The New York City Department of Environmental Protection's Comments on the Draft Environmental Impact Statement and Draft State Pollutant Discharge Elimination System Permits for the Proposed Belleayre Resort at Catskill Park Project

Submitted to the

New York State Department of Environmental Conservation

April 22, 2004

Table of Contents

Final Report

Appendices

Appendix A

Appendix B

Appendix C

I. Introduction

This report provides the result of New York City Department of Environmental Protection's (NYCDEP) review of the Draft Environmental Impact Statement (DEIS), dated September, 2003, for the proposed Belleayre Resort at Catskill Park, prepared on behalf of Crossroads Ventures, LLC (the "Applicant"). NYCDEP has a compelling interest in this project primarily because it is located in the watershed of the City of New York and protection and preservation of the City's water supply is of paramount importance for the one half of the population of the State of New York that relies on this invaluable resource. NYCDEP is not opposed to responsible, environmentally sensitive development in its watershed. Indeed, NYCDEP's position, as a signatory to the New York City Watershed Memorandum of Agreement (MOA), and as a participant in programs administered by the Catskill Watershed Corporation (where NYCDEP has voted in favor of virtually all economic development projects requests for loans or grants), has amply demonstrated NYCDEP's willingness and commitment to this principle. However, support for this principle does not mean that every proposed project meets this standard, or that legitimate concerns about a project contradict the spirit of the MOA. For the reasons set forth in this report, NYCDEP believes that the proposed Belleayre Resort at Catskill Park does not embody environmentally responsible growth consistent with the spirit of the MOA.

The DEIS is fundamentally flawed and incomplete because it fails to satisfy the State Environmental Quality Review Act (SEQRA) and the rules and regulations (6 NYCRR 617) enacted to govern such reviews. The DEIS fails to take a hard look at the project's potential for significant adverse impacts on the environment because it relies upon faulty assumptions and data and inaccurate predictive models as the basis of its conclusions. Since the basis for describing existing conditions and identifying significant adverse impacts of the proposed project is flawed, the identification of effective, reasonably available mitigation measures is woefully inadequate at best, and conspicuously absent at worst.

NYCDEP avers that the alternatives analysis has, likewise, failed to satisfy basic SEQRA requirements, namely in that it dismisses "reasonable alternatives." Identification of a range of reasonable alternatives which would lessen or mitigate potential significant adverse impacts is a basic requirement of SEQRA that remains unfulfilled in the DEIS. SEQRA, as a decision making tool, is not purposeful without providing this information. Having failed to analyze alternative development proposals as required under SEQRA, the Applicant failed to present the decision makers with a reasonable range of alternatives that could lessen or eliminate potential impacts. NYCDEP believes that the range of reasonable alternatives for this site can not include a golf course. Projects that have been considered and dismissed by the Applicant as economically infeasible are not necessarily the types of alternative development proposals that NYCDEP believes will enable us to reach conclusions that the impacts of the project have been mitigated.

Unless the analyses in the DEIS are substantially improved and demonstrate that the impacts of the project as proposed or a reasonable alternative project have been accurately quantified using complete, consistent, and accurate underlying data and fully documenting the measures through which the impacts are mitigated, the Applicant has not discharged its duties under SEQRA that all potential significant environmental impacts have been adequately identified, analyzed and mitigated. As such, NYCDEP is not, and until such steps are completed would not, be able to issue findings in support of the project or approve permits pursuant to its independent regulatory authority over stormwater discharges and wastewater treatment at the site. NYCDEP is concerned that it would not be able to issue permits for any of the alternatives that had been considered by the project's sponsor because our current rules and regulations do not permit post-development loadings to exceed pre-development levels.

NYCDEP provides numerous examples throughout this report of the ineffectiveness and incompleteness of the DEIS for satisfying these basic SEQRA requirements. Throughout this document, reference is made to a number of Appendices prepared by NYCDEP's consultants, RKG Associates, Inc (RKG) and EA Engineering, PC (EA). The Appendices, which provide additional details and technical analyses which support these comments, as well as additional specific points regarding those areas of the DEIS which NYCDEP considers to be insufficient and/or flawed, are attached to and incorporated into this report.

II. NYCDEP Legal Responsibilities and Primary Concerns

NYCDEP Responsibilities

As the agency charged with overseeing the operation, maintenance, and management of the New York City (the City) water supply system, NYCDEP is legally responsible for protecting the City's water supply from degradation, which requires regulating various activities within the New York City watershed that are potential sources of pollution to the water supply. Many high quality tributary streams protected under federal, State and/or City law are within and/or in proximity to the site of the proposed Belleayre Resort. As stated in *Final Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources* (Watershed Rules and Regulations), Section 18-11(a) RCNY, (10 NYCRR 128), "… [t]he high quality of these waters faces a continuing threat from the cumulative and episodic impacts of pollution sources generated by certain land uses and activities in the watershed. It is the duty of the Commissioner of the New York City Department of Environmental Protection … to protect the high quality waters from which the City's water supply is drawn and preserve it from degradation for the purpose of protecting the health and general welfare of its communities."

The site of the proposed Belleayre Resort is in the Towns of Shandaken and Middletown in the central Catskill Park of New York State at crucial headwaters of reservoirs in both

the Catskill and the Delaware watersheds (referred to jointly as the "West of Hudson Watershed"). The headwaters that would be affected by the proposed project drain primarily into the Ashokan Reservoir and also into the Pepacton Reservoir. The entire West of Hudson watershed system supplies approximately 90% of the daily water supply provided by NYCDEP. The West of Hudson watershed, along with the East of Hudson watershed and a number of wells in the Borough of Queens (The New York City water system) provides drinking water to approximately half the population of the State of New York: over eight million residents of the City and one million people in Westchester, Putnam, Dutchess, Orange and Ulster Counties. In addition, it supplies water to the hundreds of thousands of tourists and non-city resident commuters who visit the City each day.

NYCDEP, as an involved agency with respect to the proposed Belleayre Resort pursuant to SEQRA, has a legal responsibility to independently review the DEIS for the proposed Belleayre Resort, to comment as appropriate on the adequacy of the DEIS, and to make its own SEQRA findings on potential environmental impacts of the proposed Belleayre Resort, the proposed measures for mitigating those impacts, and reasonable alternatives to the proposal. Furthermore, NYCDEP is the regulatory authority pursuant to the Watershed Rules and Regulations for approving plans for certain aspects of the proposed Belleayre Resort development, in particular the design, construction and operation of wastewater treatment facilities, construction of impervious surfaces and disturbance of land through the design and implementation of stormwater pollution prevention plans for the control of erosion and runoff both during construction and subsequent operation of the resort. As such, NYCDEP has undertaken a comprehensive independent review of the DEIS in order to independently ascertain whether the DEIS is complete and adequate before the issuance of any such findings and before consideration of any request to approve plans for such activities.

Meeting this responsibility has required a thorough review of the development project's potential impacts on the New York City Watershed. As stated in the New York State Department of Environmental Conservation (NYSDEC) Commissioner's Determination of Lead Agency for the proposed Belleayre Resort, Under Article 8 of the Environmental Conservation Law,[1] "The specific expertise of the NYCDEP in the review of the development [the proposed Belleayre Resort] for the impact to water quality is … essential to the construction and operation of this resort complex in an environmentally sensitive and compatible fashion." In addition, because of the potential water quality implications of future growth and regional land use changes directly associated with or that could be induced by the proposed project, NYCDEP's review of the DEIS includes an analysis of the development project's potential regional socioeconomic impacts.

In order to efficiently utilize resources and avoid duplication of effort, NYCDEP determined that detailed review of potential local impacts of the project, such as air, noise, traffic, and impacts on local tax base and municipal services, should primarily be the responsibility of the host towns of Shandaken and Middletown. Although NYCDEP

[1] "New York State Department of Environmental Conservation Commissioner's Determination of Lead Agency Under Article 8 of the Environmental Conservation Law," John P. Cahill, Commissioner. March 20, 2000. Albany, New York.

reviewed these issues to evaluate the degree to which local impacts could have water quality implications as well as their effect on induced growth and secondary impacts, the Towns performed detailed reviews of the DEIS in these impact areas. NYCDEP provided funding support for consulting resources to assist the Towns' independent reviews of these impacts, which will be submitted to the NYSDEC by the Towns under separate cover.

Filtration Avoidance Determination and New York City Watershed Memorandum of Agreement as Basis for NYCDEP Review of DEIS

Pursuant to the Safe Drinking Water Act Amendments of 1986, the United States Environmental Protection Agency (EPA) promulgated the Surface Water Treatment Rule (SWTR), 40 CFR 141, which requires that all public water systems supplied from surface water sources either be filtered or meet stringent filtration avoidance criteria. A 1-year Filtration Avoidance Determination (FAD) was issued by EPA in January 1993, with respect to the West of Hudson Watershed, during which NYCDEP was required to, and did, meet 66 deadlines to implement studies to identify potential pollution sources, develop programs to ensure long-term watershed protection, and address known sources of contamination. Based on these efforts, EPA issued a second FAD in December 1993 containing 150 conditions to be met by NYCDEP.

The potential impact of certain conditions caused watershed residents to raise objections, in response to which negotiations ensued among numerous parties including the EPA, New York State and its agencies, New York City and its agencies, all but one watershed county, representatives of virtually all watershed towns and villages, and various not-for-profit environmental organizations. Out of these negotiations, the New York City Watershed Memorandum of Agreement (MOA) was signed by over 90 parties and became effective in January 1997. Among other things, all parties to the MOA agreed to the principle that responsible growth and development should be promoted in the NYCDEP watershed if pursued in an environmentally responsible manner consistent with the protection of water quality. Development was to be encouraged in town centers with supporting infrastructure. Growth was not envisioned as appropriate on steep slopes or at locations outside of population centers on large tracts of undeveloped land with mature forests.

Under the MOA, NYCDEP committed significant funding to numerous programs with the explicit aim of safeguarding water quality for the long term in the West of Hudson watershed. These programs include upgrades of existing wastewater treatment plants, construction of certain new wastewater treatment plants in areas with concentrations of failing septic systems, expansion of certain sewerage collection systems, rehabilitation of substandard septic systems, construction of stormwater control and stream restoration projects, construction of salt and sand storage systems for watershed communities, and funding loan programs for local business growth. EPA responded to these commitments and the anticipated efforts to be made to implement them upon the signing of the MOA by granting another 5-year FAD for waters of the City's West of Hudson watershed. This determination was subject to successful continuation of the City's efforts to meet the

conditions that were set forth by EPA in its FAD and to carry out the programs under the MOA.

NYCDEP has continued to progress with the measures required under the FAD and to work with all parties to implement the MOA. As a result, EPA issued a 10-year extension of the FAD in November 2002, which includes a 5-year assessment of continued progress to be conducted by EPA in July 2006. NYCDEP has reviewed the DEIS for the proposed Belleayre Resort in accordance with the spirit of the MOA and to preserve the progress made under the specific mutual undertakings contained in the agreement.

Thus, for the last decade, NYCDEP and its partner agencies and organizations under the MOA have developed and deployed a comprehensive watershed monitoring and protection program designed to maintain and enhance the high quality of the New York City drinking water supply system. This program has been recognized internationally as a model for watershed protection and has allowed the City to secure for the West of Hudson system a series of waivers from the filtration requirements of the SWTR. However, if NYCDEP fails at any time to meet the avoidance criteria, EPA may require the City to provide filtration within 18 months of such failure. Not only would this be a multi-billion dollar undertaking; it would also signify the permanent loss of an invaluable environmental resource.

NYCDEP Primary Concerns

Protection of the City of New York water supply is of paramount importance to NYCDEP. The proposed Belleayre Resort at Catskill Park is the largest development project proposed in the West of Hudson watershed in decades and, as designed, has the potential to have significant impacts on the quality of the City's water supply, which NYCDEP has found to be very difficult, if not impossible, to mitigate. Nearly half of the entire West-of-Hudson watershed is within the large contiguous forest of Catskill Park, which is vital to the protection of the excellent drinking water sources upon which over 9 million residents of New York State depend. The Belleayre Resort as currently proposed would be constructed on the upper levels of a forested mountain, not within villages or hamlets located close to water courses in the long-ago deforested valleys. The DEIS refers to the total size of the development as 573 acres. Of this, approximately 529 acres of privately owned, mostly wooded land in the Catskill Park adjacent to state-owned Forest Preserve land, which currently serve to preserve water quality by naturally filtering sediments and other pollutants, would be converted into a source of pesticides, fertilizers, phosphorus and other nutrients, suspended solids, and other water pollutants. More than 85 acres of impervious surfaces would be constructed. The full extent of the proposed development, based on drawings of the planned facilities layout provided by the Applicant, superimposed upon an aerial photographic map of the region is provided in Appendix C.7. The map key indicates how the acreage to be cleared would be converted from wooded forest into other land uses. NYCDEP has computed from average densities of trees identified in counts conducted on its watershed lands that about 86,000 trees of greater than 6" trunk diameter and 189,000 saplings would be removed.

If this forested land is denuded, the existing organic layer of the forest floor, which retains runoff and acts as a filter, removing pollutants from stormwater, would be lost. To exacerbate this loss, the proposed Belleayre Resort would construct two 18-hole golf courses, with less than 8 inches of topsoil and an underground drainage system that would accelerate transportation of both precipitation and irrigation water containing fertilizers, pesticides, herbicides, phosphorus, and other potential contaminants, primarily into the headwaters and tributaries of Birch Creek, which feeds the Esopus Creek and, ultimately, the Ashokan Reservoir, and Emory Brook, which feeds the Pepacton Reservoir. The Ashokan Reservoir is listed by NYSDEC as impaired pursuant to section 303(d) of the Clean Water Act due to the levels of Total Suspended Solids present; the proposed stormwater controls at the Belleayre Resort would further worsen the state of the reservoir for this pollutant. Both reservoirs also have Total Maximum Daily Loading limits for total phosphorus also assigned to them under section 303(d), which have been proposed to be modified to account for some, *but not all*, of the phosphorous to be discharged from the proposed resort under draft State Pollution Discharge Elimination System permits released by NYSDEC under a Notice of Complete Application simultaneous with the Notice of Acceptance of Draft Environmental Impact Statement for this DEIS.

The watercourses impacted by the proposed Belleayre Resort are fed from wetland areas and groundwater that would also be impacted by these discharges. Many wetland areas on the site also would be destroyed, thus preventing their continued contribution to the water quality of the reservoirs. The streams and tributaries throughout the vicinity must meet NYSDEC surface water quality standards designed to support the propagation and spawning of trout, and a varied population of aquatic species on which the trout depend.. This healthy ecosystem forms the basis for Esopus Creek being considered one of the most renowned game fisheries in the world. The unmitigated pollutant discharges to these streams could impair or destroy the trout spawning habitat that supports the fisheries. The Esopus Creek is also enjoyed for recreational and competitive canoe and kayak activities, which could be impaired by degradation of water quality and ecological conditions.

In addition to the potential direct impacts of the construction and operation of the proposed Belleayre Resort along a mountain ridge, the construction of a $240 million destination resort would have the potential to significantly induce impacts in the surrounding area. Of particular concern is the fact that while the DEIS concludes that the project would not induce any new residential growth, RKG concluded from econometric modeling they performed for NYCDEP that as many as 158 new housing units would be required in the primary economic impact area[2] (as defined by RKG in the review of the DEIS) during the first 10 years after the start of construction to support economic in-migration induced by the proposed Belleayre Resort. (see Appendix B.2) Demand for these additional units would likely follow the pattern of employment at the resort and the growth in visitation by its customers. This estimate dramatically contrasts to that in the DEIS, which dismisses the need for new residential housing.

[2] Includes the towns of Andes, Middletown, Shandaken and Olive

These economic in-migrants and other secondary economic effects of the proposed Belleayre Resort would also create demand for additional commercial development, which was predicted in the DEIS. However, while the DEIS states that the commercial development can be accommodated by vacant property in the existing, traditional business centers, NYCDEP believes that it would instead occur along the Route 28 corridor, separate from and different in character from existing businesses located in villages and hamlets. Further, this secondary commercial development would increase traffic, impervious surface areas, stormwater flows, wastewater flows, and water usage, each of which have the potential to affect the region's water quality.

III. Overview of Concerns Regarding the Failure of the DEIS to Adequately Identify and Describe Effective Mitigation for Potential Direct and Induced Impacts of the Construction and Operation of the Proposed Belleayre Resort

NYCDEP's numerous concerns regarding the errors, inconsistencies, data gaps, and flawed logic of the DEIS and the potential impacts of the proposed Belleayre Resort fall into two broad categories – those related to water quality and other direct environmental impacts of the construction and operation of the resort, and those related to growth induced by the realization of the resort and its potential to impact water quality. This section is an overview of NYCDEP's key concerns, which are organized as follows:

- stormwater quantity,
- stormwater quality,
- construction erosion and sedimentation control,
- wastewater,
- natural resources and wetlands,
- groundwater resources,
- traffic,
- socioeconomics,
- case studies,
- induced growth and long-term land use change,
- alternatives, and
- local impacts.

NYCDEP's key concerns regarding potential impacts related to water quality and other direct environmental impacts of the construction and operation of the resort are highlighted below.

a. Stormwater Quantity

Post-development stormwater flows are higher than pre-development flows at several design points, which is prohibited under the Watershed Rules and Regulations. (see Appendix C.1, page 3) The DEIS does not provide any details of the ability of existing drainage features at the design points on the drawings to

receive the increased flows that would be discharged without experiencing severe erosion. The DEIS ignores hydrologic and pollutant impacts from stormwater to be discharged from drainage structures proposed at Friendship Road and Giggle Hollow Road and does not evaluate the potential off-site impacts of stormwater, particularly to Birch Creek, Emory Brook, and the aquifer beneath Wildacres, where the majority of the stormwater collected on the site is to be discharged. The DEIS does not adequately address the hydrologic setting for the entire project. Multiple gauging station data was used for various DEIS analyses, which led to an overall design composed of elements that are not based on precipitation data that is representative of the project site. This inconsistency resulted in modeling errors that were used to evaluate the stormwater quantity, the sizing of stormwater Best Management Practices and erosion control measures. These modeling errors will have very significant damaging impacts to the regional streams and reservoirs with increased pollutant loadings, particularly phosphorous and sediment, in the Ashokan and Pepacton Reservoirs.A

In addition, the stormwater plan relies on sequential routing of stormwater through a series of micro-detention ponds to control the quantity and quality of runoff. While the performance of the micro-detention ponds can not be sufficiently analyzed with the engineering models used in the DEIS, NYCDEP's analysis concludes that they discharge more volume and accomplish pollutant removal less effectively than stated in the DEIS.

Finally, the DEIS has not accounted for springs and intermittent channels that exist along the slopes off-site where stormwater will be discharged. The existing springs and intermittent streams will add to the volume of stormwater carried through the channels transmitting stormwater discharges from the project site into receiving streams. These springs and intermittent channels known to NYCDEP field staff should have been identified by the Applicant through thorough field inspections and should have been included in design consideration of the fate of collected stormwater after it leaves the project site. A map and brief written documentation of the locations of the springs and intermittent channels discussed here has been prepared by NYCDEP and is included as Appendix C.7.

b. Stormwater Quality

The DEIS misrepresents pollutant loading in stormwater runoff from the site. Analysis of levels of pesticides, nutrients, and sediment that will be discharged to off-site receiving waters is misleading. These pollutants will leave the site in quantities that will cause environmental harm.

The risk assessment for pesticide use under the turf management plan used two primary modeling tools, LEACHM to analyze vertical transport of pesticides through the soil and GLEAMS to analyze the runoff component of pesticide transport. The assessment used depth profiles of 5 existing soil types mapped on the development site to define the influence of soil characteristics on pesticide

fate. This is an invalid approach because (1) the literature-derived characterizations of both the types and depths of existing soils do not correspond to actual conditions at the site and (2) the proposed final conditions do not correspond to those utilized in the analysis. (see Appendix C.1, pages 7 and 8) The construction plan for the golf courses indicates that much of the area would be cut and filled, removing the existing soils. Crushed rock and drainage systems would be installed under fairways, and a 6-inch layer of topsoil and turf would then be installed. The modeled soil profiles do not reflect the profiles under the conditions when the pesticides would be applied and likely underestimate the rate at which pesticides will be transported through the thin topsoil layer to the underdrains, stormwater detention ponds, and the bedrock aquifer. (see Appendix C.1) This poses a substantial risk to the watershed that has not been accurately or adequately evaluated in the DEIS and could have a significant adverse impact on water quality in the region.

Other key stormwater quality issues include insufficient detention pond size to adequately address pollutant removal in accordance with the Watershed Rules and Regulations, due to under-prediction of runoff amounts by the modeling as performed in the DEIS, understating of potential point source discharges which could affect Birch Creek, and failure to perform manual calculations to compensate for the inability of the modeling to fully quantify runoff during winter months. (see Appendix C.1 8)

The DEIS explicitly states that both pollutants and solids will be discharged from the site because stormwater detention ponds have been configured with the goal to eliminate temperature impacts in receiving streams, but not also to achieve phosphorus and other pollutant removal level necessary to prevent conditions that are both deleterious to the aquatic biota in the streams and which compromise the wuality of the water supplied from the rewervoirs. The resulting system is predicted to increase phosphorus loadings from the site under post-development conditions. (see Appendix C.1, page 8) The effect of the addition of these pollutants and sediments on all organisms in the ecology of the receiving streams is not considered in the DEIS. The effect of the addition of these pollutants to the Ashokan Reservoir, which can become severely eutrophic from phosphorus additions and which has already been designated by NYSDEC as impaired for total suspended solids, has also not been evaluated in the DEIS, nor have mitigation measures been suggested.

c. Construction Erosion and Sedimentation Control

Erosion during the construction phase could have disastrous impacts on receiving waters. Due to the steep slopes, it is unlikely that the level spreaders proposed to establish sheet flow discharge from the temporary construction sediment ponds and the operational phase detention ponds will prevent reconcentration of stormwater flows and erosion of existing drainage channels. Flow control and velocity dissipation structures, swale dimensions and lining, and discharge

structures for Giggle Hollow Road are not detailed in the DEIS, which should provide complete and detailed analysis and design information for both temporary and permanent erosion and sedimentation controls. The DEIS provides details of gravel/sand check dams for temporary erosion control, which are insufficient and sub-standard practices that will not protect water quality. The Applicant is required to obtain a State Pollutant Discharge Elimination System (SPDES) permit to construct the project because the total disturbed area is greater than 1 acre. The stormwater management criteria are established in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (Permit NO. GP-02-01). The maximum area of disturbance typically permitted under these regulations is 5 acres. Due to the size and complexity of the proposed project, the Applicant has requested orally at a meeting and is acting that it is accepted by NYSDEC to submit a plan with up to 25 acres of unstabilized soil at any given time within each reservoir basin. This deviation was dependent on slope, soil, proximity to watercourses and other site constraints. It is NYCDEP's position that many of the temporary erosion controls are undersized and in some cases inappropriate. It would be catastrophic to the New York City water supply if several of these areas that have been previously stabilized fail, resulting in significantly more than 25 areas of unstablized soil and a potential for a significant release of sediment and nutrient load to the streams and reservoirs. (see Appendix C.2) The DEIS also ignores permitting requirements for crossing, piping and/or diverting Class C and D streams on the site. (see Appendix C.2) In addition, the DEIS does not adequately address how stockpiles of excavated material would be managed and stabilized during the construction process. The area of the stockpiles appears to have not been considered as part of the disturbed area during each construction stage, which must be included in the calculations.

d. Wastewater Treatment

The DEIS does not adequately address the wastewater treatment issues during the eight-year construction period for the project. (see Appendix C.3) Ten State Standards requires a proposed plan for management of wastewater during construction activities. The proposed 2,114 person-years for an 8 year construction activity is a significant number of construction workers on site without adequate wastewater management. The DEIS also does not address when the WWTPs will be put on line, or the operation of the WWTP under low flow conditions until full build out. (see Appendix C.3)

e. Natural Resources and Wetlands

The project has not been designed to avoid and minimize wetland impacts. The Applicant must demonstrate that wetland fill and other impacts have been minimized and/or avoided. In addition, NYCDEP believes there are wetlands on-site that were incorrectly determined by the US Army Corps of Engineers

(ACOE) to be non-jurisdictional. For their vital role in the removal of pollutants from water as it enters watercourses that lead to NYCDEP reservoirs and recharges groundwater systems in the region, these areas should be protected and preserved, regardless of jurisdictional status, to the greatest degree possible.

The DEIS does not adequately document the sources of information for the existing vegetation type mapping. Surveys for birds, amphibians and reptiles, threatened and endangered species, and other wildlife resources were not adequately documented and appear from the description in the DEIS not to have been conducted in a manner that could have resulted in sightings of the target animals, thus almost certainly under-counting both the species and individuals present. (see Appendix A.3)

f. Groundwater Resources

The DEIS does not adequately evaluate the hydrogeology of the area, which is critical to preparing an accurate water balance for the site, taking into account recharge from the surface into regional subsurface features and ensuring that modifications to the existing recharge patterns made by the development of the proposed Belleayre Resort do not compromise the protection of existing local drinking water supplies. In short, it is not clear how the Applicant plans to protect groundwater resources since the DEIS has not presented the results of detailed literature and site investigations conducted to gain an understanding of the hydrogeology of the area. (see Appendix C.4, page 3) In addition, the stormwater management plan should be evaluated more thoroughly to determine potential impacts to ground water resources, as mentioned above. Actions that would impact groundwater include the filling of wetlands, regrading of the site, and placement of underdrain systems on the golf course fairways. Potential impacts from these actions, including addition of pesticides, herbicides, phosphorous and other nutrients and disruption of recharge areas, are not identified. Other potential impacts would include under sized irrigation ponds, based on the water budget, that do not provide sufficient irrigation supply for the turf and fairways, resulting in using more groundwater supply and therefore, having a significant impact on the Village of Fleischmanns and hamlet of Pine Hill water supplies.

g. Traffic

The number of truck trips for shipments of supplies and equipment generated during operation of the project should be disclosed as they could be significant and should be included in the traffic impacts analysis in the DEIS. For example, NYCDEP estimates that more than 5,000 gallons of sludge will be trucked out of the proposed Belleayre Resort on a daily basis. Further, the DEIS estimates that more than 25,000 potential buyers of the timeshare units would need to make the trip to the resort, though it does not specifically identify any of the impacts

associated with these visitors, and it is unclear whether these potential buyers are included in the traffic counts.

The DEIS neither quantifies nor evaluates traffic impacts associated with the commuting of construction workers, delivery of construction equipment and material, and the export and import of cut and fill material. The potential impact on traffic during the construction period (at least 8 years) from worker vehicles, lumber, logging, and concrete trucks, as well as dozens of pieces of large equipment such as cranes and earthmovers, is not included in the DEIS. (see Appendix A.7) This is a significant omission, as the DEIS indicates that construction employment would average 264 person-years annually.

Vehicular traffic has the potential to adversely impact water quality in the region. Of great concern is that the amount of impervious surface would likely increase significantly through widening of existing roadways off-site. Water that washes off paved roadways carries a mix of chemicals, animal waste, and other contaminants. Vehicles leave behind zinc and copper dust from brake pads, tire dust, exhaust particles, and oil and grease. Thus, increases in traffic will increase the amounts of these contaminants present in local streams, all of which supply NYCDEP reservoirs.

h. Socioeconomics

In order to properly evaluate a project as complex as the proposed Belleayre Resort, it is important to understand the areas that would likely be impacted by the realization of the project, as well as the rationale for selecting those areas for evaluation. The DEIS defined study areas based on zip code areas, which do not conform to municipal boundaries which are used in reporting and analyzing census and related information and are the conventional groupings used in conducting evaluations of this type. Further, more recently available data than that relied upon in the DEIS, such as the journey-to-work data from the 2000 Census, makes re-evaluating the study areas for operational employment, construction employment, and visitor spending essential. Appendix A.1 of this report provides a detailed analysis and description of study areas that are proposed for use in the DEIS.

Overall, there are major flaws with the internal logic of the document. For example, the DEIS indicates that the project would have a major positive economic impact on a relatively depressed region of the Catskills, while simultaneously having no adverse impact on traffic. This is contradictory, since the resort would necessarily increase local traffic to bring its patrons (as well as employees and delivery trucks) to the site (see Appendix A.7). The DEIS also indicates that most of the residential and commercial development would occur on-site and assumes that no increases in the demand of housing for workers would be generated by the project. This is inconsistent with the reality of the local labor market, which does not have sufficient workers in the labor categories required to

construct or operate the proposed resort (see Appendix B.1). The only logical conclusion is that those workers would have to either commute into the region (creating traffic impacts) or relocate into the region (creating housing impacts).

Within the DEIS there are also many inconsistencies in the data, errors and mistakes are apparent, and relevant trend data is lacking in some cases. Housing supply and the residential real estate market are discussed neither quantitatively nor in sufficient detail. According to the DEIS, land available for development is limited. If this were true (note that NYCDEP has come to the opposite conclusion), and property values were to rise due to demand induced by the resort, area residents/ workers could be priced out of the market. This pattern has occurred at other comparable successful destination resorts. (see section VIII. of this Report)

The experience of commercial investment in the northeast region of the U.S. is that the preferred location is on major access highways - for visibility, availability of parking, and ease of access. New investors could enter the market and would most likely develop commercial projects along the NYS Route 28 corridor, which could result in displacement of existing businesses, which could have serious socioeconomic impacts and adversely affect community character. This possibility is not evaluated in the DEIS. The DEIS dismisses the possibility of new construction, though predicts additional commercial business to result directly from the proposed Belleayre Resort. However, NYCDEP believes that there is a high probability of construction of new commercial facilities along the NYS Route 28 corridor, with much of the pressure coming in areas in close proximity to the Belleayre Ski Center, with a particular focus on those properties with access to public sewer systems.

The DEIS addresses this issue by positing that existing merchants within hamlets would simply “expand” either their facilities or their operating hours to meet new retail demand. This assumes that (a) merchants would be able to finance expansion/ modernization, (b) it would be economically feasible to do so in existing retail locations with limited highway visibility, and (c) existing merchants in the region would want to operate on an expanded level. Additionally, there is no mention of how the higher average wages to be paid at the resort may cannibalize employees from the existing work force in the region, thus potentially forcing out existing businesses that can’t compete with the higher-than-market wages being proposed in the DEIS to be paid to resort employees. (see Appendix A.2) In short, there is no assessment of how induced growth would likely cause the loss of key businesses and consequential impacts on community character.

i. Case Studies

The case studies presented in the DEIS primarily focus on ski areas, while the proposed Belleayre Resort is focused on golf course development and

hospitality/timeshare development creating, with the existing Belleayre Ski Center, a destination resort. Therefore, the case studies presented in the DEIS (though specified in the Final Scoping Document) are largely irrelevant and have little value in accurately predicting likely socioeconomic and induced growth. RKG performed a thorough survey and identified two destination resort developments that are more representative for evaluating the strength of conclusions reached in the DEIS about secondary impacts on surrounding communities, labor and housing markets, and commercial development that will follow the resort development. These case studies were Mountain Creek in Vernon, New Jersey, and Snowshoe Mountain in Snowshoe, West Virginia. (see Appendices A.3, A.4 and A.5)

j. Induced Growth and Long-Term Land Use Change

There are a variety of concerns related to the potential for induced growth associated with the proposed Belleayre Resort. These include demand for new residential housing, development of additional commercial space along NYS Route 28, competing hotel and residential developments, escalation of housing and land prices, and conversion of some residential structures to non-residential uses.

In contrast to the DEIS, which ignores the potential for induced residential growth, NYCDEP's analysis indicates that in the next ten years the proposed Belleayre Resort would induce demand for as many as 158 housing units in the primary market area and an additional 160 units in the outlying communities of the secondary market area[3] (as defined by NYCDEP's consultants in their review of the DEIS). (see Appendix B.2) The 158 potential new units is greater than the 137 net new units that were added in the host communities during the 1990s. Therefore, compared to a no-action scenario, the development of the proposed Belleayre Resort could potentially more than double the rate of housing growth experienced over the last census decade. While the DEIS states that no new residential development and minimal commercial development will occur, there is evidence in the marketplace that speculative competing developments are already being pursued. (see Appendix B.4)

The REMI model that NYCDEP used in its evaluation of the DEIS predicts that over the course of the next twenty years, regional land use changes associated with development of the proposed Belleayre Resort are expected to be significant. The predicted 323 housing units that would be built in the primary economic impact area over this period as a secondary economic impact of the proposed Belleayre Resort, could result in the conversion of between 975 and 1,625 acres of land for residential uses (assuming an average of 3 to 5 acres per new housing unit). See Appendix B.4, page 3 for additional information on the projected increase in housing units associated with the proposed Belleayre Resort.

[3] The towns of Andes, Middletown, Shandaken and Olive

A number of natural resource impacts are likely to occur as a result of this increased need for residential development (not accounted for in the DEIS), as well as anticipated commercial development, which would have the potential to adversely impact water quality. Potential alterations to natural resources include land clearing for residential and commercial units, addition of impervious surface through paving of roads, driveways and parking lots, and conversion of forest to landscaped areas, which would increase sedimentation, pesticide use, phosphorus and other contaminant loads within the watershed.

k. Alternative Analysis

Appendix 27 of the DEIS concludes that none of the four development alternatives examined in appendix 27 of the DEIS are economically viable and thus cannot be considered a "reasonable" alternative to the Proposed Action. This is not in compliance with SEQRA's mandate that an EIS evaluate a range of reasonable alternatives. At least some reasonable alternatives must be considered in the DEIS. Because alternatives were dismissed, the DEIS does not include an environmental analysis of any other possible development scenarios, and thus there is no means for decision-makers to determine if there is an alternative with less adverse environmental impacts and/or impacts that are more realistically mitigatable.

The DEIS states, without providing justification or citing a source, that alternative developments are not economically feasible because "hotel and resort IRRs [yields] *generally* enter into feasible territory once they exceed approximately 14%," (DEIS Appendix 27, p. 1-9 (emphasis added)) and, according to the calculations made in the DEIS, only the full development exceeds what the Applicant considers to be acceptable industry standard. Notably, however, this conclusion ignores the IRRs associated independently with the detached lodging units, which range from 32.5% to as high as 41.6%, according to Table 6-18 in Appendix 27 of the DEIS.

A critical factor in determining the IRR of the proposed Belleayre Resort and the development alternatives considered is operating costs. Wages are a major component of such costs and thus wages to be paid to workers at the proposed Belleayre Resort directly affect the financial return to the investors in the project. Any reduction in wages would have a positive impact on profitability, and thus on the IRR for a given development alternative. The wages projected in the DEIS to be paid to employees at the resort are unrealistically high when compared to wages paid for similar employment positions in the region.

Furthermore, the Applicant is proposing to develop approximately 573 acres of the assemblage that it owns. Therefore, alternative siting on the Applicant's property of different development scenarios must be considered as well. There are other alternatives required by the Final Scoping Document to be evaluated that

are absent in the DEIS. Of particular importance to NYCDEP is that alternative stormwater management practices are assessed, as required, to mitigate erosion on the project site and adjoining lands after stormwater is discharged from the Applicant's project site.

l. Local Impacts

The fiscal impact analysis section of the DEIS looks at potential property tax revenue increases but does not discuss, or attempt to quantify, any increase in costs for municipal services, including schools, police, fire, etc. This is a critical flaw, as fiscal impact evaluations must quantify both the benefits and costs of developments on host communities. The potential adverse impacts and reasonable mitigation measures are not evaluated. The report provides very little information on either Middletown or Shandaken, both of which would bear the major impact of this project, particularly from a fiscal impact perspective. Since the majority of the proposed resort improvements would be located in Shandaken, Shandaken is likely to see the majority of new tax revenue associated with the development. Development in Middletown would limited to the 21 new homes at Highmount Estates and six of the eighteen holes of the Wildacres golf course. However, since housing is generally less expensive in Middletown, resort workers (and their school-aged children) would likely elect to live in Middletown. This could create a significant negative fiscal situation for Middletown, which would experience increased demand for education and municipal services while receiving tax revenues which would not cover those expenditures.

IV. Anticipated Direct Impacts Resulting from the Construction and Operation of the Proposed Belleayre Resort

The primary concern of NYCDEP in its review of the DEIS is watershed protection and avoidance of adverse water quality impacts. NYCDEP is concerned and dismayed that the DEIS has failed to utilize the best available baseline data for executing the water quality-sensitive designs and analyses as well as for identifying socioeconomic impacts, which drive induced growth. The Applicant used different values for the same baseline conditions in certain parts of the design, resulting in a design that may not be sufficiently protective in many aspects. The Applicant also neglected to consider and propose designs that reflect all conditions on-site and between the project boundaries and receiving water courses, resulting in designs that fail to adequately control significant impacts to the site of the project, off-site property, and the receiving water courses and bodies. Throughout all sections of the DEIS numerous impacts are either not identified or dismissed, and appropriate mitigation measures are rarely considered.

a. Stormwater Quantity Analysis

1. The DEIS selects precipitation data from three meteorological stations, therefore using different data sets for various analyses.

NYCDEP is not convinced that the Applicant performed a rigorous analysis of the available meterological data sets to determine which is the most representative of the site. No evidence of such analysis appears in the DEIS. Multiple gauging stations were used for various DEIS analyses, which lead to an overall design composed of elements that do not anticipate equivalent volumes of water. (see Appendix C.4) NYCDEP believes that the Slide Mountain station is not representative of either the Big Indian Plateau or the Wildacres/Highmount portions of the proposed Belleayre Resort. Meteorological records exist for several other sites in the region: Arkville at the base of Belleayre Mountain, and a station operated by NYSDEC *on Belleayre Mountain*. The DEIS describes that the form of the data available from some of the other stations is not in the format needed as input to the mathematical models used in the design process, or is not as long a data record as that from Slide Mountain. However, data sets from neighboring stations that are not in the form required by the various models used should be correlated with conditions at the actual project site and used with a correction factor applied to the values.

This is especially evident when reviewing the interaction between the precipitation data used in preparing the water balance for the site and the design of all the elements that derive from the water balance. As discussed in Appendices C.1 and A.3 of this comment document, multiple gauging stations were used for various DEIS analyses, which led to an overall design composed of elements that do not anticipate equivalent volumes of water. In computing the total amount of water available on which to prepare the water budget, the meteorological data from Slide Mountain (annual precipitation 63.61 inches) was selected. This station, on the highest peak in the Catskills, records the highest amounts of precipitation of any of the regional meteorological stations available for use by the Applicant.

However, the applicant used the Tannersville station data set (annual precipitation 32 inches) for the HydroCAD model that calculates the volume of runoff. The results from the HydroCAD model were further used in the WinSLAMM model for computing pollutant loadings, the sizing of the fairway underdrain systems, the sizing of the micro-detention ponds and other erosion control Best Management Practices (BMPs). If the precipitation data used in the WinSLAMM model is too low, the temporary erosion controls are not sized correctly and the detention ponds will be undersized. The precipitation value is also used to determine the number, capacity, and location of the level spreaders, that are proposed in the DEIS, as the method of disposing of stormwater from the temporary detention and sedimentation ponds during the construction period, as well as for the permanent disposal of water from the micro-detention pond systems in the final site design. A design using a smaller precipitation or runoff value used in each construction stage would result in undersized temporary

erosion controls and detention ponds and therefore, have very significant damaging impacts to the regional streams and reservoirs with increased pollutant loadings, particularly phosphorous and sediment, in the Ashokan and Pepacton Reservoirs. The Tannersville station data is 20 miles away from the Belleayre Resort and the data is significantly lower value than the closer available long-term data.

And finally, the Arkville meteorological station (annual precipitation 40.97 inches) precipitation data was used for GLEAMS model, which predict the percolation through the soil to the fairway underdrains and down into the bedrock and regional groundwater.

A smaller precipitation input value to the GLEAMS and LEACHM models reduces the proposed amount of water, containing chemicals applied under the proposed Integrated Pest Management Plan, which is predicted to enter the regional groundwater system. Conversely, a higher value entered into the GLEAMS will increase the projected yield of regional groundwater resources to safely supply the considerable additional demand of the proposed Belleayre Resort in addition to the local communities that rely on groundwater for their supplies. If this value is incorrect, during times of genuine drought, the ongoing demands of the resort and local communities will reduce the groundwater available for charging the streams in the vicinity of the project.

The choice of precipitation baseline values also drives the sizing of the irrigation ponds, which are to be used to provide needed irrigation of the golf courses when natural rainfall is insufficient. If an unrealistic high precipitation value is entered in the model, the irrigation ponds will not be maintained through natural precipitation, and will require a supplemental supply from wastewater effluent, or from the Village of Fleischmanns and on site wells. Again, if there is a genuine drought, the ongoing demands of the resort will reduce the groundwater supply available to the local communities and for charging the streams in the vicinity of the project.

Finally, the water balance contained in the DEIS reflects infiltration that would have occurred under an earlier subsurface discharge wastewater treatment scheme that has been abandoned and is not now in the design of the proposed Belleayre Resort. Nevertheless, this previous design remains reflected in the water balance presented in Appendix 19A of the DEIS.

2. Modeling of stormwater loadings from the proposed stormwater controls underestimate pollutant discharges.

Input data files for the SLAMM and HydroCAD modeling performed by the Applicant were evaluated and numerous discrepancies, inconsistencies and omissions were revealed that demand a more rigorous modeling analysis. Issues identified include: individual subcatchments included in modeling for more than

one area of the site, modeling of subcatchments composed of different areas when comparing pre- and post-construction conditions, omission of certain subcatchments (including parking areas) from the modeling, inconsistency in characterizing whether or not there is infiltration from individual control ponds, mischaracterization of the drainage system components, inability of the modeling to accurately represent the sequential stormwater basins employed in the proposed designs. The identified deficiencies create a significant under-calculation of the post-development discharge of total phosphorus and, thus, other pollutants from the site, as well as the magnitude of impacts on receiving waters. (see Appendix C.1)

The Watershed Rules and Regulations, through the incorporation of General Stormwater Permit GP-93-06, require that proposed stormwater pollution prevention plans not generate more phosphorus discharge in the post-development state than the pre-development condition. The modeling conducted by the Applicant does not comply with this requirement.

The stormwater management design disregards the impacts of pollutant loadings in stormwater runoff and focuses instead on mitigating temperature impacts to local streams. This ignores the purpose of a properly designed and implemented SPPP, as required under the Watershed Rules and Regulations. Moreover, this ignores the damage that improperly managed stormwater runoff can do to watercourses and wetlands, from introducing nutrients that contribute to reservoir eutrophication, pesticies and fertilizers which contribute to toxic conditions in streams that threaten the ecology and biological health and diversity, soils and sediments eroded from surfaces over which the runoff flows in channels formed by the excess of volume and velocity of flow, and oil and grease, which remain suspended for lengthy periods and reaches reservoir intakes. A proper evaluation and control strategy for stormwater would take these potential loadings and effects into account, quantifying pre- and post-construction conditions and designing control measures to prevent these and other identifiable impacts. The DEIS does not provide any potential mitigation measures for the impacts that could occur from the increase in pollutant loadings that the proposed design would create.

3. As the DEIS does not adequately describe the hydrogeologic setting for the project, NYCDEP can not reasonably evaluate the proposed stormwater management infrastructure.

Proper planning for development includes the complete identification of surface and groundwater resources. This is critical when designing stormwater drainage infrastructure to fully would mitigate post-development changes in hydrology and negate pollutant loads. No hydrogeological investigation was conducted by the Applicant, which should be required by NYSDEC. The hydrogeologic study in the DEIS must include a complete analysis of the surface and sub-surface off-site resources that would receive stormwater run-off and groundwater discharge from the development. A portion of the hydrogeological investigation would evaluate the infiltrated water and its impact on storm flow. This subsurface storm flow

component is important since it has the ability to rapidly mobilize and transport nutrients and chemicals within the soil to adjacent streams. The effects from blasting could increase the transmissivity of the bedrock allowing subsurface storm flow to more rapidly mobilize and transport nutrients and chemical to bedrock. ((see Appendix C.1; Appendix A.3).

4. **The DEIS selectively evaluates portions of the development project rather than comprehensively evaluating the entire area to be developed.**

   The study areas described for stormwater management considerations do not encompass all areas slated for development, so not all stormwater, groundwater and erosion impacts are adequately quantified and may be underestimated. The defined study area for Wildacres Resort does not include the entire development. Specifically, the northwest corner of the site is excluded. The Wildacres pre-development area modeled in HydroCAD is larger than the post-development area. All disturbed areas should be included in the study area. The defined study area for Highmount Estates does not include the entire development. Specifically, the lots west of County Route 49A (17, 18, 19, and 20) and the southern portions of Lots 11 and 12 are not included within the study area. For additional information, see Appendix C.1. These omissions may significantly affect the sizing of the detention ponds associated with these areas and the ability of the stormwater control program to mitigate increases in flow and pollutant loadings.

5. **The DEIS does not adequately evaluate off-site issues related to hydrologic pathways to sensitive water resources, resulting in an inaccurate evaluation of pollutant loading, erosion and sedimentation.**

   A number of watercourses (as defined by NYCDEP under the Watershed Rules and Regulations) at both Big Indian and Wildacres have not been delineated in the DEIS. These connect wetlands described in the DEIS as “isolated” to Birch Creek and Emory Brook. Applicable NYCDEP regulations prohibit construction of impervious surfaces within 100 ft of these features. The DEIS fails to demonstrate that all watercourses on the site have been delineated and that impervious surfaces avoid the specified separation distances from these watercourses. Moreover, many of the wetlands described in the DEIS as “isolated” are actually hydrologically connected to waters of the United States through the watercourses that have not been identified in the DEIS. (see Appendix C.1 and Appendix A.4)

   The incomplete analysis results in an incomplete characterization of the hydrologic pathways to sensitive water resources such as Birch Creek and the aquifer located beneath the northern portion of the Wildacres site, which in part serves the Fleischmanns water supply spring house. In addition, watercourses and hillside seeps that currently exist and which could result adjacent to the developed areas were not completely evaluated. This missing data has biased the outcome of the hydrologic and pollutant loading analysis so that the results are too low and has direct ramifications on the completeness of the erosion and sediment control plan because it ignores large quantities of water that would be flowing down the steep slopes that surround the proposed Belleayre Resort site. Areas adjacent to

the development property, downstream of project stormwater control points, should have been included in the stormwater analysis. That is, those reaches of tributaries between the railroad bed and their confluence downhill with Birch Creek and Emory Brook should be an integral component of the analysis. These stream channels cross very steep terrain. Based on site visits and review of the drainage plan by NYCDEP, these tributaries will receive significant increases in flow compared to pre-development conditions. An evaluation of the capacity and stability of each of these offsite stream channels under this increased volume of flow is necessary to demonstrate that they would not be impacted by the Applicant's stormwater management plan. (see Appendix A.3)

Based on information presented in the DEIS, many of the existing intermittent and perennial channels that define the pre-development hydrology on the project site have neither been adequately mapped nor considered in the modeling exercise used to predict stormwater runoff conditions. Without an accurate characterization of pre-development conditions, the adequacy of the proposed stormwater management program cannot be thoroughly assessed.

Individual drainage watersheds within the regional study area and project site should be delineated, in the typical engineering technique used to compute drainage from any site. The DEIS should then overlay developed areas upon these same drainage areas to calculate impacts resulting from the changes contemplated to be made to the site. The small watersheds at the highest portions of the site would be most susceptible to the land use change, and potential impacts should be addressed beginning at this level, then work downstream. (see Appendix A.3).

6. The DEIS does not realistically evaluate how stormwater routing through sequential ponds could affect overland discharge rates.

The stormwater routing plan for Big Indian/Belleayre Highlands relies on sequential routing of stormwater through several series of ponds for management of the quantity and quality of runoff. As a result, several ponds at the northern, downhill property line above Birch Creek receive much of the stormwater flow from the entire development and subsequently discharge by overland flow on steep slopes. For example, Pond 100 along the railroad bed at the northeast corner of the property receives flow from 18 detention micro-ponds; nine via overland flow from Pond 25, and nine via Pond 27 and the railroad ditch. Along the length of the railroad ditch numerous springs and intermittent channels currently contribute flow from farther up the mountain. It is likely that flow in these streams would be augmented by the overland discharge of stormwater from the proposed detention micro-ponds uphill. There are several locations where past storm events have caused washouts and undercuts along the railroad. It is likely that increased flow from the stormwater management ponds would exacerbate these conditions. (see Appendix C.1)

The DEIS indicates these flows would be routed to by-pass the ditch. Details should be provided to indicate the structures that would be used to accomplish

this. The railroad ditch is approximately 4,400 ft long; details must be provided for the dimensions and lining of the ditch and velocity control structures that would be used to protect this conveyance from erosion.

7. **The DEIS does not provide sufficient documentation on flow paths and times of concentration.**

   Flow paths for the times of concentration are not shown on the drawings. These must be provided so that times of concentration can be verified. Flow paths should indicate where changes occur in the type of flow or flow surface (e.g., from sheet, to shallow concentrated, to concentrated channel flow). This mapping should be based on a detailed site investigation conducted on top of the plateau to verify areas of infiltration, and locations of sheet flow and concentrated flow. The mapping should include all springs and concentrated flow on the steep slopes between the top of the plateau and the railroad bed off the Applicant's property. These areas, which do not appear to have been so mapped, play a critical role in evaluating, understanding, and controlling the transport of stormwater down the mountain from the overland flow discharge structures. (see Appendix C.1)

8. The stormwater management plan proposed in the DEIS does not meet the requirements of the New York State Stormwater Management Design Manual.

At several design points, post-development flows are *higher* than pre-development flows for the 10-year and 100-year storms. (see Appendix C.1, page 3) This does not satisfy the stormwater management requirements set forth in NYSDEC's New York State Stormwater Management Design Manual (2001).

9. The DEIS provides inconsistent treatment of design points for pre- and post-development stormwater flows. This data deficiency is significant, as insufficient stormwater management evaluation could result in detrimental water quality impacts.

The design points used in the hydrologic analysis are not appropriately located or adequately described on the drawings and in the text, respectively, of the DEIS. Not all flow from the site could be accounted for by NYCDEP in the analysis with the points defined in the DEIS. For example, at Wildacres, watershed #2 does not flow to either design point 1 or 2 in the pre-developed condition. In the analysis for Big Indian, watershed subcatchments 4, 5 and at least part of 6 do not flow to either of control/design points 1 or 2. In addition, at Big Indian, control/design points 3 and 4 do not have their entire watershed delineated. Consequently, the pre- and post development watershed areas are not consistent. As a result, the post-development hydrologic analysis does not adequately address the topographic constraints presented by the site and does not accurately represent the post development flow as necessary to design and locate the stormwater management facilities. (see Appendix C.1, pages 3 – 5)

Subcatchment areas 200 and 300 at Wildacres Resort are not identical for pre-development and post-development conditions, as they should be, and are assigned much lower peak flows in the post-development condition compared to pre-development. These subcatchments are outside of the developed area and, thus, should not change from pre-development to post-development conditions. All of the subcatchments should also be shown in their entirety on the drawings to facilitate quantitative review by NYSDEC and NYCDEP. (see Appendix C.1, page 5)

Several piped reaches, including reaches 60 and 300, are shown to be major flow constrictions in the HydroCAD model. Pressurized flow would exist in these reaches, and should be modeled through these pipes, and potential flow over the associated roadways should be quantified. (see Appendix C.1, page 6)

In the design drawings, stormwater from portions of the Big Indian site around the proposed lodges and fairways 16, 17, and 18 do not appear to be captured and treated by any stormwater facilities. These must be included in the stormwater pollution prevention plan, as must any area of the site intended to be disturbed, regraded, and redeveloped. As these areas appear to drain down hill to the Friendship and Giggle Hollow roads, the stormwater plans must include quantification of the added hydraulic and pollutant loads to receiving streams

from these areas, as well as the pollutant loadings that would be contributed from erosion along the slopes and drainage channels where this discharge is routed, as well as means for mitigating these impacts.

10. Distribution of stormwater discharges from the complement of discharge structures described is inadequate. All stormwater discharge structures included in the designs must be presented in the DEIS.

The level spreaders proposed to distribute discharges from the detention micro-ponds are inadequate for ensuring the generation of a stable non-point discharge (i.e., overland sheet flow). The slopes downhill from one level spreader shown in the design are greater than 60 percent. No other level spreaders are shown in the design. Based on the description of their location, they are to be located on slopes ranging from approximately 30 percent to approximately 50 percent. Reconcentration of flows and erosion in the channels created by or conveying them is likely in these areas. (see Appendix C.1) The *"New York State Guidelines for Urban Erosion and Sediment Control"* (Blue Book) includes details and specifications on level spreaders which state, "the area below the level lip must be uniform with a slope of 10 percent or less and the runoff not re-concentrate after release … ." This departure from the standard is likely to result in rapid reconcentration of stormwater flows in existing intermittent drainage channels with the potential for significant erosion on these steep hillsides. The DEIS should describe the basis and justification for departing from the requirements of the Blue Book, and how the potentially significant impacts resulting from this departure will be mitigated.

11. The DEIS ignores several key issues and does not provide clear data or relevant calculations on existing drainage features.

The DEIS does not address hydrologic or pollutant impact from stormwater at the Friendship Road access to the Big Indian Plateau or Giggle Hollow Road connecting Big Indian to Belleayre Highlands. **(see Appendix C.1)**

The DEIS fails to fully evaluate how stormwater drains to Giggle Hollow from the proposed detention ponds and roads onto and across property that is owned by others. Reaches should be detailed on the drawings. The design should address how ground water intercepted by road cuts during construction would be managed. Base flow of Giggle Hollow and other watercourses must be considered in the hydrologic calculations.

No provision has been made to convey and control how the water flows from the site to the receiving streams at the bottom of the mountain. Existing drainage features at the design points are not shown on the drawings included in the DEIS. The drawings should provide detail on all culverts including location, size, length, material, and slope, as well as detail on open-channel location and characteristics including lining and cross-sectional dimensions. The DEIS must demonstrate that stormwater management controls downstream of the design points and offsite are adequate to handle any increased flow, or propose modifications to existing controls to mitigate the changes in flow.

The technical appendices of the DEIS should provide a list of channel linings and the associated Manning's *n* values (engineering coefficient characterizing the roughness of the channel lining that reflects its capacity to slow or impede flow) used in the calculations for each lining. This information is critical to determining whether the design of these conveyances is adequate to mitigate the estimated design flows. This is particularly so given the length of many of these drainage structures and the number of ponds that are serviced by each.

12. The DEIS should explain how stormwater management systems would be maintained in the potential event that the proposed Belleayre Resort fails.

Worst-case scenarios have not been included in the DEIS that address the impacts if the resort (and the golf courses in particular) is unsustainable as a result of economic or other circumstances. Of primary concern are whether and how the site would be reclaimed and how the stormwater ponds would be maintained. The nearly 70 permanent stormwater detention ponds, once installed, would require maintenance in perpetuity (i.e., sediment and debris removal) to prevent failure and resulting degradation of water quality in the receiving streams. (see Appendix C.1)

b. Stormwater Quality Analysis

1. The DEIS uses invalid assumptions when modeling potential impacts of pesticides, fertilizers and other chemicals used in the Integrated Pest Management Plan.

The risk assessment for pesticide use under the turf management plan is not representative of the proposed project. The modeled soil profiles do not adequately reflect the developed conditions and likely underestimate the rate at which irrigation water and precipitation, containing dissolved pollutants, such as pesticides, would be transported through the thin topsoil layer to the under-drains and then into the stormwater detention ponds or into regional groundwater through fractures or other features in the native bedrock. The DEIS analysis used two primary modeling tools, LEACHM to analyze vertical transport of pesticides through the soil and GLEAMS to analyze the runoff component of pesticide transport. The assessment used literature values for the depth profiles of five soil types on the development site found on generalized reference maps to define the influence of soil characteristics on pesticide fate. This is an invalid approach because the construction plan for the golf courses would remove essentially all of the native soils and significant amounts of bedrock and regrade much of the 573 acres to be developed. Much of the area would be cut and filled, crushed rock and drainage systems would be installed under the future fairways, and a 6-inch layer of imported topsoil and turf would be installed. (see Appendix C.1)

The proposed stormwater management plan indicates that it was developed to meet thermal objectives for protection of trout population in receiving streams

rather than pollutant removal objectives. Detention micro-ponds have been sized, configured, and located on the site plan to maximize shading by trees retained on the site (and to minimize conflict with the golf course layout). Many of the ponds are relatively long and narrow and situated into the edge of the tree line, shielded from incident solar radiation that might increase water temperatures above that protective of trout downstream. The resulting system would increase post-development phosphorus and other pollutant loadings from the site over pre-development conditions. This violates regulatory requirements. Further, the increase in pollutant loading created by this design approach is acknowledged in the DEIS, but SEQRA is violated, as no potential mitigation is offered for this known impact. In addition, the NYCDEP Watershed Rules and Regulations incorporate NYSDEC general stormwater permit GP-93-06, which requires that stormwater control measures assure that the "quality of runoff during and after development is not substantially altered from pre-development conditions."

The analysis of the mitigation of the impacts from the proposed trade-off of thermal control at the expense of pollutant discharge control presented in the DEIS is limited to the simple assertion that because the Ashokan Reservoir is in compliance with the Total Maximum Daily Load for total phosphorus, established pursuant to section 303(d) of the Clean Water Act, the reservoir is capable of assimilating these additional pollutant loads. The potential loadings to the receiving streams, and the resulting – potentially significant and, as currently proposed, unmitigated – impacts, of the full range of pollutants contained in the runoff must be evaluated and described in full. Among the pollutants would be phosphorus, a nutrient that contributes to eutrophication in reservoirs, pesticides, which can have toxic effects on both flora and fauna in the ecosystems that support the target trout populations, suspended solids, which exacerbate turbidity and siltation in the Esopus Creek and the Ashokan Reservoir, which is already on NYSDEC's 303(d) list of impaired water bodies for suspended solids. Because water quality and habitat conditions in the receiving streams may be degraded by these discharges of pollutants from the site, the DEIS must disclose these potential impacts, present reasonably available means for their mitigation, and describe the conditions that will exist in the streams and reservoirs as the result of the proposed discharges.

2. **The DEIS and draft SPDES permits do not treat stormwater discharge consistently between Big Indian and Wildacres.**)

   The SPDES Permit for the Wildacres Resort has been written with 13 regulated point source discharges from the detention micro-ponds to tributaries of Emory Brook. In contrast, the stormwater discharges at Big Indian have been characterized as non-point sources that infiltrate to groundwater. However, models based on inaccurate and incomplete data, have resulted in a misinterpretation of the significance of the discharge locations and quantities. The detention ponds are therefore undersized. NYCDEP believes that the overland flow from many of the Big Indian detention ponds would quickly concentrate while flowing down the steep slopes off the proposed Belleayre Resort site, connect to existing defined channels and watercourses then discharge

to tributaries of Birch Creek. As previously stated, NYCDEP has mapped several watercourses that also indicate that the overland flow will discharge to surface waters and therefore be tributary to Birch Creek. A map and brief written documentation of the locations of the springs and intermittent channels discussed here has been prepared by NYCDEP and is included as Appendix C.7. Therefore, the discharge locations are point sources and should be treated as such; effluent limits under the SPDES permit for Big Indian should be assigned at the appropriate locations. (see Appendix C.1)

The SLAMM model does not account for runoff during the winter, including spring snowmelt and rain-on-snow events, again resulting in an underestimation of runoff and associated pollutant loads. (see Appendix C.1) The DEIS states that basins have been resized to attenuate spring snowmelt using the NYS Stormwater Management Design Manual (2001). Calculations and assumptions used to estimate the storage required for spring snowmelt must be provided in the DEIS for validation. Additionally, snow removal activities should be detailed, including stockpile locations. These locations should be taken into consideration, and control measures should be provided under the stormwater management design (i.e., impact of melting during a rain-on-snow event).

3. **The DEIS does not use a realistic phosphorus export coefficient for the proposed Belleayre Resort.**

   The phosphorus export coefficient used by the developer to estimate baseline total phosphorus export condition is a literature value assigned to "grass and shrub" landscapes, which is not appropriate for forested watersheds such as the project site. The value is significantly higher than NYCDEP's site-specific monitoring data demonstrate. The site-specific data represents more than 3 years of pre-construction monitoring that has been conducted by NYCDEP and has been provided to the Applicant annually according to the agreement under which site access is afforded to NYCDEP to conduct the monitoring. The result of using the literature value rather than actual site conditions is to reduce the magnitude of predicted pre- versus post-development impacts and thus underestimate the magnitude of the increase in phosphorous export created by site development, as well as to undersize the necessary mitigation or control measures proposed. (see Appendix C.1)

4. **The DEIS should specify protection measures associated with outside storage of specialized soil materials and de-icing materials.**

   The DEIS indicates that outdoor covered storage would be provided for specialized soil addition materials and de-icing materials. The Watershed Rules and Regulations, Section 18-45, require that storage facilities for such materials prevent runoff from entering any watercourse, wetland, or reservoir. (see Appendix C.2)

5. **The DEIS should provide more specificity regarding the anticipated management plan for the irrigation ponds.**

The draft SPDES permits allow the seasonal discharge of treated effluent from the two WWTPs to the irrigation ponds and irrigation of the golf courses using withdrawals from these ponds from April through November. This irrigation water would flow into the stormwater collection and control system after being applied, in the same manner as would natural precipitation. The SPDES permit does not have surface water effluent limits for the WWTP discharge to the irrigation ponds. Therefore, if the WWTP has any bypass of treatment, the effluent could be discharged to the irrigation ponds without violating the SPDES permit and discharge untreated sewage for irrigation water. NYCDEP has stated that the irrigation ponds may not be sized correctly based on the water budget analysis and that the Turf Management Plan is incorrect due to the post construction change in soil type and rock base with the underdrain system. NYCDEP has also shown additional watercourses, therefore significantly increasing the possibility of the untreated effluent irrigation water reaching surface waters of New York State. NYCDEP recommends surface water effluent limits placed on both WWTP all year round to be sampled before discharging to the irrigation ponds, Birch Creek and Emory Brook. The DEIS does not provide any analysis of what the differential effect on stormwater discharge pollutant loadings would be as the result of the use of treated wastewater as a substitute for or augmentation of natural precipitation.

The DEIS should indicate what operating water level would be maintained in these ponds and how much additional emergency high water capacity has been incorporated into the design. The plans do not show outlet structures on the irrigation ponds, and it is not clear how pond levels and overflow would be managed during periods of high precipitation, when the demand for irrigation would be negligible. The DEIS is inconsistent in describing infiltration from these ponds, variously indicating that infiltration would occur, yet that the ponds would be constructed with geo-textile or clay liners to prevent infiltration.

c. Erosion and Sedimentation Control

Impacts from erosion and sediment from the development of the proposed Belleayre Resort is a critical issue to NYCDEP, especially because the Ashokan Reservoir is listed by NYSDEC as impaired pursuant to section 303(d) of the Clean Water Act for Total Suspended Solids. The DEIS does not sufficiently quantify nor propose adequate, effective mitigatation measures for this pollutant. Without proper mitigation, the proposed Belleayre Resort would further worsen the state of the reservoir for this pollutant.

1. **The DEIS does not adequately evaluate potential erosion associated with very steep portions of the on-site roadways.**

   The DEIS states, “In order to access the flatter plateaus on which development is proposed, it was necessary to overcome slopes up to 35% for the roadway.” Because of recent experience with severe erosion problems at a nearby project site

with a similarly steep switchback access road confirms that this is a potentially significant impact to both receiving streams and reservoirs; the DEIS must address erosion control for all access roads in greater detail, including anticipated seeps from groundwater encountered in cuts made to expand or improve road segments which traverse the slope, and immediate re-vegetation of the slope with appropriate engineering control methods. (see Appendix C.2, pages 2 and 3)

2. **The DEIS does not recognize potential impacts of erosion and sedimentation in forested buffers.**

   The DEIS states, "forested buffers, ranging from 700 to 2,000 feet offer important and tangible stream protection as well as the other erosion and sediment control measures". (see DEIS Volume 1, Page 3-25) Natural, vegetated buffers and constructed vegetated filter strips are useful tools for watershed protection, but the age and condition of the stand is important to this function, and no description of the forests proposed to be used in this way is provided. However, use of undisturbed, forested land is not an acceptable sediment and erosion control measure at many locations at the proposed Belleayre Resort because the forests exist on slopes ranging from 30 to 60%. Eroded sediments could travel through the existing forested buffers to adjacent watercourses, particularly where numerous identified pre-development stream channels exist, thus creating an ongoing source of suspended sediments to those watercourses. Appropriate erosion and sedimentation control structures, not currently provided for in the DEIS, must be implemented in these locations to prevent transport and deposition of sediments into adjacent forested buffers.

   The DEIS must also state that if any erosion control BMPs are not operating as designed, remedial measures would be implemented immediately, and provide examples of remedial measures that may be applicable.

3. **The operation and management of stockpiles during construction as outlined in the DEIS is insufficient, and some of the proposed erosion control measures do not conform to published standards.**

   The DEIS indicates that crushed stone generated in one construction phase would be stockpiled in areas scheduled for construction in subsequent phases. Stockpiles that are placed outside of the ongoing construction area should be included as part of the total area of disturbance for each construction phase. The DEIS should provide details for management of these out-of-phase stockpiles: e.g., amount of tree clearing; whether material is placed on disturbed ground or existing vegetation; whether any liner or berm system will be employed; stabilization measures; erosion and sedimentation control practices and structures. **(see Appendix C.2)**

   Gravel/sand check dams are detailed on sheet CP-18. These temporary erosion control structures are not effective to control the quantities of flow that will exist, nor are they in accordance with the Blue Book. Rock check dams are the only option appropriate for control of erosion in concentrated flow conditions.

The DEIS indicates that stockpiles not used within 14 days would be stabilized using tackifiers. Erosion and sedimentation control plans should provide for management of all stockpile areas. Stockpiles should be created only on relatively flat land with appropriate erosion control structures and filter strips between stockpiles and steep slopes. With the Applicant's proposal that a variance be allowed so the maximum disturbed surface allowance be increased from 5 acres to 25 acres, rigorous use of erosion controls on stockpiles and all exposed surfaces that would effectively mitigate the impacts associated with this large a working area must be detailed in the DEIS so that permit requirements to achieve the needed erosion and sedimentation controls can be developed.

4. **The DEIS does not adequately address potential impacts of road cuts and golf course fill on the swale along Giggle Hollow Road.**

   The stormwater management plans do not account for the flows of the stormwater discharges from proposed level spreaders occurring as "overland flow" across the steeply-sloped lands located off the property of the proposed Belleayre Resort, and then joining drainage flows along Friendship/Big Indian Road and Giggle Hollow Road. Giggle Hollow Road is approximately 4,000 ft long approaching Giggle Hollow from the Big Indian Plateau; a continuous swale parallels the uphill side of the road for this entire length, then discharging into Giggle Hollow. Road cuts and golf course fill for fairway 16 of the Big Indian golf course would create a disturbance approximately 260 ft long on a slope of 60-70 percent along the Giggle Hollow Road. Flow control and velocity dissipation structures, swale dimensions and lining, and discharge structures should be detailed in the DEIS. The DEIS should also provide complete and detailed analysis and design information for both temporary and permanent erosion and sedimentation controls in these areas. The construction sequencing must account for unexpected groundwater seeps exposed by road cuts. (see Appendix C.2)

5. **The DEIS ignores the necessity of obtaining permits for crossing, diverting or piping streams.**

   NYCDEP Watershed Rules and Regulations require Crossing, Piping and Diversion Permits (CPDP) for streams that do not require a permit from another agency. Therefore, all CPDP issues included in the SPPP need to be reviewed and approved by NYCDEP. The DEIS analysis of all of the reasonably identifiable impacts associated with the crossings of these streams must provide relevant details on impacts and mitigation measures. (see Appendix C.2)

6. **The DEIS does not address where the 200,000 cubic yards of top soil will be obtained.**

   The DEIS should state to location of the topsoil to be brought on site for establishing turf on the greens. If the topsoil is to be obtained from within the NY City Watershed, this is an additional area of disturbance that must be addressed in the DEIS and in the SWPPP. The DEIS should also discuss the availability of such quantities of topsoil. NYCDEP has heard that there is a shortage of adequate material near by for subsurface sewage treatment systems. In fact, the Hanah

Country Inn & Golf Resort had to switch from subsurface treatment systems to a WWTP for the wastewater due to the lack of soil in the area.

d. Wastewater

Technical analyses of the wastewater systems focused on a review of the following components of the DEIS: Executive Summary; Sections 2 and 5 of the text; Delaware Engineering Plan Sheets 1, 2, 8, 9, and 20 through 29 for Big Indian; Delaware Engineering Plan Sheets 1 through 14 for Wildacres; Appendix 2 (Big Indian Plateau SPDES Permit Application [Dec. 2002], Wildacres Resort SPDES Permit Application [Dec. 2002], Belleayre Resort Stormwater SPDES Permit Application [Dec, 19, 2002; March 17, 2003; Oct. 7, 2003; Oct. 17, 2003], and Stream Disturbance Permit Application and 401 Water Quality Certification [November 2003]); Appendix 8; and proposed SPDES permits [NYSDEC Application Nos. 0-9999-00096/00005, 0-9999-00096/00007, 0-9999-00096/00009], and Use and Protection of Waters Permit [0-9999-00096/00001], included in NYSDEC Notice of Complete Application, dated December 12, 2003.

General Comments Applicable to Both Development Sites

1. **The DEIS is unclear regarding when WWTPs would be put on-line, and how low flows during the early years of operations would affect these WWTPs.**
   The construction schedule shows the WWTPs to be built in construction years one and two. The DEIS does not address when the WWTPs would be put on-line, nor does it address issues relating to the effective operation of the WWTPs under the low flows during the remaining construction years and first several years of resort operation. The estimated sewage flow (hydraulic loading) should be presented in phases, and the wastewater treatment operational flexibility must be addressed based on the project phases. (see Appendix C.3)

2. **The DEIS does not identify how or where wet and/or dry sludge from the WWTPs would be disposed of.**
   The estimated wet sludge and dry sludge production quantities, as well as the expected availability of solid waste disposal facilities, should be presented in the DEIS. The proposed sludge treatment consists of an aerated holding tank with no decant ports. The DEIS states that 5,304 gpd of sludge would be produced. The final disposal site for the liquid sludge must be addressed in the DEIS. The DEIS does not state where this volume would be trucked to for ultimate disposal and which facilities have been identified and confirmed to have the ability to accept this volume.

3. **The DEIS does not adequately address pipe anchoring or cold weather WWTP operations.**
   Water main and sewer mains are proposed on slopes greater than 40% without any pipe protection and erosion control measures. Ten States Standards requires

pipe anchoring for pipes on slopes that are greater than 20 percent. (see Appendix C.3)

ICEAS-NDN (Intermittent Cycle Extended Aeration System Sequencing Batch Reactors) treatment performance during cold weather should be addressed. The design should include a protective covering of the basin enclosing this treatment process to achieve optimum treatment during the cold weather season.

4. **The DEIS ignores alternative locations for the proposed WWTPs.**
   Alternative WWTP sites should be evaluated in the DEIS, taking into consideration the extent of potential cut and fill, locations with deep groundwater relative to deep treatment tanks, and prevailing wind effect on down wind odors.

5. **Discharge limits and monitoring requirements for pesticides to be used in the Integrated Turf Management Plan as reflected in the draft SPDES permits are not sufficiently detailed.**
   Only 15 of the 31 pesticides listed in SPDES permits are currently detectable by certified laboratory methods. Before chemicals are used for which a certified method does not exist, an analytical method validation package should be prepared and presented to both NYSDEC (under its SPDES enforcement authority) and NYCDEP (under its watershed protection responsibility) for review and approval. This package would provide sufficient information to guide a suitably qualified, certified analytical laboratory in performing the monitoring required under the SPDES permits to verify the method and test effluents and ambient receiving waters for the pesticide, as well as to guide NYSDEC in understanding the methodological limitations, if any, of the results.

   Two pesticides proposed for use in the DEIS, bifenthrin and lambda cyhalothrin, are not listed in the SPDES permits.

6. **The DEIS ignores wastewater management during the 8-year construction period for the project.**
   The Executive Summary states that approximately 2,114 person-years would be involved with the 8-year construction activities. This estimate includes construction of the WWTPs. In accordance with Section 11.28(i) of the 1997 Ten States Standards, a proposed plan for management of wastewater during construction activities is necessary. This plan must be detailed in the DEIS and be in place prior to the start of construction activities. (see Appendix C.3)

Big Indian Resort

1. **The DEIS anticipates a subsurface wastewater disposal system for the gatehouse, to be sited on an area with slopes of 25%.**
   Subsurface treatment is proposed only for the Gatehouse area of Big Indian. However, the NYSDEC Design Standards state that:

> *Trenches may be placed on slopes of up to 20 percent, but beds should be limited to sites with slopes no greater than 5 percent. If it can be demonstrated that the site has the necessary assimilative capacity, trench systems may be built on slopes steeper than 20 percent. Under these conditions, special construction techniques (e.g., terracing or hand digging) may be necessary.*

The proposed site for the Gatehouse absorption field has an estimated slope of 25 percent, as shown on Drawing 24. Therefore, either the location of the absorption field must be modified or there must be special construction techniques incorporated. In addition, this particular site can be utilized only after it demonstrates the necessary assimilative capacity by appropriate field-testing, for which the DEIS presents no documentation. More detail to justify the technical feasibility and reliability of this proposed subsurface wastewater treatment system is necessary. (see Appendix C.3)

2. **The DEIS lacks detail of some specifics of the wastewater treatment system, other sections contain data errors.**

   The effluent pump station shown on Drawing 25 is not detailed. Information regarding the size of the wet well, type of pump, or any other appurtenances are not included, thus they cannot be evaluated. Details on the pump station, as well as calculations supporting the sizing of discharge piping to Birch Creek or the irrigation ponds, should be provided.

   The hydraulic loadings tables for Big Indian and Wildacres include an error in the estimation of wastewater flow. The proposed flow for the ballroom/auditorium is 3 gpd/seat. The NYSDEC Standards for Banquet facilities is 20 gpd/seat. The ballroom would presumably be used routinely as a banquet facility or for weddings and other social events and should have adequate sewage capacity for these purposes. This would increase the sewage flow by 3,400 gpd for Big Indian.

   Discharge from the WWTP at Big Indian is limited to Birch Creek or the irrigation ponds. Confirmation that the Birch Creek discharge structure is designed in accordance with Section 55.1 of the Ten States Standards and the New York State Erosion and Sediment Control Guidelines is needed. These guidance documents indicate that the outfalls should be constructed and protected against the effects of floodwater, tide, ice, or other hazards to ensure structural stability and freedom of stoppage to enable continuous protection of receiving streams banks and bottoms from scouring, deposition or other damage. (see Appendix C.3)

3. **Proposed sand filtration and micro filtration equivalent system details are missing.**

   The number of the sand filters and micro filtration equivalent units, referred to as the DSS filter trains on Drawing Number 26 of Delaware Engineering Drawings as part of the DEIS, does not satisfy the Watershed Regulations. The Watershed

Regulations require three sand filters for WWTP with flows over 50,000 gpd. The basis and justification for this proposed departure from requirements must be provided. The meaning of the note "future" for DSS filter train 3 should be explained. It is not clear whether this is for future expansion or installation as the WWTP demand increases up to the SPDES permitted flow as the project is developed.

.

4. **The DEIS does not reflect induced residential growth as a result of the project, which could have a significant effect on wastewater generation.**

   Based on preliminary results of the econometric analyses conducted by NYCDEP for the overall project, the addition of 158 new housing units is projected to occur in the primary study area within the initial 10-year period. If this build-out were to occur entirely within the existing boundaries of the Pine Hill sewer district (this is the sewer district closest to the entrance to the resort grounds), the Pine Hill WWTP would receive significant additional load. Calculated based on the same criteria used in the DEIS and Table 3 of the 1998 NYSDEC Design Standards for Wastewater Treatment Works, this additional load is estimated at approximately 75,050 gpd. These projections should be evaluated in the context of the design and existing capacity of the Pine Hill WWTP and any future impact on the Big Indian WWTP. (see Appendix C.3)

5. **The proposed SPDES permit for Big Indian Plateau should include discharge limits for pesticides, as provided for the permit proposed for Wildacres Resort.**

   The same pesticides, as well as other chemicals to be used in the proposed Integrated Turf Management plan, would be used at both sub-developments of the proposed Belleayre Resort. The mechanisms by which the chemicals would exit the site (carried in the irrigation and/or precipitation water that enters the underdrains or is lost to groundwater) are identical on both portions of the Belleayre Resort. Therefore, discharge limits should be included in SPDES permits to provide equal levels of protection to both receiving reservoirs.

Wildacres Resort

1. **The relationship between water usage and sewer flow presented in the DEIS is inconsistent with standard engineering practices.**

   The water supply demand for the Wildacres Resort, Highmount Estates, and Wilderness Activity Center is estimated at 109,308 gpd. This is *22% lower* than the sewage flow estimated at 140,435 gpd for the same area. Water demand is usually higher than the sewage flow. This discrepancy indicates that errors exist in the engineering study and computations that underlie the design of one or both of these systems.

2. **Some piping runs identified in the DEIS may be under-sized.**

   The projected flows from each source were used by NYCDEP to calculate proper sizing for the proposed collection systems. It appears that the length of the wastewater piping between the Wildacres Resort and the main force-line

(approximately 400 feet) may be under-sized. General wastewater design practice is to limit the velocity of wastewater flow to between 2 and 10 feet/sec to prevent settling (occurs if velocity is less than 2 feet/sec) and scouring (occurs if velocity is greater than 10 feet/sec) (Metcalf & Eddy 1981). The initial 350 feet of piping would reach a peak velocity of 19.2 feet/sec and velocities in the next 50 feet of the main line would be 12.6 feet/sec, both of which are higher than the 10 feet/sec standard. Therefore, larger diameter piping may be appropriate for this segment. (see Appendix C.3)

3. **The DEIS lacks detail of some specifics of the wastewater treatment system, and other sections contain data errors.** (see Appendix C.3, pages 8 – 10)

   The effluent pump station shown on Drawing 8 is not detailed. Information regarding the size of the wet well, type of pump, and any other appurtenances are not included, thus they cannot be evaluated. Details on the pump station, as well as calculations supporting the discharge piping to the unnamed tributary to Emory Creek or the irrigation pond, should be provided.

   Discharge from the WWTP at the Wildacres Resort is limited to the unnamed tributary to Emory Creek or the irrigation pond. The discharge structure should be designed in accordance with Section 55.1 of the Ten States Standards, which requires that the outfalls be constructed and protected against the effects of floodwater, tide, ice, or other hazards, to ensure structural stability and freedom from stoppage.

   As discussed in regard to the Big Indian wastewater design, the hydraulic loadings tables for Wildacres include an error in the estimation of wastewater flow from the ballroom. Correcting this error would increase the sewage flow by 11,900 gpd for Wildacres.

e. Natural Resources and Wetlands

The DEIS indicates in numerous sections that the development is a small portion of the site and of the NYC watersheds. However, it does not state that the remaining undeveloped portions of the property are over 20% slope and otherwise not developable nor – generally – are they home to resources that are valuable to the protection of water quality and ecological integrity. The proposed Belleayre Resort would result in the development of nearly all of the reasonably developable lands on the Applicant's property.

1. **The DEIS does not consider means by which wetlands impacts could be avoided or minimized.**

   The DEIS does not discuss avoidance and minimization of wetland impacts. Before any wetland impacts are considered, the Applicant must demonstrate that impacts and wetland fill have been avoided and minimized. In addition, NYCDEP believes there are wetlands on-site that were incorrectly determined by the ACOE to be non-jurisdictional because the evaluation performed by the

Applicant did not consider hydraulic and/or ecological connection to features not on property owned by the Applicant.

The DEIS does not disclose if any areas of the proposed Belleayre Resort are included in the revised maps of NYSDEC-regulated wetlands that were prepared and published in 2003 by NYSDEC for the entire West of Hudson watershed. These areas should be protected and preserved to the maximum extent possible, regardless of jurisdictional status, because of their vital role in removing pollutants from water and retarding water flow as it enters watercourses that lead to NYCDEP reservoirs. The project design must be reconsidered in light of this additional information, revised accordingly to ensure that wetland areas are not disturbed, and be fully described and evaluated in the DEIS.

In addition to the 1.49 acres of wetlands to be destroyed that the Army Corps has determined to be non-jurisdictional, the DEIS indicates another 1.59 acres of wetland will be impacted through the clearing of vegetation for "playovers" between holes of the golf courses. The degree of the impacts to these wetlands or mitigation measures are not detailed in the DEIS. For example, what is the desired canopy height in these areas, how is it to be maintained, and would herbicides or plantings of non-wetland species be utilized to maintain the desired conditions? What measures would be used to assure that machinery for removing felled trees would not enter wetland boundaries? What species of willow cuttings are proposed for use where upland vegetation in proximity to wetlands and intermittent streams would be disturbed?

For wetlands that will be filled or impacted by the filling for the proposed project, mitigation should be provided as part of the project. NYCDEP recommends, at a minimum, conformance to the Compensatory Mitigation Guidelines prepared by the ACOE.

2. **The DEIS does not clearly document information sources.**

   The DEIS does not adequately document the sources of information for the existing vegetation type mapping. Surveys for birds, amphibians and reptiles, threatened and endangered species, and other wildlife resources were not adequately documented and not systematically designed and executed, providing what NYCDEP can only characterize as opportunistic sightings rather than quantitative, reliable, scientifically valid survey information. Considering the complexity of the terrain, size, and environmental sensitivity of the property affected, more rigorous surveys should be undertaken.

3. **The proposed landscaping presents a risk of introducing invasive species to the Catskills woodlands.**

   The landscaping plan includes many non-native species, several of which are known by NYCDEP to be forest invaders that preclude forest regeneration. These species are specifically barred from use on lands owned and managed by NYCDEP throughout the watershed to protect the native plant communities.

These plants, once introduced on the Applicant's site, would migrate freely onto NYCDEP forest holdings, as well as State- and privately-owned forest areas.

4. **The DEIS should present details of proposed maintenance and sustainability strategies for recreational amenities intended to be provided (where new) or utilized (where pre-existing, or publicly-owned) as a part of the project.**

   The recreational plan should include a trail and recreational area maintenance plan that protects these resources from overuse and prevents erosion and sediment damage from occurring within these recreational areas, and on adjoining property and watercourses.

f. Groundwater Resources

1. **The DEIS does not provide sufficient information on hydrogeology.**

   A more thorough investigation of the hydrogeology of the project site and surroundings is needed to ensure protection of existing regional drinking water supplies. This should include field data-based geological cross-sections at key locations depicting the relationship between overburden aquifers, deep bedrock aquifers, surface water, and public water supply springs. Cross-sections should also show the relationship between existing residential and public water supply wells and the impact of drawdown at the project's production wells on these other resources. (see Appendix A.3)

   The underdrain systems proposed for the golf course fairways are designed to convey water that infiltrates the fairways horizontally to the stormwater collection and control ponds. However, with the underdrain structures being unlined and in direct contact with the underlying strata, the potential for percolation to move downward into the underlying rock layer must be considered. The extent to which such vertical losses may occur and the fate of the water, with any entrained or dissolved pollutants, has not been evaluated and is not addressed in the DEIS.

   Once the pesticides applied on the golf courses leach to the overburden water table and enter the fracture zone of the bedrock aquifer, the typical processes of pesticide degradation (photolysis, volatilization, oxidation, adsorption) would not be active. An assessment is needed of the fate of pesticides that reach the water table in the fracture zone. Several area residents and the town of Pine Hill utilize spring water that may be affected. Depending on how far water that enters the fracture zone can travel, more distant users of ground water could also be affected.

2. **The DEIS does not adequately evaluate the impacts of stormwater routing on groundwater resources.**

   The impact to groundwater resources as a result of changing stormwater routing as explained in the stormwater management plan should be thoroughly evaluated. This analysis should be performed project-wide for the entire site in order to assess the magnitude and location of infiltration, recharge from overburden to

bedrock, and discharge of pollutants to groundwater. This assessment should account for native soil conditions for pre-development and engineered soil profiles of the post-development landscape. (see Appendix A.3)

3. The DEIS does not consider the use of well water for golf course irrigation.

Treated wastewater is proposed for use to irrigate the golf courses. However, while the Big Indian course and the Wildacres course would partially open in construction-year two and construction-year three respectively, wastewater flow will be low until build out of the project neared completion and occupancy of the hotels and any constructed time-share units begins. Therefore, from construction-year two through seven or eight, golf course irrigation would depend to a greater extent on well water. This would be a period of intense irrigation to promote establishment of a strong turf and root structure. The reliance on wells under this scenario and its impacts on groundwater resources is not discussed in the DEIS.

g. Traffic

1. The traffic analysis is inadequate and flawed.

The major flaws with the internal logic and consistency of the DEIS are evident in the traffic analysis. For example, the document indicates that the project would have a major positive economic impact on a relatively depressed region of the Catskills, while simultaneously having no adverse impact on traffic. This is contradictory, since the resort would necessarily increase local traffic to bring guests, suppliers, employees, and potential buyers of timeshare units to the site (see Appendix A.7). Also, references for assumptions made in the traffic analyses are not provided. For example, NYCDEP believes that the traffic growth rate of 3% is likely to be low. Also, traffic analyses should not base conclusions on trips per minute since a steady flow of traffic is very difficult to guarantee; the standard terminology used is trips per hour.

2. The traffic analysis for the operational phase of the proposed Belleayre Resort is incomplete.

The traffic analysis fails to consider commuter traffic from Belleayre Resort employees, traffic from potential buyers of timeshare units, and traffic from trucks servicing the resort. The DEIS assumes that no increase in demand for workers from outside of the labor market, though the regional labor market does not have sufficient workers in the labor categories required to construct or operate the proposed resort. Those workers would have to either commute into the region (creating traffic impacts) or relocate into the region (creating housing impacts). Most likely, a combination of these two would occur, creating impacts on both available roadway capacity during commuting hours and creating additional demand for existing local housing stock.

Furthermore, the DEIS estimates that more than 25,000 potential buyers of the timeshare units would need to travel to the resort, though it does not specifically identify any of the impacts associated with these visitors, and it is unclear whether these potential buyers are included in the traffic counts.[4] In addition, the number of truck trips for shipments of supplies and equipment during operation of the project should be disclosed as they could be significant. For example, NYCDEP estimates that more than 5,000 gallons of sludge are expected to be trucked out of the proposed Belleayre Resort on a daily basis. Finally, the traffic analysis does not discuss the provision of the shuttle bus service; it is unclear if this item has modified the trip generation analysis.

3. The DEIS does not contain any data or analysis of traffic induced by construction activities.

The potential impact on traffic during the construction period (at least 8 years) from worker vehicles, lumber, logging, and concrete trucks, as well as dozens of pieces of large equipment such as cranes and equipment to move rock and earth for regrading of the site, is not included in the DEIS. (see Appendix A.7) For example, the DEIS indicates that construction employment would average 264 person-years annually. It also states that more than 200,000 yards of topsoil would be trucked in for development of the golf courses. However, there is no analysis of the impacts that the worker and truck traffic will have on State and local roads or the potential erosion that the trucks and other heavy equipment would cause traveling on the private roads to Big Indian. A project of such magnitude necessitates a comprehensive analysis of construction traffic.

4. The traffic analysis neglects the additional traffic impacts associated with induced growth and development.

The DEIS predicts that the project will create the demand for an additional 76,700 square feet of new commercial development, but the traffic modeling and impacts assessment fails to take the traffic related to both the construction and the operation of those new businesses into account. As discussed elsewhere in these comments, the DEIS assumes that this new commercial activity will take place in

[4] See DEIS Appendix27, page 7-11, Tables 7-2 and 7-3

existing vacant properties, but NYCDEP analysis indicates that it will take place along the NYS Route 28 corridor, thus further adding to the traffic loads along this roadway and requiring additional parking areas as well.

5. The traffic analysis does not consider mitigation measures for protecting regional water quality.

Induced vehicular traffic has the potential to adversely impact water quality in the region. Of great concern is that the amount of impervious surface would likely increase significantly through widening of existing roadways off-site. Certainly, in order for heavy equipment to ascend steep slopes to reach Big Indian Plateau, stabilizing the existing logging roads would be necessary and widening would likely be required.

Water that washes off paved roadways carries a mix of chemicals, animal waste, trash, and other contaminants. Vehicles leave behind zinc and copper dust from brake pads, tire dust, exhaust particles, and oil and grease. Use of unpaved roadways results in erosion into waterways, and improvement of the current on-site will remove additional soil and vegetation from watershed areas (if not create impermeable surface due to plans to use gravel roads) and require effective erosion practices during construction. (see Appendix A.3, page 10) The DEIS should thoroughly address these potential threats to the watershed, and provide significant, comprehensive mitigation measures to ensure protection of water quality.

h. Socioeconomics

1. The DEIS contains inaccurate socioeconomic data.

The DEIS contains a number of errors in its evaluation of socioeconomic trends in the region, which could have a significant effect in realistically evaluating the potential impacts of the proposed Belleayre Resort on the region. For example, the DEIS contains erroneous population forecasts, which project a loss in population for both Delaware and Ulster counties through 2005, despite documented population gains from 1990 through 2000. Similarly, the DEIS projects a loss of more than 5,700 households between Delaware and Ulster counties, despite these counties having gained more than 8,300 households during the 1990s. (see Appendix A.2)

2. The DEIS misuses information from Census 2000.

The DEIS misuses Census information relative to households and housing units. The DEIS states, "The household figures ... include a large proportion of second homes in the area." This statement is not accurate since households are considered to be occupied housing units at the time of the decennial census, while homes for seasonal use are considered to be vacant housing units. Therefore, seasonal households are not included in the census data which are the basis for demographic figures shown in Table 2-1 of DEIS Appendix 26. Moreover, the DEIS does not attempt to quantify the amount of seasonal housing units and seasonal population, but merely presents percentages of housing units in the two

towns where household statistics are not provided. In addition, the percent of seasonal housing is from the 1990 Census, and has not been updated with Census 2000 figures as the population and household statistics were. (see Appendix A.2)

3. **The DEIS uses study areas based on zip codes, rather than municipal boundaries.**

   In order to properly evaluate a project as complex as the proposed Belleayre Resort, it is important to understand the areas that would likely be impacted by the realization of the proposed project, as well as why those areas were selected for evaluation. The DEIS defined impact areas for the proposed Belleayre Resort based principally on zip code boundaries. Since zip code boundaries are established for the convenience of the U.S. Postal Service and do not necessarily conform to municipal boundaries, they are not typically used in such analyses. (see Appendix A.1)

4. The labor market area used by the DEIS does not reflect the most up-to-date journey-to-work information from Census 2000.

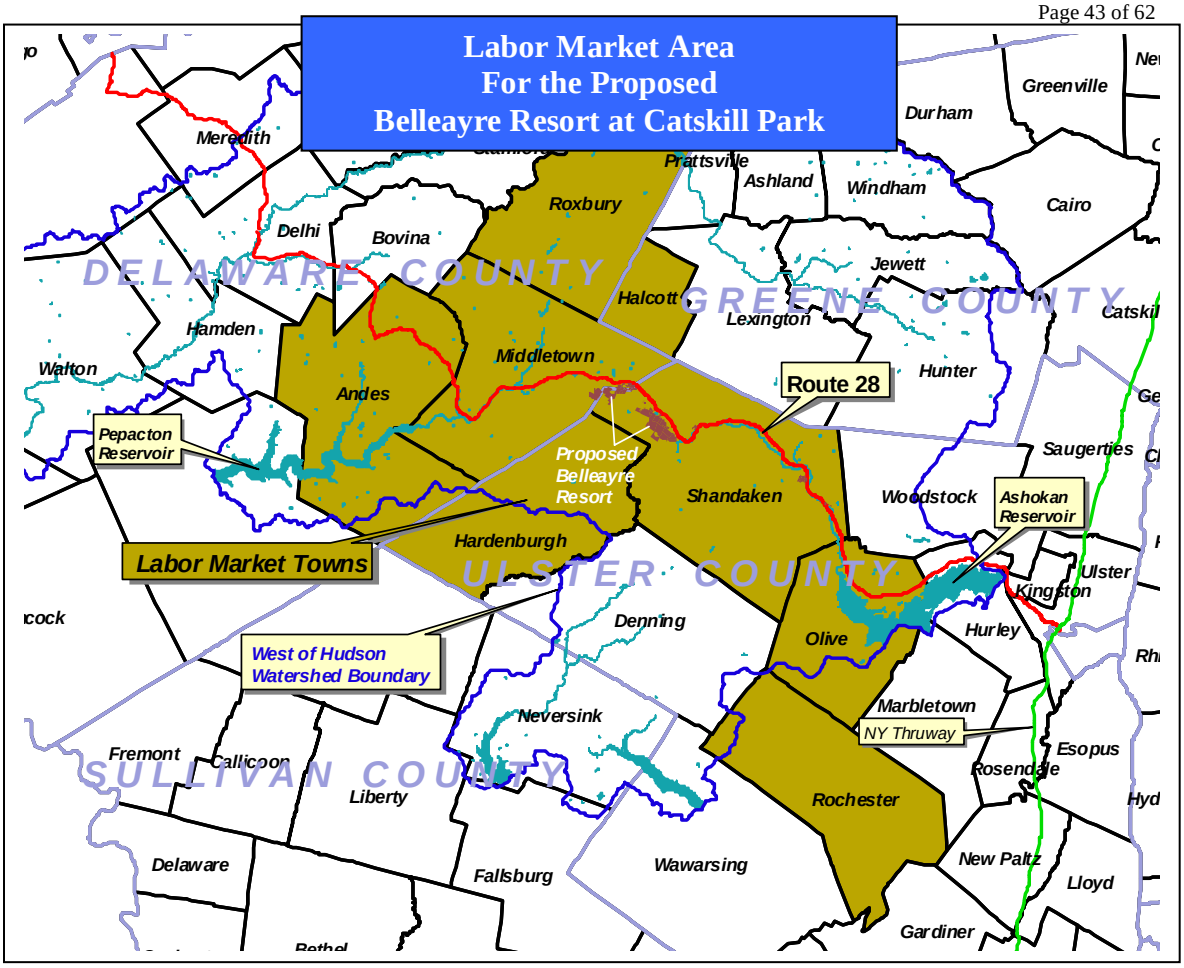
NYCDEP's consultants reviewed journey-to-work data from Census 2000 for persons working in the primary host communities of Middletown and Shandaken. According to Census 2000, a total of 2,368 people commuted to their place of employment in these communities. As shown in Table 1 below (prepared by RKG), the principal source of labor for Middletown and Shandaken are communities along the major commuting route of NYS Route 28. However, the area also has representation from workers in Hardenburgh to the south and east, and Roxbury and Halcott to the north. (see Appendix A.2 4)

Table 1
Place of Residence for Workers
In Middletown and Shandaken

Community	Workers	Percent of Workers
Andes	69	2.9%
Halcott	31	1.3%
Hardenburgh	39	1.6%
Middletown	959	40.5%
Olive	29	1.2%
Rochester	45	1.9%
Roxbury	79	3.3%
Shandaken	605	25.5%
Subtotal	**1,856**	**78.4%**
All Other Communities	512	21.6%
Total	**2,368**	**100.0%**

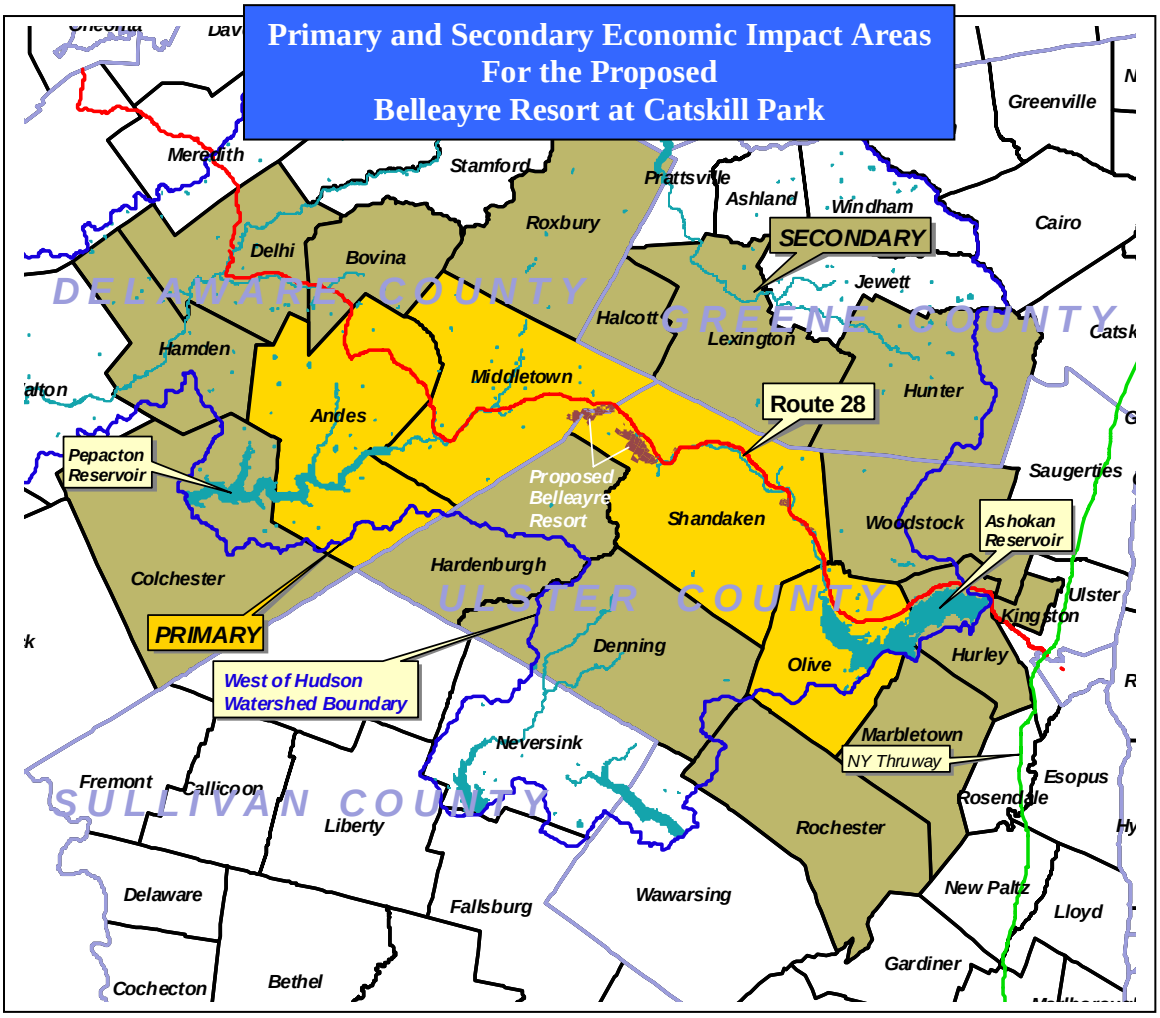
Source: U.S. Census 2000

The communities in the "Labor Market Area" map below (prepared by RKG) are more representative of the historic commuting patterns for workers traveling from existing population centers to places of employment in Middletown and Shandaken than the labor market area analyzed in the DEIS. Given the skill levels required for positions to be offered at the proposed resort, it is unlikely that these historic commuting patterns would be substantially altered.



5. The DEIS does not define the study areas and impact areas according to typical practice for analysis of impacts from development projects.

The DEIS defines the area likely to be affected by the economic impacts associated with the proposed Belleayre Resort as nine zip codes along NYS Route 28. NYCDEP's review of retail, restaurant, and service businesses within these towns and their villages and hamlets indicates that the likely primary economic impacts associated with visitors to the proposed Belleayre Resort are expected to be focused along the NYS Route 28 corridor, from Olive in the east to Andes in the west. The secondary area of influence is expected to include those areas within a one-hour drive of the proposed Belleayre Resort, outside of the primary economic impact area. (see Appendix A.1) These two economic impact areas, which were utilized by RKG (NYCDEP's consultant for this aspect of the review of the DEIS) when evaluating the financial and socioeconomic impacts of the proposed Belleayre Resort, are illustrated in the following figure, also prepared by RKG.



6. The DEIS fails to address impacts on existing businesses and business centers that would result from the induced secondary retail demand.

No analysis is provided evaluating the location or availability of vacant commercial property to absorb the predicted secondary commercial business growth and the factors that could contribute to new businesses being created to accommodate this growth and their affect on existing businesses and business centers. The DEIS presents, without analytical justification, the conclusion that existing merchants within hamlets would simply "expand" to meet new retail demand. This conclusion assumes, without justification, that merchants would be able to finance expansion/modernization of their facilities, that such renovation would be economically feasible in those existing retail locations with limited highway visibility, or that existing merchants in the region would want to operate on an expanded schedule. (see Appendix A.2)

V. Lessons Learned from Case Studies of Comparable Resort Developments

The DEIS relies on three case studies of resorts identified by NYSDEC in the Nov. 3, 2000 Final Scoping Document to provide an indication of the potential induced impacts associated with the construction of the proposed Belleayre Resort.

However, of the three case studies presented in the DEIS, none are established destination resorts. In fact, one of the case studies presented, Greylock Glen in Massachusetts, is not yet an active project. Massachusetts Development, a state entity, has only issued a request for proposals to evaluate the financial and market feasibility of the recently completed master plan for the property.

The two remaining case studies used in the DEIS are ski resorts, which is inconsistent with the development planned by Crossroads Ventures. The proposed Belleayre Resort does not include establishing a ski area, but rather the construction of two 18-hole golf courses, as well as a variety of lodging and restaurant facilities that would "leverage" access to the Belleayre Ski Center to create the winter season draw. The case studies evaluated in the DEIS does not provide comparable elements such as: facilities available (a golf and hospitality development), the complexity of the development project (a $240 million construction project including hotels, restaurants, golf courses, and day spas in an environmentally sensitive area), the timing of the planned construction (construction completed over an eight year period) or the level of visitation (more than 600,000 visitors annually).

Therefore the use of the specific case studies presented in the DEIS does ***NOT*** provide the NYSDEC with any level of understanding of the potential impacts associated with the proposed Belleayre Resort. Simply put, the case studies used in the DEIS bear little resemblance to the proposed Belleayre Resort, and as such, they provide little, if any, indication of the potential impacts associated with the development of the Resort. The USEPA echoed this concern in a March 23, 2004 comment letter to NYSDEC, expressing concern over the lack of relevance of the case studies included in the DEIS.

NYCDEP's review of two comparable destination resort developments identified some common impacts that are applicable to the evaluation of the potential impacts associated with the proposed Belleayre Resort at Catskill Park. (see Appendix A.5, pages 15 and 16) These include:

1. **Improvement of roadway access during the early stages of resort development projects, in order to enhance access to and from the resort**.
   This may be reflected in the addition of turning lanes, or more comprehensive roadway improvements as the development gains increased usage over time. Additional paved surfaces, and the associated run-off, are key concerns relative to water quality.

2. **Development in/near the host communities tied, to some extent, to the availability of sewer service.**

In Vernon, New Jersey, community officials indicate that development pressure is mounting for those areas served by the sewer system, while in Snowshoe, West Virginia, nine existing wastewater treatment plants are being replaced with one large regional system and related collection system improvements. The availability of sufficient wastewater treatment capacity to support not only the proposed resort development, but also the follow-on development, is considered critical to maintaining water quality.

3. **Capitalization on the tourism associated with the resort development by developers not affiliated with the resort.**

   In the New Jersey case study, the community has expanded their plans to revitalize their commercial core, to include mixed-use development. Other developers are constructing a 178-room hotel off-site, as well as new retail space for ski shops, restaurants and other users. At Snowshoe Mountain, one small strip mall has been constructed, and another is planned by the owner/operator of the ski shop. There is evidence that this is already occurring in the area of the proposed Belleayre Resort, as a hotel in Margaretville is pursuing a major expansion.

4. **Creation of housing communities intended to compete with the development.**

   In New Jersey, for example, the former Playboy Resort is being converted to 300 homes, while in West Virginia, nearby landowners have subdivided their land to create 150 new home sites. Competing development creates additional concerns in terms of analyzing, and addressing, increased demand for potable water, increased generation of wastewater, and additional runoff from impervious surfaces.

5. **Conversion of residential property to non-residential uses**.

   In New Jersey, where there is a limited amount of land available for development, several residential properties have been converted to non-residential uses. This has water quality implications, particularly if some residential uses are converted to restaurants or other hospitality uses, as water usage would be substantially higher than for a traditional residential use, and impervious surfaces would increase because of increased need for parking lots. In addition, it would be critical to monitor any such conversions, to ensure that wastewater disposal meets legal requirements.

6. **Rapid increases in housing and land pricing**.

   This is a double-edged sword for existing year-round residents, who can "cash-in" on the value increases, but who are likely to subsequently have difficulty in finding reasonably priced housing in the region. In effect, many "locals" are being priced out of the market. This could impact water quality; if existing homes are acquired and demolished in favor of larger, more modern homes, without updating water and sewer connections to current standards, in conformance to the Watershed Regulations. Whether for the reason of commercial conversion, or for increased demand for purchase of second houses in the area by visitors to the ski areas and golf courses who do not purchase resort property, sales price of existing residential buildings increased approximately four-fold in the Vernon, New Jersey

area, with many older homes being acquired and demolished to make way for newer vacation homes.

All of these impacts show the potential for growth and land use changes induced by the proposed Belleayre Resort. For additional information on the experience of other communities where significant resort development has occurred, please see Appendices A.4 (Evaluation of Comparable Facilities to the Proposed Belleayre Resort) and A.5 (Evaluation of Impacts Associated with Facilities Considered Most Comparable).

VI. Induced Growth and Long-Term Regional Land Use Change

There are a variety of concerns related to the potential for induced growth associated with the proposed Belleayre Resort. These include demand for new residential housing, development of additional commercial space along NYS Route 28, competing hotel and residential developments, escalation of housing and land prices, and conversion of some residential structures to non-residential uses. The DEIS fails to analyze the potential for such induced growth to adversely impact water quality.

1. **The DEIS did not employ an econometric model capable of predicting the dynamic effects and interactions throughout the region created by an economic input of the magnitude of the proposed Belleayre Resort.**

   RKG Associates utilized the REMI[5] model to evaluate the direct and indirect impacts associated with the proposed Belleayre Resort. REMI *Policy Insight* is a structural economic forecasting and policy analysis model that integrates traditional input-output, general equilibrium, econometric and economic geography methodologies. (see Appendix B.2) The model is dynamic, with forecasts and simulations generated on an annual basis with behavioral responses to wage, price, and other economic factors. Unlike static models such as RIMSII, the model used in the DEIS, REMI tracks the effects of an economic event over multiple time periods, calculating the interrelated impacts as the local and regional economies adapt to the initial change. For example, an increase in wages in a particular area might result in migration of workers over a period of time to that region, leading to population growth, new demand for housing and increased competition for existing jobs.

2. **The DEIS does not realistically evaluate the availability of labor in the Tri-County area (Ulster, Delaware, and Greene counties) and the potential for in-migration.**

   The capacity of the regional labor market to supply necessary employees for the proposed Belleayre Resort is analyzed using statistics for a variety of occupations (such as machine operators, fabricators and precision production jobs, among others), which have little or no relevance to the proposed Belleayre Resort. Discussion based on existing jobs in the hospitality, retail, or service industry, which would be meaningful to the actual skills needed, is not included.

[5] Regional Economic Models Inc.

NYCDEP compared the number of direct jobs estimated in the DEIS during the operational phase (747) to the number of unemployed persons in the Labor Market Area[6] (LMA) (587) reported in Census 2000. This comparison suggests a minimum potential shortage of 160 workers in the LMA, assuming that all the presently unemployed persons were to be hired at the proposed Belleayre Resort. This indicates that in-migration would be unavoidable for construction and full staffing of the resort; a significant number of employees would either have to commute from further away or would seek to relocate closer to the proposed Belleayre Resort, which would increase demand for residential housing.

3. **The DEIS ignores the potential for new residential growth that may result from the proposed Belleayre Resort. In contrast, NYCDEP's analysis indicates that increased investment in housing stock could add as many as 158 housing units to the primary market area in the next ten years, and an additional 160 units in the outlying communities of the secondary market area.**

   As discussed earlier in this report, RKG Associates utilized the REMI model to evaluate the direct and indirect impacts associated with the proposed Belleayre Resort. The REMI model indicated that the construction of the proposed Belleayre Resort would result in almost $16 million of additional investment in residential capital stock over the first ten years of the project. Given the labor shortages identified in Appendix B.1, this investment has been allocated to new year-round residential units, which are expected to be required to support economic in-migrants (see Appendix B.2, Table 4). Allocating the projected residential investment at an average of $100,000 per unit results in an estimated 158 new units in the primary market area over the first ten years after the construction period begins.

   The 158 potential new units (an average annual rate of 16 units) is 15% greater than the 137 net new units that were added in the host communities during the 1990s. Therefore, if development were to increase under a no-action scenario at a similar rate in the 2000s as during the 1990s, the development of the proposed Belleayre Resort could potentially more than double the rate of the housing growth experienced over the last census decade. (see Appendix B.2)

4. **The DEIS ignores the likelihood that new induced commercial construction would occur outside the villages and hamlets.**

   Although the results generated through the REMI model were similar to those presented in the DEIS for commercial impacts (the DEIS estimated induced demand for approximately 76,700 square feet (DEIS Sec. 7.3), while the REMI model indicated a slightly higher demand of approximately 79,700 square feet), NYCDEP disagrees with the conclusion in the DEIS that there would be no new construction to accommodate the increased demand. NYCDEP believes that there would be *significant development pressure* along NYS Route 28 to accommodate some of this induced demand, due to the desire for enhanced access, parking and

[6] The LMA includes the Towns of Andes, Middletown, and Roxbury in Delaware County, Halcott in Greene County, and Hardenburgh, Shandaken, Olive, and Rochester in Ulster County.

visibility not available in the villages and hamlets. Specifically, areas nearest to the entrances to the Belleayre Ski Area and to the proposed Belleayre Resort, as well as sites along NYS Route 28 near Pine Hill and Margaretville, which are serviced by public sewer systems, are likely to see the most significant development pressure. (see Appendix B.32) This is similar to the experience of other resort communities identified by RKG, where genuinely comparable developments have occurred, which have seen significant development pressure in those areas served by public sewer systems in close proximity to the resort. (see Appendix A.5)

Because of the need to provide parking lots, commercial development converts a high percentage of the land area to impervious surfaces, which are prime sources of pollutants that are of great detriment to the West of Hudson watershed. In the experience of NYCDEP Engineering staff who review and approve designs for development throughout the watershed, a series of developments to meet the forecasted demand for 79,700 square feet of commercial space would be a significant departure from the normal pace and scale of projects presented to NYCDEP for review.

5. **Secondary development pressure may convert existing residential uses to commercial uses.**

   The experience of Mountain Creek in Vernon, New Jersey and Snowshoe Mountain in Snowshoe, West Virginia – identified by RKG as closely comparable to the proposed Belleayre Resort – indicates that limited land availability may focus developers on redevelopment of sites with existing structures, and possibly the aggregation of two or more residential properties for conversion to a larger non-residential use. (see Appendix A.5)

6. **While the DEIS indicates no new residential development and minimal commercial development, there is evidence in the marketplace that speculative competing developments are already being pursued.**

   According to the Town of Middletown, a hotel in Margaretville is pursuing an expansion, which would reportedly add more than 60 rooms to the local supply. In addition, the Town of Shandaken indicates that a cluster housing development has been proposed in Pine Hill. These two developments, which will result in substantial increases in impervious surface and thus could affect water quality within the Watershed, represent significant development projects for the region.

   These two instances are similar to the experience of resort communities in Snowshoe, West Virginia and Vernon, New Jersey, which have seen speculative real estate development focused on competing with the resort in their respective communities. In New Jersey, for example, the former Playboy Resort is being converted to 300 homes, while in West Virginia, nearby landowners have subdivided their land to create 150 new home sites. The comparable resort developments have seen significant price increases for both existing homes and developable land.

The DEIS fails to quantify the amount and nature of the competing development that is likely to occur, and does not address the potential impacts of such development, including increased demand for potable water, increased generation of wastewater, and additional runoff from increases in impervious surfaces such as driveways, parking lots, and building roofs. (see Appendix A.5)

It is also anticipated that the vacation/ second home market will see increases in activity, as well as pricing increases. The experience of other resort communities indicates that prices are likely to rise, such that some existing homeowners may sell their primary residence in order to "cash in" on price increases. However, these homeowners are likely to encounter difficulty in finding a reasonably priced replacement for their primary residence, such that they may have to purchase a home outside the primary market area and commute in for work. This pressure to sell is expected to be exacerbated by people who travel to the region as a result of the marketing program for the proposed Belleayre Resort, but elect to look elsewhere in the region for a vacation home.

7. **The DEIS does not consider that increased traffic volumes may necessitate a widening of NYS Route 28.**

   The experience of resort communities in New Jersey and West Virginia confirms that roadway improvements are likely to be required. Roadway access has been improved during the early stages of these resort development projects, in order to enhance access to and from the resort. (see Appendix A.5, pages 15 – 16) At the proposed Belleayre Resort, this may require the addition of turning lanes, and even more comprehensive roadway improvements as the development sees increased usage over time. Additional paved surfaces, and the associated run-off discussed above in comments regarding traffic impacts, are key concerns to NYCDEP as they directly impact water quality; they have not been identified in the DEIS, nor have means for mitigating them.

VII. Potential Impacts of Long-Term Land Use Change on Water Quality

Impacts of increased population growth, housing development, and commercial development include increased impervious surface, more lawns, and thus increased phosphorous loads, as well as increased fertilizer and pesticide use, and increased stormwater flows, wastewater flows, and water usage. All of these impacts have the potential to affect the region's water quality. The DEIS makes no attempt at evaluating the water and wastewater issues associated with induced development.

1. Residential Housing Development

Over the course of the next twenty years, regional land use changes associated with development of the proposed Belleayre Resort are expected to be significant. Assuming an average of 3 to 5 acres per new housing unit, between ***975 and 1,625 acres of land could be developed*** for residential uses to support the cumulative 323 housing units (158 during the first ten years of the project, and an additional 165 projected for the second ten year period) which are expected to be constructed in the primary economic impact area. Since locational considerations for siting residential development are different than those associated with commercial development, residential uses are more likely to be spread across a broader geographic area of each community. (see Appendix B.4)

From a practical perspective, developers are likely to pursue development at those locations which are easiest to permit, such that their projects are not unduly delayed, and that result in reasonable profit levels. To this end, areas that are served by municipal sewer systems (or can be served through extension of the sewer lines within a sewer district) would see increasing development pressure for residential uses. If the build-out of the 323 units was to occur entirely within the existing boundaries of the Pine Hill sewer district, or was close enough to warrant extension of the District, the Pine Hill WWTP would receive significant additional load. This additional load is estimated at more than 150,000 gpd. These projections should be evaluated in the context of the design and existing capacity of the Pine Hill WWTP. (see Appendix C.5 5) In addition, natural resource modifications, such as increased landscaping and impervious surfaces, would likely occur as a result of increased need for residential development, which would have the potential to adversely impact water quality.

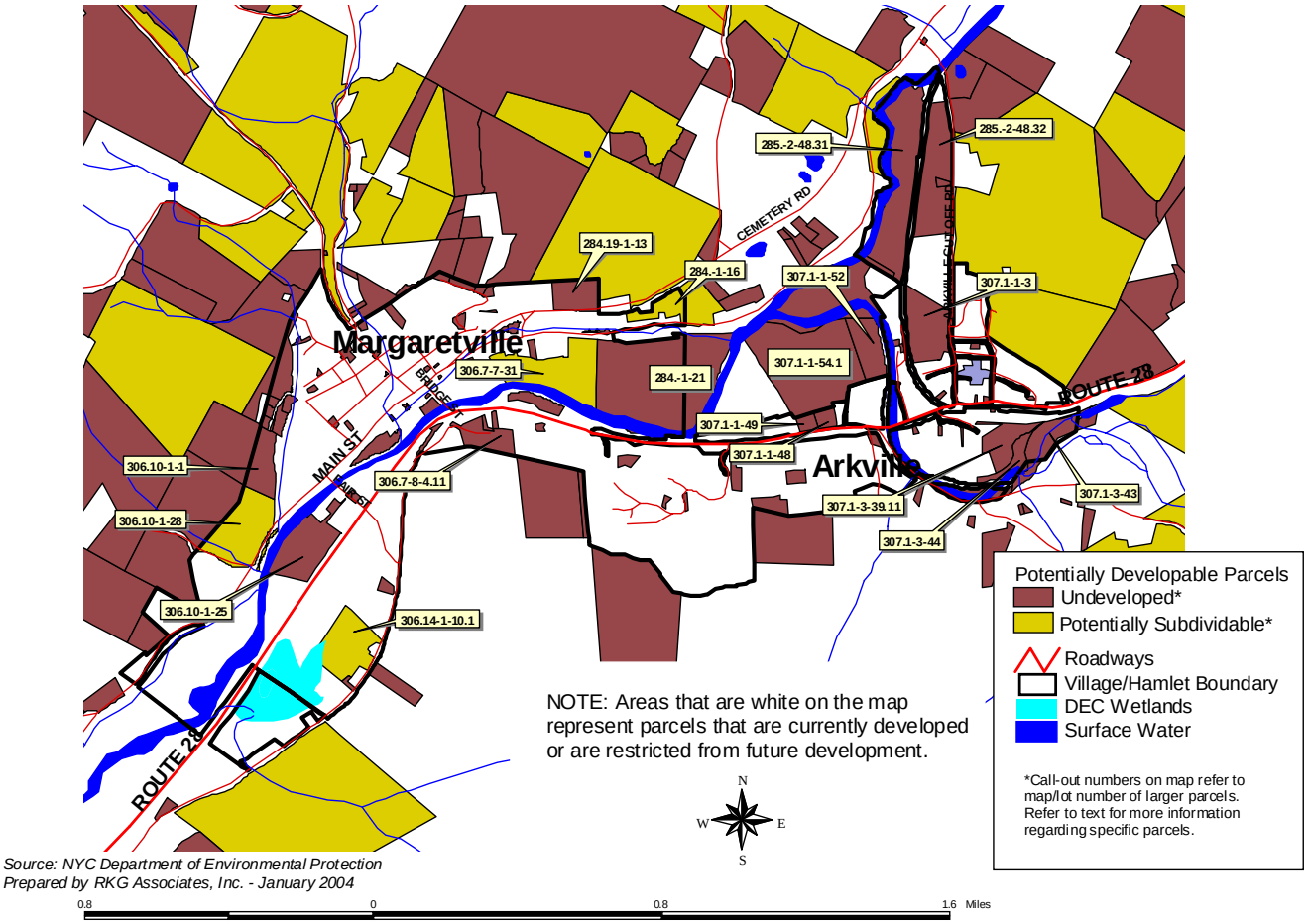
As discussed above, there is evidence that the marketplace is already seeking to capitalize on the anticipated investment associated with the proposed Belleayre Resort. There is reportedly a residential cluster development proposed in Pine Hill, and a Margaretville Hotel is reported to be seeking approval to add more than 60 rooms. (see Appendix B.4)

2. Non-residential Development Outside Villages and Hamlets

Figure 1 provides information regarding the availability of developable and potentially subdividable land in Margaretville/Arkville. As shown on the map,

land in close proximity to NYS Route 28 and within or adjacent to sewer districts[7] is available for development. Based on the experience of other resort communities, these parcels are expected to see the most significant development pressure, with non-residential development likely on lots adjacent to NYS Route 28, and high-density seasonal housing and year-round housing possible, especially on large parcels just off of NYS Route 28 (NYS Route 28 follows the course of Esopus Creek, thus the development would likely be in close proximity to this important water source).

Figure 1 Development Potential - Margaretville/Arkville
Town of Middletown



Source: NYC Department of Environmental Protection
Prepared by RKG Associates, Inc. - January 2004

Specific parcel numbers on the map in Figure 1 can be matched to Table 2, which provides an indication of the size of each of the parcels considered to be most likely to see development pressure in the future. The map of Margaretville/Arkville is used because land in this area is considered more developable than land in the Pine Hill area. Much of the land in the Pine Hill

[7] The village/hamlet boundaries which appear on the map are used as an approximation of the boundaries for the sewer districts.

area, particularly the land with frontage along and to the south of NYS Route 28 where there is access to the public sewer system, is encumbered by very steep slopes and thus is more difficult to develop. In contrast, the land in the Margaretville and Arkville areas is generally flatter and more readily developable. For additional information and maps for Fleischmanns and Pine Hill, see Appendix B.4, GIS Analysis of Available Land and Development Constraints in the Region.

Table 2
Undeveloped or Potentially Subdividable Parcels in the Hamlet/Village Areas of Arkville and Margaretville

	Map/Lot	Acres
ARKVILLE		
	307.1-1-54.1	38.19
	285.-2-48.31	34.33
	285.-2-48.32	20.97
	307.1-1-3	12.30
	307.1-3-43	10.70
	307.1-3-39.11	6.73
	307.1-1-52	6.10
	307.1-3-44	4.71
MARGARETVILLE		
	284.-1-16	94.00
	284.-1-21	55.00
	306.7-7-31	21.30
	306.10-1-25	17.15
	306.10-1-28	16.80
	306.14-1-10.1	13.30
	306.10-1-1	7.70
	284.19-1-13	7.00
	306.7-8-4.11	6.32

Source: Property assessment database records and RKG Associates, Inc.

3. Large Increases in New Impervious Surface Within Watershed.

The total impervious area introduced to the West of Hudson watershed as the result of the proposed Belleayre Resort could cumulatively approach 100 acres: approximately 85 acres added by the buildings and roadways in the development itself, and the remainder from induced growth. The DEIS must comprehensively address water quality impacts related to this substantial increase in impervious surface, particularly the potential for significant increases in stormwater and pollutant runoff, which could adversely affect water quality.

The potential impervious surface area that could result from induced growth could be 12 acres according to estimates prepared by NYCDEP's consultants. (See

Appendix C.5) NYCDEP anticipates that 20 to 25 acres of commercial land could be developed to support this induced commercial construction, and the majority of the development pressure is expected to occur along NYS Route 28 in proximity to the entrance to the Belleayre Ski Center, which would impact the headwater streams and Birch Creek in the vicinity of the site. This has the potential to increase stream temperatures and pollutants from stormwater runoff and contaminant wash-off from parking lots and streets, causing water quality degradation in Birch Creek, Esopus Creek, and Ashokan Reservoirs. (see Appendix C.5) The DEIS should comprehensively address water quality implications related to this substantial increase in impervious surface.

4. Because the DEIS totally discounts the potential for additional residential development, the evaluation of natural resource implications of new homes is insufficient.

A number of natural resource modifications are likely to occur as a result of the increased need for residential development (not accounted for in the DEIS), as well as the anticipated commercial development, which would have the potential to adversely impact water quality. Potential alterations to natural resources include land clearing for residential and commercial units, paving of driveways and parking lots, and conversion of forest to landscaped areas. (see Appendix C.5)

5. Cleared forest for landscaping associated with expected new residential construction could increase total phosphorus loads by more than 20%.

The DEIS does not identify the impacts of cleared forest for landscaping. Increased nutrient and pesticide loading from landscaping and lawn maintenance, however, could result from the increase in residential and commercial development. Based on a conservative estimate, where all of the proposed residential development resulted in the conversion of forest to grass, no stormwater quality controls were to be implemented (stormwater controls are not required under the Watershed Rules and Regulations and NYSDEC General Stormwater Permit GP-02-04 if development occurs on individual lots of less than 1 acre), and yard area for each new house equaled 1 acre rather than being clustered in concentrated developments, a total of 158 acres of forested land would be converted to landscaped area over the next ten years. Assuming a rough export coefficient of 0.33 kg/ha/year for deciduous forest and 0.57 kg/ha/year for grass areas, this could result in net increase of 15 kg/year in total phosphorus (TP) loads. This increase is in addition to the 70 kg/year increase in TP export already projected in the DEIS as a direct result of the proposed Belleayre Resort. (see Appendix C.5)

VIII. Alternatives Analysis

Appendix 27 of the DEIS concludes that none of the four development alternatives examined in appendix 27 of the DEIS are economically viable and

thus cannot be considered a "reasonable" alternative to the Proposed Action. This is not in compliance with SEQRA's mandate that an EIS evaluate a range of reasonable alternatives. At least some reasonable alternatives must be considered before the DEIS can conclude that there is not a reasonable variation of resort components anywhere on the Applicant's 1960 acres of land. In addition, because alternatives were dismissed, the DEIS does not include an environmental analysis of any other possible development scenarios, and thus there is no means for determining if there is an alternative with less adverse environmental impacts and/or impacts that are more realistically mitigatable.

The Economic Evaluation study in Appendix 27 of the DEIS, "Fiscal and Marketing Information," presents a discussion of the economics of the hotels, golf courses, country clubs, and spa operations of the proposed Belleayre Resort, as well as of the timeshare/vacation club component. The purpose of the evaluation was, "to determine whether either of the two central components of the proposed development (Big Indian Plateau or Wildacres Resort), or any of the major components contained therein can be feasibly eliminated or delayed without adversely affecting the feasibility of the remaining component." The analysis finds that the only scenario (of the five it considers) that provides the necessary critical mass and synergy to yield a viable economic return is the resort as proposed with all of its components: "… only the entirety of the subject resort … can generate the critical mass in terms of market awareness that is necessary to overcome the limitations associated with the surrounding area." (DEIS Appendix 27, HVS Consulting Services report page 7-1)

The DEIS states, without providing justification or citing a source, that alternative developments are not economically feasible to the developer because "hotel and resort IRRs [yields] *generally* enter into feasible territory once they exceed approximately 14%," (DEIS Appendix 27, p. 1-9 (emphasis added)) and, according to the calculations made in the DEIS, only the full development exceeds the 14.7% IRR that the Applicant considers to be the acceptable industry standard. Notably, however, this conclusion ignores the IRRs associated independently with the detached lodging units, which range from 32.5% to as high as 41.6%, according to Table 6-18 in Appendix 27 of the DEIS.

SEQRA does not suggest that only the most profitable alternative formulation of a proposed project need be considered. In addition, if the resort as proposed does indeed exceed the threshold that defines a reasonable rate of return¸ NYCDEP challenges the DEIS' conclusion that the yield of all four of the other alternatives considered falls below that threshold. Conversely, if the fact that alternatives initially identified are determined not to be reasonable, does not relieve the Applicant of the responsibility of evaluating alternatives; they must define others that are within the range of reasonable alternatives and evaluate their potential adverse environmental impacts.

A critical factor in determining the IRR of the proposed Belleayre Resort and the development alternatives considered is operating costs. Wages are a major

component of such costs and thus wages to be paid to workers at the proposed Belleayre Resort directly affect the financial return to the investors in the project. While the DEIS does not provide a consistent estimate of potential annual revenues, Appendix 26 indicates annual revenue of $43.4 million, while estimating annual wages of $20.5 million. This suggests that wages represent more than 47% of revenues. As such, any reduction in wages would have a positive impact on profitability, and thus on the IRR for a given development alternative.

The wages projected in the DEIS to be paid to employees at the resort are unrealistically high when compared to wages paid for similar employment positions in the region. The DEIS reports that the average wage and salary during the operational period is projected to be $27,424, which is about 7.8% higher than the indicated private sector wage in the Tri-County Area (Delaware, Ulster, and Greene counties). The average wage and salary estimated for the hotel and lodging jobs would be $28,296, and for the restaurant jobs it would be $27,516. In comparison, the average wage in the Tri-County Area in 2002 in the Accommodation sector was $17,773, and $10,426 per year in the Food Service sector. (See Table 3, below, prepared by RKG) This indicates that the proposed wages for 79.5% of the jobs during the operational phase of the proposed Belleayre Resort would be between 59% and 164% higher than the current prevailing average wage for like employment in the Tri-County Area.

Table 3
Average Wages at the Proposed Belleayre Resort and Actual Average Wages in Tri-County Area (2002)

	Proposed Wage	2002 Average Wage	Average Wage to Proposed Wage	Notes
Golf	$27,138	$14,183	91.3%	[1]
Hotel/Lodging	$28,296	$17,773	59.2%	[2]
Restaurants	$27,516	$10,426	163.9%	[3]
Retail	$21,617	$21,033	2.8%	[4]
Timeshares	$21,601	$23,204	-6.9%	[5]
Wilderness Center	$29,563	$25,433	16.2%	[6]

Notes:
[1] Average Wage in Amusement, Gambling & Recreation sector
[2] Average Wage in Accommodation sector
[3] Average Wage in Food Services and Drinking Places sector
[4] Average Wage in Retail sector
[5] Average Wage in Real Estate, Sales & Leasing
[6] Average Wage Overall
Source: Belleayre DEIS, NYDOL and RKG Associates, Inc.

Because the operating costs are so exaggerated, the IRR for each of the alternatives – as well as the Proposed Action – is understated. In addition, the evaluation of hotel and country club scenarios based on a target IRR of 14.7% ignores the anticipated IRR from the detached lodging units, which, as discussed above, the DEIS estimates to be between 32.5% and 41.6%. As a result, the conclusion that none of these alternatives are economically feasible is potentially flawed, an additional reason why the Applicant cannot depend on the supposed economic infeasibility of every development alternative as the basis for its declination to consider any of these options as reasonable. The overstatement of wages in the pro forma for the proposed Belleayre Resort suggests that if wages more typical of the region were proposed and utilized in the alternatives analysis yields would significantly increase, and if the detached lodging units are included in the calculation of the IRR, one or more of the development alternatives of lesser scale may well exceed the minimum threshold for fiscal feasibility established by the Applicant.

Furthermore, the Applicant is proposing to develop approximately 573 acres of the assemblage of 1,387 acres that it owns. Therefore, alternative siting on the Applicant's property of different development scenarios must be considered as well. There are other alternatives required by the Final Scoping Document to be evaluated that are absent in the DEIS. These include alternative water supply techniques, wastewater treatment technologies and services, access locations and internal roadway systems, and the no-action alternative of leaving the lands in their present state. Of particular importance to NYCDEP is that alternative stormwater management practices are assessed, as required, for the potential to mitigate adverse impacts from a range of pollutants, added chemicals, total

phosphorous, and suspended solids resulting from erosion on the project site and adjoining lands after stormwater is discharged from the Applicant's project site.

IX. Protection Mechanisms: Recommended Strategies for Future Protection of the Applicant's Land as Well as Enforcement of Proposed Mitigation and Monitoring Plans.

Given the concerns relative to the market and financial viability of the proposed Belleayre Resort, combined with its potentially significant adverse environmental impacts to the Catskills region, as well as potential impacts to water quality within the West-of-Hudson watershed, NYCDEP believes strongly that the Applicant-recommended mitigation measures are woefully inadequate to mitigate long-term risks associated with a lapse in diligent adherence to the numerous, complex controls and management plans during operation of the project or the uncertainty regarding if and how the site would be reclaimed and how stormwater management system would be maintained if the project is unsustainable, due to economic or other circumstances, after it has been partially or fully completed. As previously mentioned, the nearly 70 stormwater ponds, once installed, would require maintenance in perpetuity (i.e., sediment and debris removal) to prevent failure and degradation of water quality.

Although NYCDEP does not believe that the DEIS can be considered complete, or that the potential for significant impacts enumerated throughout this report can necessarily be mitigatable due to the scope and scale of the proposed project, NYCDEP considers the following protection measures to be necessary for any development of this magnitude. Specifically, NYCDEP recommends five categories of protection be put in place, assuming that the Applicant first addresses *all* other issues raised during the SEQRA and Uniform Procedures Act processes, and that NYSDEC and all involved agencies are satisfied that adverse impacts have been fully identified and effectively mitigated: conservation easements, deed restrictions, construction monitoring, operation monitoring, and financial surety.

In the DEIS, the Applicant asserts that impacts from the proposed Belleayre Resort will be mitigated because no development will occur in the future on the 1,387 acres of its land holdings that are not disturbed by the proposed project. As discussed above, this is a minimal mitigation, as the portions of the property not being developed are all of those for which genuine physical impediments to construction exist. Nevertheless, NYCDEP recommends a conservation easement in favor of NYSDEC or NYCDEP for the undeveloped property. The easement would run with the land so that Crossroads Ventures, or its successors or assigns, could only sell, transfer, or convey the property under the restrictions and obligations of the easement. The easement would be required as a condition of approval after all other issues raised during the review of the DEIS have been rectified.

Included as part of deed restrictions should be limits on: the amount of impervious surfaces; further development and clearing of undeveloped land; use of chemicals; planting of invasive non-native species; and protection of wetlands. In addition, NYSDEC, NYCDEP, and the Towns of Shandaken and Middletown should be granted a right to access the property at any time for monitoring, inspection, records reviews, and testing to insure compliance with specified agreements.

In order to insure the protection of the WOH watershed, the Applicant should provide funding for NYCDEP to maintain on-site staffing to monitor construction activities, particularly those aspects which present erosion and sedimentation risks. Given the likelihood of construction in more than one area simultaneously, with up to fifty acres being developed at any one time, a team of four to six professionals is recommended, who may issue stop-work orders when conditions on the site violate project approvals, applicable laws (including the Watershed Rules and Regulations) of otherwise present an imminent risk to water quality.

NYCDEP also urges required monitoring of the golf course turf management and pest management operations. This could be achieved with an agreement that would allow NYCDEP site access for this purpose. Alternatively, however, the Applicant could apply for membership with a program such as the Audubon Signature Cooperative Sanctuary Program *(Audubon Signature Program)*. The goal of the Audubon Signature Program is, "to merge wildlife conservation, habitat enhancement, resource conservation, and environmental improvement with the economic agenda associated with the development." To achieve certification, the Applicant would be required to successfully complete and implement a Natural Resource Management Plan to Audubon International's specifications and pass an on-site environmental audit after project completion. To retain membership, the Applicant would be required to pass successive site audits and submit periodic reports.

Finally, as the financial risks associated with a project of the magnitude of the proposed Belleayre Resort are substantial, NYCDEP believes that financial security protection, particularly related to construction and long-term operation of the WWTPs and maintenance of stormwater controls is essential to ensure long-term protection of the watershed. As such, NYCDEP recommends that the Applicant be required to post bonds or implement other financial security arrangements, in sufficient amounts and with/through creditworthy sureties so as to ensure (1) completion of construction of the proposed WWTPs in accordance with approved plans and specifications, and (2) the collection and remote treatment of all wastewater destined for each WWTP, if and as needed, until such time as the WWTP has been operated successfully in full compliance with SPDES permit conditions and the Watershed Rules and Regulations for a period of at least on full year. In addition, since development of the proposed Belleayre Resort is expected to require eight to twelve[8] years to complete, it is

[8] While the DEIS indicates a construction period of eight years, any slowdown in the sales of detached lodging units would extend the necessary construction period. A maximum of twelve years was used to

recommended that the Applicant be required to provide financial security (through the posting of bonds or other equivalent arrangements) for the total operating costs for each WWTP and the temporary stormwater management and erosion control systems for a period of twelve years after commencement of construction. Finally, the Applicant should be required to provide financial security for the long-term operation and maintenance of each WWTP and of all permanent stormwater and erosion control measures, from the date of completion of construction for a period of at least 5 years. All financial security arrangements should be from creditworthy institutions, should be non-cancelable, and should be enforceable by NYSDEC and NYCDEP, as the regulatory agencies with jurisdiction over WWTP design and construction and stormwater management in the New York City watershed.

X. Impacts at the Community Level

In reviewing the DEIS, NYCDEP focused on issues pertaining to water quality and deferred to the Towns of Shandaken and Middletown for providing detailed analyses of certain local impacts. NYCDEP provided certain funding to the Towns of Middletown and Shandaken so that these communities could engage consultants to assist in the review of the local impacts and mitigation measures in the DEIS. Funding was used to evaluate the DEIS and determine whether the DEIS adequately evaluated the following:

- air impacts;
- traffic impacts;
- noise impacts;
- visual impacts;
- impacts on local tax base and municipal services; and
- potential changes in community character, including induced growth from the project.

The Town of Middletown retained Fraser and Associates of Rensselaer to evaluate these issues, while the Town of Shandaken retained Ferrandino and Associates of Elmsford. Reports from these two consultants will be submitted to NYSDEC under separate cover.

Although NYCDEP's consultants did not look specifically at local issues, they did review those portions of the DEIS which deal with fiscal issues. This was necessary for the induced growth analysis. A major flaw in the DEIS is that the fiscal impact analysis looks at potential property tax increases but does not discuss, or attempt to quantify, any increase in costs for municipal services,

---

reflect the uncertainty associated with timeshare units, which have not been widely developed in the Catskill region.

including schools, police, fire, etc. This could be a significant issue for the Towns. For example, given the multi-story nature of the hotels at the proposed Belleayre Resort, one or both communities could have to purchase a ladder truck capable of reaching four- to six-stories, at a cost of $300,000 to $500,000 or more.

The DEIS includes little information for either Middletown or Shandaken, both of which would bear the majority of this project's impacts, particularly from a fiscal impact perspective. Since the majority of the proposed resort development is located in Shandaken, Shandaken is likely to see the majority of new tax revenue associated with the development. However, since housing is generally less expensive in Middletown, some resort workers (and their school-aged children) who migrate to the area to reduce their commuting distances may live in Middletown. This could create a negative fiscal situation for Middletown, as that Town would be required to pay for increased education and municipal services, while only receiving tax revenues from the small portion of the development located in the Town of Middletown (primarily the 21 new homes at Highmount Estates). (see Appendix A.7) As discussed in Appendix A.1 of this report, the DEIS does not address baseline socioeconomic conditions for the host communities.

It is important to once again note that the DEIS ignores the potential for induced residential growth associated with the proposed Belleayre Resort. NYCDEP's analysis estimated that 158 housing units would be needed in the four-town study area to support population growth projections associated with the construction and operation of the proposed resort. At .3 to .6 students per household, the schools in the four-town study area could see an additional 50 to 100 students.

The DEIS also indicates that the Margaretville Central School District "stated that they have capacity to serve the proposed project," and references an exhibit in Appendix 6 of the DEIS, "Letters of Record." However, the letter provided by Marcia Franklin, Superintendent of Schools, merely indicates, "Our organization has the capacity to service the Belleayre Resort at Catskill Park project, *with the understanding that probably only the privately-owned homes in Highmount Estates might house school-aged children*." (emphasis added by NYCDEP) Given the potential for additional residential development, it is highly likely that school-aged children would come from other areas in addition to Highmount Estates.

Mitigation measures for potential impacts on the local schools should be proposed, since ignoring these impacts is unsound and unrealistic. The DEIS goes on to indicate, "The vast majority of employees in the hotel industry are young, mostly in their 20s and mostly childless. Those who have children typically have very young children." No source is cited for these "statistics." In any case, an employee who has "very young children" would likely have an impact on the schools in the region within three to four years, as the children reach school-age. (see Appendix A.7, page 6)

The DEIS does not adequately address many local traffic issues, particularly traffic associated with construction of the proposed resort. The potential impacts on traffic during the construction period (8 years) is not identified or analyzed in any detail. The DEIS also indicates that more than 200,000 yards of topsoil would be imported for construction of the golf courses, and the impact of this traffic, which would presumably occur during daytime working hours through summer construction seasons has not been addressed in the DEIS. (see Appendix A.7)

Also, the DEIS estimates more than 25,000 potential buyers of the timeshare units that would need to make the trip to view the resort and the surrounding region. However, it does not specifically identify any of the impacts associated with these visitors, and it is unclear whether these potential buyers are included in the traffic volumes that were analyzed.

In addition, the DEIS does not analyze the potential impacts of the proposed Belleayre Resort paying wages substantially above the average for the region. The DEIS does not adequately evaluate how the higher average wage to be paid at the resort may cannibalize employees from the existing jobs in the region, and therefore force existing businesses to increase their wages to retain employees and the potential effects on their viability and competitiveness. As shown in Table 3 of this report, the DEIS projects wage rates that are as much as 163% over the existing average in the region. A doubling of wage rates, while beneficial to employees, could have a significant negative impact on profitability for many small employers. Many of the retail and hospitality employers in the primary market area, even those which are not in direct competition with the proposed Belleayre Resort, could potentially be forced out of business if they had to pay wages similar to those being proposed in the DEIS for employees of the resort.