3-169
2.	Wildacres Resort.....	3-170
3.	Big Indian Plateau.....	3-170
C.	Sound Resources .....	3-170
1.	Existing Conditions.....	3-170
2.	Potential Impacts .....	3-172
3.	Mitigation Measures .....	3-176
3.9.....	Community Services .....	3-176
3.9.1	Emergency Services .....	3-177
A.	Existing Conditions.....	3-177
1.	Fire .....	3-177
2.	Ambulance.....	3-177
3.	Hospital.....	3-177

	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-177</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-178</b>
<b>3.9.2</b>	<b>Police</b>	<b>.....</b>	<b>3-178</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-178</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-178</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-178</b>
<b>3.9.3</b>	<b>Potable Water</b>	<b>.....</b>	<b>3-179</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-179</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-179</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-180</b>
<b>3.9.4</b>	<b>Wastewater</b>	<b>.....</b>	<b>3-180</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-180</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-180</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-180</b>
<b>3.9.5</b>	<b>Solid Waste/Recycling</b>	<b>.....</b>	<b>3-180</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-180</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-181</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-181</b>
<b>3.9.6</b>	<b>Utilities</b>	<b>.....</b>	<b>3-181</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-181</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-182</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-182</b>
<b>3.9.7</b>	<b>Schools</b>	<b>.....</b>	<b>3-182</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-182</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-182</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-183</b>
<b>3.9.8</b>	<b>Recreation Facilities</b>	<b>.....</b>	<b>3-183</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-183</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-183</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-183</b>
<b>3.9.9</b>	<b>Roadways</b>	<b>.....</b>	<b>3-185</b>
	<b>A.</b>	<b>Existing Conditions.....</b>	<b>3-185</b>
	<b>B.</b>	<b>Potential Impacts .....</b>	<b>3-185</b>
	<b>C.</b>	<b>Mitigation Measures .....</b>	<b>3-185</b>
<b>3.10.....</b>	<b>Socio-Economic Setting</b>	<b>.....</b>	<b>3-185</b>
<b>3.10.1</b>	<b>Existing Conditions</b>	<b>.....</b>	<b>3-185</b>
	<b>A.</b>	<b>Methodology .....</b>	<b>3-186</b>
	<b>B.</b>	<b>Demographic Characteristics of the Study Area .....</b>	<b>3-187</b>
	<b>C.</b>	<b>Workforce Capacity and Opportunities .....</b>	<b>3-188</b>
	<b>D.</b>	<b>Labor Force Demographics .....</b>	<b>3-189</b>
	<b>E.</b>	<b>Characteristics of the Unemployed .....</b>	<b>3-191</b>
	<b>F.</b>	<b>Economic Trends and Conditions .....</b>	<b>3-193</b>
<b>3.10.2</b>	<b>Potential Impacts</b>	<b>.....</b>	<b>3-195</b>

3.10.2.1	Construction Phase .....	3-195
A.	Introduction .....	3-195
	1. Overview of Methodology .....	3-195
	2. Construction Cost .....	3-196
B.	Economics Benefits .....	3-196
	1. Employment.....	3-196
	2. Wages and Salaries .....	3-197
	3. Economic Activity .....	3-197
C.	Fiscal Benefits.....	3-198
3.10.2.2	Operational Phase.....	3-198
A.	Introduction .....	3-198
B.	Direct Economic Benefits .....	3-199
	1. Direct Employment.....	3-199
	2. Direct Wages and Salaries.....	3-201
	3. Projected Annual Revenues .....	3-201
C.	Indirect Economic Benefits .....	3-201
	1. Overview of Methodology .....	3-201
	2. Employment.....	3-202
	3. Wages and Salaries .....	3-202
	4. Total Economic Impact .....	3-203
D.	Fiscal Impacts.....	3-203
	1. Sales Tax .....	3-203
	2. Existing Property Taxes .....	3-204
	3. Future Property Tax Revenues with The Proposed Project .....	3-204
E.	Effects of Resort Visitors and Guests.....	3-207
	1. Projected Resort Visitation .....	3-207
	2. Timeshare and Vacation Club Visitation .....	3-208
	3. Hotel Visitation.....	3-212
	4. Highmount Estates.....	3-214
	5. Conference Center .....	3-216
	6. Wilderness Activities Center and Children’s Center.....	3-216
	7. Restaurant Visitors .....	3-217
	8. Summary of Effects of Resort Visitors.....	3-217
3.10.3	Mitigation Measures .....	3-218
3.11.....	Cultural Resources .....	3-218
3.11.1	Existing Conditions .....	3-218
3.11.2	Potential Impacts .....	3-219
3.11.3	Mitigation Measures .....	3-220

**SECTION 4 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS ..... 4-1**

4.1..... **Vegetation** ..... 4-1  
4.2..... **Wildlife** ..... 4-1  
4.3..... **Erosion** ..... 4-1  
4.4..... **Fugitive Dust** ..... 4-2  
4.5..... **Sound** ..... 4-2  
4.6..... **Visual** ..... 4-2  
4.7..... **Traffic** ..... 4-2

**SECTION 5 ALTERNATIVES ..... 5-1**

5.1..... **Alternative Locations**..... 5-1  
5.2..... **Alternative Use of Site** ..... 5-2  
5.3..... **Alternative Layouts** ..... 5-2  
    5.3.1 **Alternative Layouts of the Proposed Golf Courses** ..... 5-4  
    5.3.2 **Alternative Buildings and Building Layouts** ..... 5-5  
    5.3.3 **One Golf Course and One Hotel Complex Alternative** ..... 5-6  
    5.3.4 **Either and “East Resort” or a “West Resort” Alternative** ..... 5-6  
        A. **Overview** ..... 5-6  
        B. **Market Analysis** ..... 5-7  
        C. **Financial Analysis** ..... 5-9  
        D. **Conclusion** ..... 5-13  
    5.3.5 **Limitations Affecting Alternatives** ..... 5-13  
    5.3.6 **Additional Golf Courses** ..... 5-13  
5.4..... **Alternative Water Supply** ..... 5-14  
    5.4.1 **Big Indian Plateau** ..... 5-16  
        A. **Rosenthal Well #2** ..... 5-16  
        B. **Silo A Spring** ..... 5-17  
        C. **Upper Spring (Woodchuck Hollow Spring)** ..... 5-17  
        D. **Silo B Spring** ..... 5-18  
        E. **Railroad Spring**..... 5-18  
        F. **Rosenthal Well #1** ..... 5-18  
        G. **Existing On-Site Wells**..... 5-19  
        H. **Pine Hill Water Company**..... 5-19  
        I. **Proposed Water Supply Sources** ..... 5-21  
    5.4.2 **Wildacres Resort and Highmount Estates**..... 5-22  
        A. **Village of Fleischmanns Water Supply** ..... 5-22  
        B. **Highmount Spring** ..... 5-25  
        C. **Wildacres #3 Spring**..... 5-25  
        D. **Existing On-Site Wells**..... 5-25  
        E. **Proposed Water Supply Source**..... 5-26  
5.5..... **Alternative Wastewater Disposal** ..... 5-26

5.5.1	Big Indian Plateau .....	5-26
A.	Alternatives .....	5-27
1.	Individual Subsurface Disposal Systems .....	5-27
2.	Pre-treatment Systems with Regional Subsurface Disposal.....	5-27
3.	Consolidated Discharge.....	5-27
4.	On-site Wastewater Treatment Plant .....	5-28
B.	Evaluation Considerations of Alternatives.....	5-28
1.	Estimated Hydraulic and Organic Loading .....	5-29
2.	Estimated Effluent Quality Requirements .....	5-29
3.	Site Conditions .....	5-29
C.	Subsurface Disposal Systems .....	5-30
D.	Consolidated Discharge.....	5-32
E.	Wastewater Treatment Plant.....	5-33
F.	Proposed Alternative .....	5-34
5.5.2	Wildacres Resort and Highmount Estates.....	5-35
A.	Alternatives .....	5-35
1.	Subsurface Disposal Systems .....	5-35
2.	On-site Treatment Systems .....	5-35
3.	Consolidated Discharge.....	5-36
B.	Evaluation Considerations for Alternatives .....	5-36
1.	Estimated Hydraulic and Organic Loading .....	5-36
2.	Estimated Effluent Quality Requirements .....	5-36
3.	Site Conditions .....	5-37
C.	Subsurface Disposal Systems .....	5-39
D.	Consolidated Discharge.....	5-40
E.	Wastewater Treatment Plant.....	5-40
F.	Proposed Alternative .....	5-41
5.6.....	Alternative Site Access .....	5-42
5.6.1	Big Indian Plateau .....	5-42
A.	Access from Existing Roads.....	5-42
B.	Internal Site Access.....	5-44
5.6.2	Wildacres Resort and Highmount Estates.....	5-44
A.	Access from Existing Roads.....	5-44
B.	Internal Site Access.....	5-46
5.7.....	Alternative Golf Course Management Practices .....	5-46
5.7.1	Grass Species Selection.....	5-47
5.7.2	Biological Pest Controls.....	5-48
5.7.3	Pest Monitoring, Pest Thresholds, and Spot Treatments.....	5-48
5.7.4	Limiting Fertilizer Phosphorus Applications.....	5-49
5.8.....	Alternative Stormwater Management Practices.....	5-49
5.9.....	Alternative Construction Phasing Plan .....	5-50
5.9.1	Phases .....	5-51
5.9.2	Subphases .....	5-51
5.9.3	Work Areas .....	5-51
5.9.4	Alternative Construction Sequencing .....	5-51

5.9.5	Comparison of Alternatives .....	5-53
5.10.....	No-Action Alternative.....	5-55
5.10.1	Land Use .....	5-55
5.10.2	Local and Regional Planning Goals .....	5-55
5.10.3	Socioeconomic Benefits.....	5-58
A.	Construction Phase.....	5-58
B.	Operation Phase.....	5-58

**SECTION 6 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES .....** 6-1

**SECTION 7 GROWTH INDUCING, SECONDARY AND CUMULATIVE IMPACTS OF THE PROPOSED ACTION.....** 7-1

7.1.....	Introduction .....	7-1
7.2.....	Commercial Development Demand.....	7-2
7.2.1	Estimating Induced Commercial Demand .....	7-3
A.	New Expenditure Estimate.....	7-3
1.	Off-site Visitor Expenditures .....	7-3
2.	Employment-based Personal Income.....	7-3
3.	Overall Economic Activity .....	7-4
4.	Summary.....	7-5
7.3.....	Potential Induced Development.....	7-5
7.3.1	New Commercial Development .....	7-5
A.	Estimated New Commercial Activity .....	7-5
B.	Guiding New Commercial Development .....	7-8
7.3.2	New Residential Development .....	7-9
A.	Seasonal Residential Development .....	7-9
B.	Year-round Residential Development.....	7-13
7.4.....	Potential Impacts from Induced Growth.....	7-15

**SECTION 8 EFFECT OF THE PROPOSED ACTION ON THE USE AND CONSERVATION OF ENERGY .....** 8-1

**SECTION 9 CONSULTATION AND COORDINATION.....** 9-1

**REFERENCES**

## PLAN SHEETS UNDER SEPARATE COVER

### 1. LA Group Plan Sheets

	Cover Sheet
MP-1 – MP-6	Master Plan
SG-1 – SG-10	Grading Plan
SD-1 – SD-7	Drainage Plan
PH-1 – PH-3	Phasing and Erosion Control
CP-1 – CP-18	Construction Phasing Phase 2 Big Indian Country Club
SA-1 – SA-3	Proposed Grade Slope Analysis
SL-1 – SL-14	Landscaping and Lighting Plan

### 2. Delaware Engineering Plan Sheets

#### 1. Wildacres Water Supply, Treatment and Distribution

Drawing No.	Title
1	Project Location
2	Index Map – Water System
3	Water System
4	Water System
5	Water System
6	Water System
7	Water System
8	Water - Pump Station and Tank
9	Water Details
10	Water Details

#### 2. Wildacres Wastewater Treatment and Disposal

1	Project Location
2	Index Map – Wastewater Disposal System
3	Wastewater Disposal System
4	Wastewater Disposal System
5	Wastewater Disposal System
6	Wastewater Disposal System
7	Wastewater Disposal System
8	Wastewater Treatment Plant Site Location
9	Wastewater Details
10	Wastewater Details
11	Wastewater Treatment Plant Layout
12	Wastewater Treatment Plant – Aeration System Plan & Sections
13	Wastewater Treatment Plant – Filter Plant Plan & Sections
14	Wastewater Treatment Plant – Exterior Elevations

3. Big Indian Water Supply, Treatment and Distribution

1	Project Location
2	Index Map – Water System
3	Water System
4	Water System
5	Water System
6	Water System
7	Water System
8	Water System
9	Water - Pump Station and Tank
10	Water Details
11	Water Details

4. Big Indian Wastewater Treatment and Disposal

1	Project Location
2	Index Map – Wastewater Disposal System
3	Wastewater Disposal System – Alternative #1
4	Wastewater Disposal System – Alternative #1
5	Wastewater Disposal System – Alternative #1
6	Wastewater Disposal System – Alternative #1
7	Wastewater Disposal System – Alternative #1
8	Wastewater Details
9	Wastewater Details
10	Wastewater Disposal System – Alternative #2
11	Wastewater Disposal System – Alternative #2
12	Wastewater Disposal System – Alternative #2
13	Wastewater Disposal System – Alternative #2
14	Pre-treatment System Details – Alternative #2
15	Wastewater Disposal System – Alternative #3
16	Wastewater Disposal System – Alternative #3
17	Wastewater Disposal System – Alternative #3
18	Wastewater Disposal System – Alternative #3
19	Wastewater Disposal System – Alternative #3
20	Wastewater Disposal System – Alternative #4
21	Wastewater Disposal System – Alternative #4
22	Wastewater Disposal System – Alternative #4
23	Wastewater Disposal System – Alternative #4
24	Wastewater Disposal System – Alternative #4
25	Wastewater Treatment Plant – Site Location, Alternative #4
26	Wastewater Treatment Plant Layout – Alternative #4

- 27 Wastewater Treatment Plant – Aeration System Plan & Sections,  
Alternative #4
- 28 Wastewater Treatment Plant – Filter Plant Plan & Sections,  
Alternative #4
- 29 Wastewater Treatment Plant – Exterior Elevations, Alternative #4

## LIST OF APPENDICES

---

### Volume 2

Appendix 1	SEQRA Documentation
Appendix 2	NYSDEC Permit Applications
Appendix 3	Recreational Amenities Plan
Appendix 4	Wilderness Activity Center Program
Appendix 4A	Draft Covenants Highmount Estates
Appendix 5	Study of Catskill Architecture
Appendix 6	Letters of Record

### Volume 3

Appendix 7	Water Supply Report
------------	---------------------

### Volume 4

Appendix 8	Conceptual Design Reports for Wastewater Treatment and Disposal
------------	---

### Volume 5

Appendix 9	Construction Phase Stormwater Quantity Management Plan
Appendix 9A	Operational Phase Stormwater Quantity Management Plan
Appendix 10	Construction Phase Stormwater Quality Management Plan
Appendix 10A	Operational Phase Stormwater Quality Management Plan
Appendix 11	Draft Construction Stormwater Pollution Prevention Plan
Appendix 12	Soil Test Results
Appendix 13	Big Indian Resort and Spa Recommendations for Landscaping on Elevated Structures

### Volume 6

Appendix 14	Integrated Turf Management Plan
Appendix 15	Fertilizer and Pesticide Risk Assessment
Appendix 16	Treated Wastewater for Golf Course Irrigation
Appendix 17	Wetland Delineation Report
Appendix 17A	Federal Wetland Pre-Construction Notification (PCN)
Appendix 17B	Supplemental PCN Information
Appendix 18	Water Quality Data <b>with Addendums</b>

### Volume 7

Appendix 19	Surface Water and Groundwater Assessment Big Indian Plateau
Appendix 19A	Water Budget Analysis - Wildacres
Appendix 20	Bird, Reptile and Amphibian Surveys <b>with Addendum</b>
Appendix 21	Visual Impact Study

## LIST OF APPENDICES

---

### Volume 8

Appendix 22	Sound Impact Study
Appendix 22A	Air Quality Assessment of Construction Activities
Appendix 23	Cultural Resources <b>with Addendum</b>
Appendix 24	Bridge Hydraulics
Appendix 25	Traffic Impact Study <b>with Addendum</b>

### Volume 9

Appendix 26	Economic Benefit and Growth Inducing Effects
Appendix 27	Fiscal and Marketing Information <b>with Addendum</b>

### Volume 10

Appendix 28	Local Surveys and Letters of Support
Appendix 29	Shandaken Town Board Documents
Appendix 30	Consultant's Qualifications

## LIST OF FIGURES

---

<u>Number</u>	<u>Figure Name</u>
1-1	State Location Map
1-2	Regional Location Map
1-3	Catskill Park
1-4	West-of-Hudson Watershed
1-5	Site Location Map
1-6	Layout Plan
1-7	Belleayre Mountain Ski Attendance 1987-2002
1-8	Big Indian-Beaverkill Range Wilderness Area
1-8A	Shandaken Wild Forest
1-9	Zoning Map Eastern Portion
1-10	Zoning Map Western Portion
2-1	Big Indian Plateau Layout Plan
2-2	Wildacres Resort Layout Plan
2-3	Existing Development Big Indian Plateau
2-4	Existing Development Wildacres Resort
2-5	Undeveloped Lands
2-6	Turf on Belleayre Mountain Ski Slopes
2-7	Hardiness Zone Map
2-8	Big Indian Country Club Layout Plan
2-9	Big Indian Country Club Golf Maintenance Area
2-10	Pesticide Mixing and Recycling Area
2-11	Highmount Golf Club Layout Plan
2-12	Highmount Golf Club Golf Maintenance Area
2-13	View of Big Indian Resort and Spa Scale Model
2-14 A, B	Big Indian Resort and Spa Building Elevations
2-15	Big Indian Country Club Single Club Membership Unit
2-16	Big Indian Country Club Triplex Club Membership Unit
2-17	Belleayre Highland Quadplex Club Membership Unit
2-17A	Brisbane Mansion
2-18	Wildacres Resort Hotel Perspective View
2-18A	Wildacres Hotel Scale Model
2-19	Wildacres Resort Hotel
2-19A	Marlowe Mansion
2-20	Wildacres Resort Octoplex Lodging Unit
2-21	Wildacres Resort Lodging Unit Clubhouse
2-22	Big Indian Plateau Access and Roadways
2-23	Wildacres Resort and Highmount Estates Access and Roadways
2-24	Typical Road Section
2-24A	Typical Pedestrian and Golf Cart Crossing for Gunnison Road
2-24B	Pedestrian Connections Wildacres Hotel, Wilderness Activity Center and Belleayre Mountain Ski Center

## LIST OF FIGURES

---

2-24C	Ski Area Express Bus Route
2-24D	Ski Area Local Bus Route
2-25	Typical Road Signage
2-26	Typical Wood Frame Signage
2-27	Typical Stone Signage
2-28	Phasing Plan Eastern Portion
2-29	Phasing Plan Western Portion
3-1	Topography
3-2	Eastern Portion Existing Topography 2 Foot and 5 Foot Contours <b>(in front pocket of Volume 1)</b>
3-3	Western Portion Existing Topography 2 Foot and 5 Foot Contours <b>(in front pocket of Volume 1)</b>
3-4	Slope Map Eastern Portion
3-5	Slope Map Western Portion
3-6	Soils Map Eastern Portion
3-7	Soils Map Western Portion
3-8	Ashokan Watershed Land Use
3-9	Pepacton Watershed Land Use
3-10	Surface Water Resources
3-11	Local Sampling Locations 1999 NYC Watershed Random Sampling Program
3-12	Esopus Creek Average Monthly Discharge 1963-1998
3-13	FEMA Floodplains Eastern Portion
3-14	Emory Brook Floodplain
3-15	Big Indian Plateau Bridges
3-15A	Wildacres Resort Bridge
3-15B	Stream Crossing Details Friendship Road Bridge
3-15C	Stream Crossing Details Winding Mountain Road Bridge
3-15D	Stream Crossing Details Giggle Hollow Road Bridge
3-15E	Stream Crossing Details Wildacres Bridge
3-15E1	Stream Crossing Details Erosion Control Details
3-15E2	Big Indian Plateau – Effluent Outfall Location
3-15E3	Big Indian Plateau – Effluent Outfall Plan
3-15E4	Wildacres Resort Effluent Outfall Location and Detail
3-15F	Project Construction Phasing
3-15G	Construction Components Big Indian Country Club Phase 2
3-15H	Construction Sequence 1
3-15I	Construction Sequence 2
3-15J	Construction Sequence 3
3-15K	Construction Sequence 4
3-15L	Construction Sequence 5
3-15M	Construction Sequence 6
3-15N	Construction Sequence 7

## LIST OF FIGURES

---

3-15O	Construction Sequence 8
3-15P	Construction Sequence 9
3-15P1	Construction Sequence 10
3-15P2	Construction Sequence 11
3-15P3	Construction Sequence 12
3-15Q	Chitosan Flocculent Testing
3-15R	Flocculent Delivery System
3-15S	Cumulative Phosphorus Loading <b>(in text page 3-40)</b>
3-16	Well Location Map
3-17	Ecological Community Types Western Portion
3-18	Ecological Community Types Map Eastern Portion
3-19	Soils Testing Map Eastern Portion
3-20	Soils Testing Map Western Portion
3-21	Distribution of Weekend Traffic <b>(in text page 3-124)</b>
3-21A	Proposed Roadway Improvements County Road 49A
3-21B	Proposed Improvements NYS Route 28/County Road 49A
3-22	State Hiking Trails Eastern Portion
3-23	State Trails Western Portion
3-24	State Lands
3-25	Viewshed Analysis – Viewpoints
3-25A	Viewshed Analysis – All Target Points
3-26	Viewshed Analysis – Big Indian Plateau
3-27	Viewshed Analysis – Wildacres Resort
3-27A	Supplemental Study Points
3-28	Visual Simulation Process
3-29,30, 30A	Visual Simulation Plateau Mountain Enhanced and Rendered
3-31,32,32A	Balsam Mountain Simulations
3-33,34,34A	Balsam Mountain Simulations
3-35,36,36A	Balsam Mountain Simulations
3-37,38,38A	Visual Simulation Park off Route 28
3-39,40,40A	Owls Nest Simulation
3-41,42,42A,42B	Wood Road Simulation
3-43,44,44A,45,46,46A	Sunset Lodge Simulation
3-47	Eastern Portion Lighting Plan
3-48	Western Portion Lighting Plan
3-49	Study Area
3-50	Study Area
5-1,2	Residential Development Alternative for Big Indian Plateau
5-3	Residential Development Alternative for Wildacres Resort
5-4	Highmount Golf Club Alternative 1
5-5	Highmount Golf Club Alternative 2
5-6	Alternative Big Indian Hotel Building Elevation.
5-7	Wildacres Resort Upper Lodge Alternative

## LIST OF FIGURES

---

5-8	Wildacres Resort Lower Lodge Alternative
5-9	Third 18-Hole Golf Course (Not Proposed)
5-10	Fourth 18-Hole Golf Course (Not Proposed)
5-11	Access Alternatives Big Indian Plateau
5-12	Construction Components Big Indian Country Club Phase 2
5-13	Big Indian Country Club Phase 2 Reduced Site Plan
5-14	Alternative Construction Sequence Schematic 1
5-15	Alternative Construction Sequence Reduced Site Plan 1
5-16	Alternative Construction Sequence Schematic 2
5-17	Alternative Construction Sequence Reduced Site Plan 2
5-18	Alternative Construction Sequence Schematic 3
5-19	Alternative Construction Sequence Reduced Site Plan 3
5-20	Alternative Construction Sequence Schematic 4
5-21	Alternative Construction Sequence Reduced Site Plan 4
5-22	Alternative Construction Sequence Schematic 5
5-23	Alternative Construction Sequence Reduced Site Plan 5
5-24	Alternative Construction Sequence Schematic 6
5-25	Alternative Construction Sequence Reduced Site Plan 6
5-26	Alternative Construction Sequence Schematic 7
5-27	Alternative Construction Sequence Reduced Site Plan 7
5-28	Alternative Construction Sequence Schematic 8
5-29	Alternative Construction Sequence Reduced Site Plan 8
5-30	Alternative Construction Sequence Schematic 9
5-31	Alternative Construction Sequence Reduced Site Plan 9
7-1	Corridor Spending Analysis Model

## LIST OF TABLES

---

1-1	Permits and Approvals
2-1A	Big Indian Plateau Construction Phasing and Cut and Fill Volumes
2-1B	Wildacres Resort and Highmount Estates Construction Phasing and Cut and Fill Volumes
2-2	Cut and Fill Volumes <b>(in text page 2-37)</b>
2-3	Impervious Surfaces Including Porous Pavement
2-4	Impervious Area in Relation to Project Size
2-5	Summary of Proposed Tree Planting <b>(in text page 2-50)</b>
2-7	Projected Employment <b>(in text page 2-68)</b>
2-8	Inert Ingredients <b>(in text page 2-90)</b>
3-1	Cut and Fill Volumes <b>(in text page 3-6)</b>
3-2	Surface Water Descriptions
3-3	NYSDEC Region 3 Water Quality Data
3-4	Selected 1999 Region 4 Water Quality Data
3-5	Alpha Geoscience Field Water Quality Data
3-6	Alpha Geoscience Analytical Water Quality Data
3-7	Summary of NYCDEP Water Quality Data
3-8	Monthly and Annual Average Discharges on Esopus Creek
3-9	Erosion Control Products
3-10	Overall Nutrient Export <b>(in text page 3-38)</b>
3-11	Wastewater Nutrient Export <b>(in text page 3-39)</b>
3-12	Pesticide Screening Process
3-13	Modeled Fertilizer Programs <b>(in text page 3-56)</b>
3-14	Nutrient Export from Modeled Fertilizer Programs <b>(in text page 3-56)</b>
3-15	Soil Characteristics and Limitations
3-16	Big Indian Country Club Irrigation With 12-Hour Well Replenishment
3-17	Vegetation Communities Eastern Portion
3-18	Vegetation Communities Western Portion
3-19	Existing Vegetation
3-20	Flora of the Belleayre Resort Site
3-21	Vegetation Disturbance Total Site
3-22	Vegetation Disturbance Eastern Portion
3-23	Vegetation Disturbance Western Portion
3-24	Summary of Proposed Tree Planting <b>(in text page 3-87)</b>
3-24A	Plant Palette <b>(in text page 3-87)</b>
3-24B	Xeriscape Plant List
3-25	Wetland Table – Eastern Portion
3-26	Wetland Table – Western Portion
3-26A	Projected Impacts to Wetlands on the Belleayre Resort Ventures Site
3-27	Bird Species Observed at the Belleayre Resort Spring 2000
3-28	Bird Species Observed at the Belleayre Resort Summer 2000

## LIST OF TABLES

---

3-29	Reptile and Amphibian Species Observed on the Belleayre Resort Site-Spring and Early Summer 2000
3-29A	Aquatic Invertebrates
3-29B	Avian Pesticide Toxicity <b>(in text page 3-105)</b>
3-30	Soil Sample Sieve and Hydrometer Test Results
3-31	Wildacres Resort Trip Generation <b>(in text page 3-124)</b>
3-32	Big Indian Plateau Trip Generation <b>(in text page 3-125)</b>
3-33	Highmount Estates Trip Generation <b>(in text page 3-125)</b>
3-34	Big Indian Plateau Density
3-34A	Wildacres Resort Density
3-34B	Inventory of All Documented Viewpoints
3-34C	Summary of Viewpoints with Potential Visibility of the Project.
3-35	Noise Abatement Criteria <b>(in text page 3-175)</b>
3-36	Big Indian Plateau Construction Noise Impacts and Mitigation
3-37	Wildacres Construction Noise Impacts and Mitigation
3-38	Cumulative Construction Noise and Mitigation Measures
3-39	Population and Household Trends and Projections
3-40	Average Household Income
3-41	2000 Family Household Income Distribution Estimates
3-42	Average Annual Labor Force Trends 1980-1999
3-43	Employment Trends 1980-1999
3-44	Unemployment Rate 1990-1999
3-45	Education Level for Persons Over 25
3-46	Location of Residents' Workplaces in 1990
3-47	Major Destination Counties for Out-Commuters in Three Area Counties
3-48	Change in Precision Production, Craft, and Repair Operation Jobs 1980-1990
3-49	Changes in Machine Operators, Fabricators, Laborers, Assemblers, and Inspectors Jobs 1980-1990
3-49A	Unemployment Insurance Beneficiaries Age Breakdown 2001 <b>(in text page 3-192)</b>
3-49B	Unemployment Insurance Beneficiaries Previous Work Experience 2001 <b>(in text page 3-192)</b>
3-50	Job Distribution by SIC Sectors, 1999
3-51	Average Annual Labor Force Trends and Projections
3-52	Changes in Real Wages by SIC Sectors 1990-99
3-53	Tourism Spending in Three Area Counties, 1997
3-54	Change in Retail Sector Employment by SIC Category: 1993-1997
3-55	Change in Service Sector Employment by SIC Category: 1993-1997
3-56	Current Business Data for Retail SIC Categories in Three Area Counties
3-57	Current Business Data for Retail SIC Categories in the Study Area
3-58	Current Business Data for Service SIC Categories in the Three Area Counties
3-59	Current Business Data for Service SIC Categories in the Study Area
3-60	Construction Costs and Expenditures
3-61	Overview of Economic Benefits from Construction Activities

## LIST OF TABLES

---

3-62	Economic and Fiscal Effects by Component from Construction of the Proposed Belleayre Resort at Catskill Park
3-63	Cumulative Fiscal Benefits Resulting From Construction Activities
3-64	Belleayre Resort Employment
3-65	Belleayre Wages and Salaries
3-66	Belleayre Gross Annual Revenues
3-67	Projected Direct and Indirect Employment
3-68	Projected Annual Payroll
3-69	Projected Annual Total Effect on the Local Economy
3-70	Projected Annual Sales Tax Revenue from Belleayre Resort (2001 Dollars)
3-71	Belleayre Resort Parcel Taxing Districts, Acreage, Assessed Value, Tax Rates, and Tax Payments – Town of Shandaken (Ulster County)
3-72	Belleayre Resort Parcel Taxing Districts, Acreage, Assessed Value, Tax Rates, and Tax Payments – Town of Middletown (Delaware County)
3-73	Full Market Value and Assessed Value of Belleayre Resort Components
3-74	Existing and Future Property Tax Revenues Generated by Belleayre Resort Project – Town of Shandaken (Ulster County)
3-75	Existing and Future Property Tax Revenues Generated by Belleayre Resort Project – Town of Middletown (Delaware County)
3-76	Timeshare Unit Ownership
3-77	Estimated Timeshare/Vacation Club Visitation
3-78	Vacation Club Membership
3-79	Off-site Spending by Timeshare Visitors and Big Indian Country Club Members
3-80	Estimated Hotel and Lodging Visitation
3-81	Estimated Off-Site Spending by Hotel and Lodging Visitors
3-82	Estimated Highmount Estates Visitation
3-83	Estimated Off-Site Spending by Highmount Estate Visitors
3-84	Restaurant Capacity
3-85	Summary of Overall Spending By Belleayre Resort Visitors
3-86	Belleayre Resort Visitor Off-Site Spending
5-1	Land Use and Zoning
5-2	Alternatives Table – Summary of East and West Project Components
5-3	Summary of Financial IRR Analysis <b>(in text page 5-12)</b>
5-4	Alternative Construction Phasing for Phase 2 of Big Indian Country Club
7-1	Corridor Spending Analysis
7-2	Timeshare Unit Sales and Prospective Buyers
7-3	Annual Sales Volume and Number of Prospective Buyers

## LIST OF ACRONYMS

---

AADT	Average Annual Daily Traffic
ACOE	Army Corps of Engineers
AMSL	above mean sea level
APA	Adirondack Park Agency
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
BOD	biological oxygen demand
c.f.	cubic feet
CCPA	Central Catskill Planning Alliance
CFC	chlorofluorocarbon
cfs	cubic feet per second
CITES	Convention on International Trade in Endangered Species
CO	carbon monoxide
CPPP	Construction Pollution Prevention Plan
CR	County Road
dB	decibels
dBA	A-weighted decibels
DEIS	Draft Environmental Impact Statement
ECL	Environmental Conservation Law
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPM	Environmental Procedures Manual
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTE	full-time equivalent
GIS	Geographic Information Systems
GLEAMS	Groundwater Loading Erosion from Agricultural Management Systems
gpd	gallons per day
gph	gallons per hour
gpm	gallons per minute
HC	Highway Commercial
HCM	Highway Capacity Manual
HUD	Housing and Urban Development
HVAC	heating, ventilation and air conditioning
ICEAS	Intermittent Cycle Extended Aeration System
IPM	Integrated Pest Management
ISO	Insurance Services Office
ITE	Institute of Transportation Engineers
ITM	Integrated Turf Management
kg/ha	kilograms per hectare
kV	kilovolts
LC <sub>50</sub>	lethal concentration at which 50% of tested organisms die
L <sub>dn</sub>	day night average sound level
LEACHM	Leaching Estimation and Chemistry Model
L <sub>eq</sub>	equivalent sound level
LOS	level of service

## LIST OF ACRONYMS

---

LP	liquid propane
MCC	Motor Control Center
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
MOA	Memorandum of Agreement
MSDS	Material Safety Data Sheet
NAC	Noise Abatement Criteria
NGF	National Golf Foundation
NO <sub>x</sub>	nitrogen oxides
NY	New York
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSERDA	New York State Energy Research and Development Agency
O & M	Operations and Maintenance
P	phosphorus
PHWC	Pine Hill Water Company
PM <sub>10</sub>	particulate matter
POTW	publicly owned treatment works
PVC	polyvinyl chloride
RIBS	Rotating Intensive Basin Studies
SCS	Soil Conservation Service
SEQRA	State Environmental Quality Review Act
SIC	standard industrial categories
SLAMM	Source Loading and Management Model
SPDES	State Pollutant Discharge Elimination System
SPL	sound pressure levels
TMDL	total maximum daily load
TKN	total kjeldahl nitrogen
TSS	total suspended solids
UMP	Unit Management Plan
US	United States
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UV	ultraviolet
VOC	volatile organic compounds
WIN	Watershed Index Number
WINPST	Windows Pesticide Screening Tool
WRHGC	Wildacres Resort Highmount Golf Club
WSA	Water Supply Application
WWTP	wastewater treatment plant