STATE OF NEW YORK : DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Applications of CROSSROADS VENTURES, LLC, for permits to construct and operate a proposed development to be known as The Belleayre Resort at Catskill Park located in the Town of Shandaken in Ulster County, New York, and the Town of Middletown in Delaware County, New York, pursuant to Environmental Conservation Law (ECL) Article 15, Titles 5 and 15, and Article 17, Titles 7 and 8 and Parts 601, 608 and 750 through 758 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR), and for a Water Quality Certification pursuant to Section 401 of the Federal Water Pollution Control Act and 6 NYCRR Part 608.	**RULING ON ISSUES AND PARTY STATUS** **DEC Application Numbers:** **0-9999-00096/00001** **0-9999-00096/00003** **0-9999-00096/00005** **0-9999-00096/00007** **0-9999-00096/00009** **0-9999-00096/00010**

SUMMARY OF RULINGS

This ruling identifies the parties and the issues for adjudication in the hearing on the applications of Crossroads Ventures, LLC, for permits to construct and operate a proposed development to be known as The Belleayre Resort at Catskill Park located in the Town of Shandaken in Ulster County, New York, and the Town of Middletown in Delaware County, New York, pursuant to Environmental Conservation Law (ECL) article 15, titles 5 and 15, and article 17, titles 7 and 8 and parts 601, 608 and 750 through 758 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR), and for a Water Quality Certification pursuant to Section 401 of the Federal Water Pollution Control Act and 6 NYCRR Part 608. The parties to the hearing are the Applicant; the Department Staff of the Department of Environmental Conservation; the Catskill Preservation Coalition and the Sierra Club; the City of New York; the Coalition of Watershed Towns, Delaware County, the Town of Middletown and the Town of Shandaken; the Planning Board of the Town of Shandaken; and the Watershed Inspector General. The issues identified for adjudication in the hearing are: (1) Water Supply and Groundwater and Surface Water Impacts; (2) Aquatic Habitat Impacts; (3) Stormwater Impacts; (4) Impacts to the

Catskill Forest Preserve; (5) Impacts to Wildlife; (6) Noise Impacts; (7) Traffic Impacts; (8) Visual Impacts; (9) Impacts to Community Character; (10) Secondary and Induced Growth Impacts; (11) Cumulative Impacts; and (12) Alternatives. Proposed issues which will not be adjudicated include (1) Forestry Impacts; (2) Wastewater State Pollutant Discharge Elimination System (SPDES) Impacts; (3) Mining; and (4) the Applicability of the New York City Watershed Memorandum of Agreement of 1997, the New York City Watershed Rules and Regulations, and the Public Health Law.

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BACKGROUND

Project Description and Location

Crossroads Ventures, LLC, PO Box 267, Mt. Tremper, NY 12457, has submitted applications for a proposed development to be known as “The Belleayre Resort at Catskill Park.” The project includes a total of 400 hotel rooms, 351 additional hotel and housing units, a 21-lot single-family residential subdivision and two 18-hole golf courses. The project would be developed within 1,960 acres in the Catskill Mountains of Ulster and Delaware Counties, with a total of 573 acres disturbed and the remainder left undisturbed.

The project site is located in the Towns of Shandaken (Ulster Co.) and Middletown (Delaware Co.), within the New York City Catskill and Delaware Watershed (the Pepacton and Ashokan Reservoirs), and within the boundaries of the New York State Catskill Park. The project is adjacent to the state-owned Belleayre Mountain Ski Center. The project is divided into two related but geographically distinct developments, the Big Indian Plateau and the Wildacres Resort. The layout plan for the proposed project is annexed hereto, Appendix 1.

The proposed Big Indian Plateau would be developed on a 1,242 acre site east of Belleayre Mountain Ski Center. A total of 331 acres would be developed to build an 18-hole golf course, a 150-room hotel, and 183 additional hotel/detached lodging units in 77 buildings, and related infrastructure. This project site lies within the New York City Ashokan Reservoir watershed, and would be served by central water (provided by an on-site well) and central wastewater treatment, with effluent discharge to Birch Creek and/or golf course irrigation.

The proposed Wildacres Resort would be developed on 242 acres of a 718 acre site west of the Belleayre Ski Center and would include an 18-hole golf course, a 250-room hotel, 168 additional hotel/detached lodging units in 21 buildings, and a 21-lot subdivision of single-family homes, and related infrastructure. This project would be served by central water (provided by the Village of Fleischmanns water system) and central wastewater treatment, with effluent discharged to an unnamed tributary of Emory Brook and/or golf course irrigation. This site is within the New York City Pepacton Reservoir watershed.

Permits Required

Individual Water Supply permits under title 15 of Environmental Conservation Law (ECL) article 15 and State Pollutant Discharge Elimination System (SPDES) permits under titles 7 and 8 of ECL article 17 have been requested for these developments. In addition, a Use and Protection of Waters permit under title 5 of ECL article 15 is required for proposed road crossings of regulated streams on the property and for the treated wastewater outfall structures to Birch Creek and the Emory Brook tributary. Also, an application for a Water Quality Certification in accordance with Section 401 of the Clean Water Act has been submitted. A Nationwide permit has been issued by the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act for this project.

Department Staff have prepared separate draft SPDES permits for the Big Indian and Wildacres components of the project. These draft permits contain staff proposed effluent limitations and monitoring requirements for the wastewater treatment and stormwater treatment discharges planned for the development. Sewage Works Corporations, established pursuant to Transportation Corporation Law, would be responsible for the operation of each treatment facility. For the Big Indian Plateau, an average of 87,000 gallons per day of treated sanitary wastewater are proposed to be discharged to Birch Creek. For the Wildacres

Resort, an average of 112,000 gallons per day of treated sanitary wastewater are proposed to be discharged to an unnamed tributary of Emory Brook. During certain periods, treated sanitary wastewater is proposed to be used as irrigation water for both golf courses. A SPDES "Fact Sheet" has been prepared for each permit and provides background documentation supporting DEC's proposed draft permits.

SEQRA Status and Determinations of Completeness

Under the State Environmental Quality Review Act (SEQR), the project associated with this permit is classified as a Type I Action with the Department of Environmental Conservation (DEC) designated as the lead agency. It has been determined that the project may have a significant effect on the environment. Accordingly, a Draft Environmental Impact Statement (DEIS) has been prepared and accepted as complete by DEC as SEQR lead agency.

On December 10, 2003, the Department issued a Notice of Complete Application for the proposed project.

LEGISLATIVE PUBLIC HEARINGS

Hearings of January 14 and 20, 2004

A Notice of Legislative Hearing, dated December 5, 2003, was published in the *Environmental Notice Bulletin* (*ENB*) and as a legal notice in two newspapers of general circulation in the area of the proposed project, the *Catskill Mountain News* on December 10, 2003, and the *Ulster County Townsman* on December 11, 2003. The Notice provided, in part, that two legislative hearing sessions, pursuant to 6 NYCRR Parts 617, 621 and 624 would be convened in the matter, the first on Wednesday, January 14, 2004, at the Margaretville Central School, 415 Main Street, Margaretville, New York, New York, from 4:00 P.M. to 5:30 P.M., and then recommencing at 7:00 P.M., and the second on Thursday, January 15, 2004, at the Onteora Central School, 4166 State Highway 28, Boiceville, New York, from 4:00 P.M. to 5:30 P.M., and then recommencing at 7:00 P.M., to receive unsworn statements from the public concerning the permit application. The Notice further provided that should inclement weather prevent either or both hearings from proceeding, the hearing would be held on Tuesday, January 20, 2004, at the Onteora Central School, 4166 State Highway 28, Boiceville, New York, commencing at 7:00 P.M.

As a result of inclement weather, the legislative hearing session of January 15, 2004, was postponed until January 20, 2004.

The afternoon and evening hearing sessions on January 14, 2004, in Margaretville, went forward as announced and were each attended by approximately 200 persons. A total of 56 individuals provided oral comments, 17 in the afternoon session and 39 in the evening session.

The hearing session on January 20, 2004, in Boiceville, was attended by more than 650 persons. A total of 49 individuals provided oral comments. In view of the number of people who still wished to be heard at the end of the evening, it was determined that the legislative hearing would be continued on February 3, 2004, in Boiceville. A notice of this continuation was published in the *ENB* on January 28, 2004.

Hearing of February 3, 2004

The legislative hearing continued on February 3, 2004. Eighteen individuals provided oral comments. Due to inclement weather only 80 people attended this session and it was determined to further continue the hearing to February 19, 2004. A notice of this continuation was published in the *ENB* on February 11, 2004.

Hearing of February 19, 2004

The legislative hearing was continued and concluded on February 19, 2004, in Boiceville. More than 200 persons attended. A total of 47 individuals provided oral comments.

Written Comments

As provided in the first Notice of December 5, 2003, and in the revised Notice of February 11, 2004, the filing of written comments from the public was solicited, resulting in the receipt of more than 700 pieces of correspondence.

Summary of the Oral and Written Comments Received

While numerous persons commented favorably on the proposed project, emphasizing its importance to the economic vitality of the region, the larger majority of comments received expressed concern for the significant impacts such a project would engender. These concerns included impacts to water quality and the Catskill Forest Preserve, visual impacts including light pollution, noise impacts both during and after construction of

the project, traffic impacts, and stormwater impacts. Moreover, many of the comments questioned the need for the project, its effect on the local economy and tourism, its ability to create stable employment opportunities, and its effect on local services and infrastructure, and their associated costs. Moreover, many comments expressed concern for the scale of the project and the apparent lack of any meaningful consideration of alternatives to the proposed project.

ISSUES CONFERENCE

Issues Conference Participants

Pursuant to the revised Notice of February 11, 2004, a pre-adjudicatory hearing Issues Conference was convened at 10:00 A.M. on Tuesday, May 25, 2004, at the Middletown-Hardenburgh Fire District and Middletown Fire Hall, Church Street, Margaretville, New York, to determine what issues, if any, within the scope of the Department's regulatory purview, required adjudication and to consider all timely filed applications for party status to participate in any adjudicatory hearing which might be convened in this matter. Due to the extensive number of potential issues considered, the issues conference was continued on seventeen subsequent days, concluding on August 26, 2004. The participants during the issues conference were the Applicant; Department Staff of the Department of Environmental Conservation; the Catskill Preservation Coalition and the Sierra Club; the City of New York; and the Coalition of Watershed Towns, Delaware County and the Town of Middletown. While it submitted a petition for full party status for consideration at the issues conference, the Planning Board of the Town of Shandaken did not otherwise participate in the issues conference proceedings. This petition was submitted by Drayton Grant, Esq., of the law firm of Grant & Lyons, LLP, 145 Wurtemburg Road, Rhinebeck, New York 12572.

The Applicant was represented by Daniel A. Ruzow, Esq. and Terresa M. Bakner, Esq., of the law firm of Whiteman Osterman & Hanna, LLP, One Commerce Plaza, Albany, New York 12260.

Department Staff was represented by Vincent Altieri, Esq., Regional Attorney, and Carol Krebs, Esq., Assistant Regional Attorney, from the Department's Region 3 Office, 21 South Putt Corners Road, New Paltz, New York 12561-1691.

The Catskill Preservation Coalition and the Sierra Club were represented by Marc S. Gerstman, Esq., Cheryl A. Roberts, Esq. and Eric Goldstein, Esq., of counsel, of the Law Office of Marc

S. Gerstman, Esq., Robinson Square, 313 Hamilton Street, Albany, New York 12210.

The City of New York was represented by Hilary Meltzer, Esq., Daniel Greene, Esq. and Michael Burger, Esq., of the New York City Law Department, 100 Church Street, New York, New York 10007.

The Coalition of Watershed Towns, Delaware County, the Town of Middletown and the Town of Shandaken were represented by Kevin M. Young, Esq. and Jeffrey S. Baker, Esq., of the law firm of Young, Sommer, Ward, Ritzenberg, Baker & Moore, LLC, Executive Woods, 5 Palisades Drive, Albany, New York 12205.

Issues Conference Proceedings

The Issues Conference began on May 25, 2004, with the identification of the various documents constituting the application and the draft permits as well as the DEIS and its related plans, maps and exhibits.

In accordance with the revised notice of February 11, 2004, petitions requesting full party or amicus status pursuant to 6 NYCRR 624.5(b) were to be filed by April 23, 2004. Three petitions for full party status were timely received, the Planning Board of the Town of Shandaken; the Catskill Preservation Coalition and the Sierra Club; and the City of New York. A petition was filed by the Coalition of Watershed Towns, Delaware County and the Town of Middletown on May 25, 2004. This petition was amended to add the Town of Shandaken on June 9, 2004. During the course of the issues conference, no other petitions were received. The Administrative Law Judge (ALJ) noted the receipt of the four petitions, and then inquired of the mandatory parties, the Applicant and Department Staff what, if any, objection they had to the standing of any of the petitioners as a party to the instant proceeding, in particular, with regard to those petitioners' respective requisite environmental interest in the matter as mandated by 6 NYCRR 624.5(b)(1).

Thereafter, the conference focused on the various issues asserted by the petitioners to be both substantive and significant and therefore appropriate for adjudication pursuant to 6 NYCRR 624.4(c). The issues raised comprised three broad categories (1) Department permit application and programs, (2) SEQRA concerns, and (3) law and policy concerns. As to the first category, Department permit application and programs, issues were raised concerning mining, wastewater, stormwater and

water supply. As to the second category, SEQRA, issues raised included (1) groundwater and surface water impacts, (2) aquatic habitat impacts, (3) impacts to wildlife, (4) noise impacts, (4) impacts to the forest preserve, (5) forestry impacts, (6) traffic impacts, (7) visual impacts, (8) impacts to community character, (9) secondary growth impacts, (10) cumulative impacts, and (11) alternatives to the proposed project. As to the third category, law and policy concerns, issues were raised as to the proper applicability of the Watershed Agreement of 1997, the New York City Watershed Rules and Regulations, and the Public Health Law to the proposed project.

The issues conference required eighteen days to complete and was convened on the following days in 2004: May 25 and 27; June 8 through 10, 18, 22 through 25 and 29; July 12, 21, 29 and 30; and August 24 through 26. In addition five site visits were conducted on various dates throughout the proceeding.

Post-Conference Proceedings

After the close of the proceedings on August 26, 2004, and at the request of the parties, supplemental submissions to the record of the issues conference were permitted. The parties were also permitted the opportunity to respond to these additional matters. As directed by the ALJ, closing briefs were received from all parties by December 22, 2004, and reply briefs were received by January 21, 2005.

On January 21, 2005, the ALJ received a petition from the Watershed Inspector General, James M. Tierney, Esq., seeking to participate in any adjudicatory hearing that might be convened in this matter as an *amicus* party. The petition addressed the requirements of 6 NYCRR 624.5(b)(1) and (3), and articulated the reasons for its filing after the date set forth in the revised notice of February 11, 2004, as required by 6 NYCRR 624.5(c). Following a subsequent conference call with the parties and the Watershed Inspector General, the parties were afforded time to respond to the petition, and the Watershed Inspector General was allowed an opportunity to reply to those responses. These submissions were received by March 8, 2005.

RULINGS ON PARTY STATUS

The Applicant and the Department Staff are automatically full parties to the proceeding pursuant to 6 NYCRR 624.5(a).

With respect to the petitioners Catskill Preservation Coalition and the Sierra Club; the City of New York; and the Coalition of Watershed Towns, Delaware County, the Town of Middletown and the Town of Shandaken, as provided in 6 NYCRR 624.5(d) and as applicable to this matter, to be entitled to full party status a determination must be made that they each have:

1. Filed an acceptable petition pursuant to 6 NYCRR 624.5(b)(1) and (2);

2. Raised a substantive and significant issue; and

3. Demonstrated an adequate environmental interest.

Catskill Preservation Coalition and the Sierra Club

The Catskill Preservation Coalition and the Sierra Club (CPC) is an association of various groups sharing a common connection to and interest in the environmental integrity and health of the Catskills. The groups comprising CPC are Trout Unlimited; the Natural Resources Defense Council, Inc.; Riverkeeper, Inc.; the Catskill Center for Conservation and Development; Friends of Catskill Park; the Zen Environmental Studies Institute; the Pine Hill Water District Coalition; the Catskill Heritage Alliance; the Theodore Gordon Flyfishers, Inc.; the New York Public Interest Research Group; and the Sierra Club.

Trout Unlimited, a national organization of more than 130,000 members, was founded more than 40 years ago in the Catskills. (Transcript of Issues Conference at page 56; hereinafter abbreviated "T at _") Approximately 10,000 of its members live in New York State, several hundred of whom reside in the Hudson Valley. (*Id.*) Trout Unlimited's mission is to preserve, protect and restore cold water fisheries, including trout and salmon, and their watersheds. (*Id.* and CPC Petition for Party Status, Office of Hearings and Mediation Services Exhibit 8 at 4; generally, hereinafter abbreviated OHMS Ex. _ at _.) This mission is accomplished through a network of volunteers associated with its various local chapters. Two chapters of the organization, Ashokan/Pepacton and Catskill Mountains, are jointly responsible for the Esopus-Ashokan system. (OHMS Ex. 8 at 4.) Within the preceding few years, these chapters have been directly involved in several projects at or near the Applicant's proposed site. These projects have included (1) participation in the Birch Creek Project, a continuing effort to improve fish habitat on Birch Creek which included a joint project with the US Fish and Wildlife Service to install fish-friendly baffles on a double-concrete box culvert in Pine Hill; (2) planting willows

and other trees in the Department established Day Use Area at Pine Hill; and (3) collaborating with the Department's Division of Operations to install a Denil steep-pass fishway for the Belleayre Mountain Ski Center diversion structure, which the chapters will purchase through a grant from the national Trout Unlimited organization. (OHMS Ex. 8 at 4-5.) As an integral part of the Esopus system, Trout Unlimited seeks to ensure the continued integrity of the trout spawning habitat provided by Birch Creek and Lost Clove Creek where Rainbow, Brown and Brook trout fingerlings can be observed. (OHMS Ex. 8 at 5.) The organization is concerned that the proposed project could threaten this important fish habitat. (T at 56.)

The Natural Resources Defense Council, Inc. (NRDC), is a national nonprofit legal and scientific organization of over 500,000 members, including over 53,000 in the State of New York. (T at 54.) Of this New York membership, approximately 30,000 individuals live in New York City and Westchester County and consume the drinking water provided by the New York City Watershed. Several thousand of its members live in the Catskills, many of whom live or work in the area of the proposed project. (*Id.* and OHMS Ex. 8 at 5-6.) For the past 15 years, NRDC has actively focused on New York City Watershed related issues, including the protection of sensitive lands within the Watershed and opposing what NRDC believes to be inappropriate incursions into the landscape. (*Id.*)

Riverkeeper, Inc., is a New York not-for-profit public interest environmental organization dedicated to protecting the Hudson River and its tributaries, as well as the New York City Watershed. Many of its more than 5000 members live in or near and fish or otherwise use and enjoy the Catskill and Delaware watersheds. (T at 51 and OHMS Ex. 8 at 6-7.) A signatory to the New York City Watershed Memorandum of Agreement of 1997, Riverkeeper, Inc., has made it its objective to oversee the implementation and enforcement of the Agreement. (T at 52.) It supports environmentally sensitive growth within the New York City Watershed, provided a proposed project is appropriate to the area and its environmental impacts do not threaten water quality or the quality of life within the Watershed. (*Id.*)

Founded in 1969, the Catskill Center for Conservation and Development is a nonprofit organization "committed to balancing the protection of natural resources with sustainable economic development in the Catskill region." (OHMS Ex. 8 at 7; T at 45.) In this regard, it has sponsored the development and implementation of innovative programs focusing on natural resource conservation as well as community planning and

development. (OHMS Ex. 8 at 7.) It also develops and provides educational and other programs embracing regional arts and culture. (*Id.*) In achieving its objectives, the Center has (1) partnered with other agencies and organizations to protect and conserve the area's natural resources; (2) monitored and actively participated in addressing regional environmental, natural resource and land use issues; (3) to foster sustainable communities, provided support to regional small business in the form of technical assistance, information and leadership; (4) developed an interdisciplinary Catskill curriculum for teachers; (5) coordinated a regional stream-monitoring network comprised of local school and public volunteer groups; (6) enhanced and focused public awareness of the Catskill's rich cultural and artistic heritage; and (7) sponsored various forums and conferences bringing together regional stakeholders and policy makers. (*Id.* at 7-8) The Center is a signatory to the New York City Watershed Memorandum of Agreement of 1997. (T at 45.) The Center is concerned that the proposed project does not reflect responsible land use planning and is not suited to the Catskill Park, due primarily to its size, and its potential impacts to environmentally sensitive areas, the character of local communities, and the New York City drinking water supply. (OHMS Ex. 8 at 8.)

Friends of Catskill Park is a volunteer community-based organization located Shandaken, New York. (OHMS Ex. 8 at 8-9.) Formed in response to the presently proposed Belleyare Resort at Catskill Park, its more than 700 supporters include residents of the central Catskill area to be directly impacted by the proposed project. (*Id.*) As stated in CPC's Petition for Party Status, and as reiterated by its spokesperson at the issues conference, Friends of Catskill Park's "mission is to protect the fragile balance that currently exists among the Catskill Park, the New York State Forest Preserve within the Park, the New York City Watershed and the communities within the Park, all which co-exist harmoniously and serve a wide range of needs throughout the state." (*Id.* at 9.) Implicit in its stated mission is the concern that the proposed project could upset that balance and lead to a degradation of the area's environment and its protected drinking water supply. (*Id.*)

The Zen Environmental Studies Institute is a not-for-profit environmental organization operating training facilities on Raquette Lake in the Adirondack Park, as well as a 35 acre site on the Esopus River in Mount Tremper. (T at 43; OHMS Ex. 8 at 9.) Approximately 15 acres of its Mount Tremper facility are ecologically fragile wetlands and much of its ecological training takes places within them. (*Id.*) Many of the Institute's members

use the forest preserve and the natural resources in and around the site of the proposed project. (T at 44.) In addition, they are active in community efforts to preserve and protect these resources. (*Id.*) The Institute is concerned that the creation of impervious surfaces occasioned by the proposed project could result in increases in runoff to the Esopus, particularly when it is in flood stage, causing damage to the Institute's already fragile wetlands. (OHMS Ex. 8 at 10; T at 43-44.) The Institute is also concerned that golf course pesticides and fertilizers, chlorinated hydrocarbons and phosphorous-containing chemicals may find their way into the Esopus despite the proposed detention ponds and filtration catch-basins proposed by the Applicant. (*Id.*) The Institute asserts that the design of these preventive measures is not based on experimentally verifiable data. (*Id.*)

The Pine Hill Water District Coalition is a not-for-profit organization formed to protect the water supply of the Pine Hill Water District, promote the reconstruction of its infrastructure and advocate on behalf of the people who use and enjoy the water resources of Pine Hill. (OHMS Ex. 8 at 10; T at 46.) Its members live in and around Pine Hill and most of them have water supplied by the municipally owned Pine Hill Water District, formed in 2003. (OHMS Ex. 8 at 10.) Inasmuch as the Big Indian Resort is proposing to take water from sources within the Hamlet of Pine Hill, the Water Coalition is concerned that this taking will jeopardize existing water supplies in Pine Hill and limit the amount of water available for its future growth. (T at 46.) The Water Coalition believes that the Applicant has overestimated the amount of water available from Pine Hill and underestimated the current and future water use of both the proposed Big Indian Resort and the Hamlet of Pine Hill. (OHMS Ex. 8 at 10.)

The Catskill Heritage Alliance is an unincorporated organization most of whose approximately 300 members own property or reside in and around Shandaken, New York. (OHMS Ex. 8 at 11.) The Alliance was "formed for the purpose of preserving the harmony between the villages of the central Catskills and the surrounding wilderness through community revitalization, open space conservation, and environmental protection." (*Id.*) The Alliance believes that the proposed resort does not serve the economic interests of the communities affected by the project and would harm the character of those communities by draining resources needed for more sustainable forms of tourism and hamlet revitalization. (*Id.*) Moreover, the Alliance is concerned that the proposal has not adequately (1) examined potential environmental impacts to protected open space; (2) considered alternatives to the proposed project; (3) considered the impacts of other area developments such as the Belleayre Ski Center and

the Catskill Mountain Railroad; and (4) examined impacts to the water resources of Pine Hill. (*Id.* at 12)

The Theodore Gordon Flyfishers, as CPC's Petition for Party Status states, is "a dedicated group of five hundred members, including conservationists and anglers, who are deeply concerned with the future of the Esopus Creek and its ecosystem on Belleayre Mountain, including Birch Creek and Lost Clove Brook." (OHMS Ex. 8 at 12.) Twenty percent of its members reside in the Catskill region, including in Pine Hill and Fleischmanns. (T at 57.) Some of its members are fishing guides on the Esopus Creek, while others teach fly fishing and sell fly fishing gear in the area. (T at 58.) The group is concerned with the effect the proposed resort could have on the area's renowned trout habitat. (*Id.* and OHMS Ex. 8 at 12-13.)

The New York Public Interest Research Group (NYPIRG) is the State's largest non-profit public advocacy organization, primarily focusing on environmental protection, public health and government accountability issues. (OHMS Ex. 8 at 13.) As CPC's Petition for Party Status asserts, "as negotiators of, and signatories to, the 1997 New York City Watershed Memorandum of Agreement ("MOA"), NYPIRG is committed to overseeing the implementation and enforcement of the MOA and working with watershed stakeholders to ensure that the drinking water supply for more than nine million New Yorkers remains high quality." (*Id.* at 13-14) In addition, NYPIRG is an active participating member of the Watershed Protection and Partnership Council created by the MOA "to aid in the protection of drinking water quality and the economic vitality of the Watershed communities." (MOA Article IV, Paragraph 97)

The Sierra Club is a national, non-profit environmental and conservation organization dedicated to the protection of public health and the environment. Of its 700,000 members, 43,000 live in the State of New York with some residing, working and recreating within the area of the proposed project. (OHMS Ex. 8 at 14.) The Sierra Club's concerns include (1) impacts to the forest preserve caused by the influx of people occasioned by the proposed project; (2) stormwater runoff impacts both during construction, such as turbidity, and after construction, such as pesticide and nutrients from the proposed golf courses; and (3) impacts to trout habitat.

Although both the Applicant and the Department indicated they recognized the environmental interest of CPC in this matter, it is apparent from the foregoing that each of the constituent groups comprising CPC has established its own requisite

environmental interest in this proceeding in accordance with the requirements of 6 NYCRR 624.5(b)(1)(ii) and 624.5(d)(1)(iii). (T at 62 and 64.)

As discussed below, CPC has raised substantive and significant issues for adjudication and provided adequate offers of proof with respect to each as to (1) Water Supply and Groundwater and Surface Water Impacts; (2) Aquatic Habitat Impacts; (3) Stormwater Impacts; (4) Impacts to the Catskill Forest Preserve; (5) Impacts to Wildlife; (6) Noise Impacts; (7) Traffic Impacts; (8) Visual Impacts; (9) Impacts to Community Character; (10)Secondary and Induced Growth Impacts; (11) Cumulative Impacts; and (12) Alternatives.

RULING ONE

Upon the record, I find that the Petitioner, Catskill Preservation Coalition and the Sierra Club (CPC), has met the requirements of 6 NYCRR 624.5(d) in that it has filed a petition that comports with the requirements of 6 NYCRR 624.5(b)(1) and (2), raised issues that are both substantive and significant, and demonstrated an adequate environmental interest. Accordingly, CPC is granted full party status in this proceeding.

The City of New York

The proposed project lies entirely within the New York City Watershed, a surface water supply system of 19 reservoirs and 3 controlled lakes providing 1.3 billion gallons of drinking water daily to approximately nine million people, including one half of the residents of the State of New York. (T at 66.) Both the Ashokan Reservoir and the Pepacton Reservoir are part of this system. (T at 67.) The Ashokan Reservoir supplies approximately 24 percent of the water supply system's needs, while the Pepacton Reservoir supplies approximately 25 percent. (T at 72-73.) The proposed Big Indian Plateau resort lies within that portion of the Watershed draining through Birch Creek to the Esopus Creek and ultimately to the Ashokan Reservoir. (*Id.*) The proposed Wildacres Resort drains through Emory Brook and ultimately to the Pepacton Reservoir. (*Id.*) Both wastewater and stormwater discharges from Big Indian and Wildacres will thus discharge directly to the headwaters of these two reservoirs. (*Id.* and City of New York Petition for Full Party Status, OHMS Ex. 7 at 8.) Accordingly, the City seeks to ensure that any SPDES permits issued for this project are "based upon facts and data and proper models, and that the terms and conditions will adequately protect its water supply from harmful contamination." (OHMS Ex. 7 at 8.) The City is also concerned that impacts to water quality from

phosphorous and other nutrient laden sedimentation and erosion during and after construction could threaten its water supply. (*Id.*) Moreover, as an involved agency for the purposes of SEQRA review, the City is concerned about impacts to its water supply that would be occasioned by the commercial and residential secondary growth induced by the project. (OHMS Ex. 7 at 33-38.) Finally, the City is concerned that the environmental review in this matter has not adequately considered alternatives to the scope and size of the proposed project. (OHMS Ex. 7 at 38-44.)

It is clear from the foregoing that the City has established its requisite environmental interest in this proceeding in accordance with the requirements of 6 NYCRR 624.5(b)(1)(ii) and 624.5(d)(1)(iii). As will be discussed hereinafter, the City has raised substantive and significant issues for adjudication and provided adequate offers of proof with respect to each as to (1)Stormwater Impacts; (2)Secondary and Induced Growth Impacts; and (3) Alternatives.

RULING TWO

Upon the record, I find that the Petitioner, the City of New York (City), has met the requirements of 6 NYCRR 624.5(d) in that it has filed a petition that comports with the requirements of 6 NYCRR 624.5(b)(1) and (2), raised issues that are both substantive and significant, and demonstrated an adequate environmental interest. Accordingly, the City is granted full party status in this proceeding.

The Coalition of Watershed Towns, Delaware County, the Town of Middletown and the Town of Shandaken

The Coalition of Watershed Towns, Delaware County, the Town of Middletown and the Town of Shandaken are each signatories to the New York City Watershed Memorandum of Agreement of 1997 (MOA). The Coalition of Watershed Towns (Coalition or CWT) is comprised of the fifty towns included within the borders of that portion of the Watershed situated west of the Hudson River. (Watershed Communities Petition for Full Party Status, OHMS Ex. 9 at 3.) In addition, the proposed project is actually located in the Town of Middletown, in Delaware County, and the Town of Shandaken, in Ulster County, and, thus, either in or in proximity to the towns comprising the Coalition.

The Coalition has been active in matters relating to New York City's involvement in the watershed, including "the regulation of wetlands, septic systems, wastewater treatment plants and the recreational uses of City owned lands." (*Id.* at

4) The Coalition seeks to ensure that both the spirit and letter of the MOA are maintained, which, it asserts, "recognizes that economic development of the watershed communities is not inconsistent with water quality protection." (*Id.*) To this end, the Coalition maintains that New York City's regulatory authority in the Watershed is strictly limited to, and a function of, the City's concern for water quality. (*Id.*) Moreover, according to the Coalition, the City's regulatory involvement in the Watershed must be founded upon sound science and "not present a disproportionate burden on activities in the watershed." (*Id.*)

Delaware County is comprised of twenty-four towns, all of which are either wholly or partially within the New York City Watershed. (*Id.*) Both the Cannonsville and Pepacton Reservoirs are within the County's borders. (*Id.*) Through the Bush Kill and East Branch of the Delaware River, the Pepacton Reservoir ultimately receives the waters of Emory Brook and its unnamed tributaries on and contiguous to the Wildacres Resort. (Draft Environmental Impact Statement for the Belleayre Resort at Catskill Park, November 2003 (DEIS), Volume 1, at 3-14; OHMS Ex. 3.) As the Watershed Communities petition states, Delaware County "is concerned that [the City's] proposed regulatory standards are inconsistent with the existing regulations and do not reflect the elements of the MOA." (OHMS Ex. 9 at 4.)

The Wildacres Resort portion of the proposed project would be located in the Town of Middletown. (*Id.*) As with other municipalities comprising the Watershed Communities, the Town of Middletown is concerned that the manner in which the City may seek to implement and enforce the watershed regulations in this matter could impermissibly interfere with its authority under the Home Rule Law and its right to determine land use planning issues within its borders. (*Id.*)

Pursuant to a resolution of the Town Board of the Town of Shandaken authorizing the same, and by an Amended Petition for Full Party Status, dated June 8, 2004, the Watershed Communities sought to include the Town of Shandaken as one of its petitioners in this proceeding. (OHMS Ex. 14 at 1.) The larger part of the proposed project, including all of the Big Indian Plateau, would be located in the Town of Shandaken, and its concerns and issues in the proceeding are the same as the other members of the Watershed Communities. (*Id.*)

Pursuant to 6 NYCRR 624.5(c)(2)(i),(ii) and (iii), in order to receive consideration, a petition for party status filed after the date provided in the notice of hearing must include a discussion which provides:

(i) a demonstration that there is good cause for the late filing;

(ii) a demonstration that participation by the petitioner will not significantly delay the proceeding or unreasonably prejudice the other parties; and

(iii) a demonstration that participation will materially assist in the determination of issues raised in the proceeding.

With respect to good cause, the Watershed Communities argue that, in their view, certain issues raised by New York City in its petition for full party status, OHMS Ex. 7, suggest that the City is seeking "to improperly expand [its] jurisdiction and to argue for an application of the stormwater SPDES requirements" in a manner "not consistent with State law." (OHMS Ex. 9 at 5.) These issues of concern to the Watershed Communities were not raised specifically in the context of this proceeding until the City filed its petition for full party status. (*Id.*) Moreover, the filing of the Watershed Communities petition required a resolution authorizing the same from each of its constituent municipal members. (*Id.*)

With respect to the potential delay occasioned by the late filing of their petition, the Watershed Communities pointed out that it was still early in the proceeding and that they had been apprised of the proposed issues conference schedule and would not be requesting any change in that schedule. (*Id.* at 6)

With respect to their ability to materially assist in the determination of issues raised in the proceeding, the Watershed Communities' petition states:

> The Watershed Communities present the viewpoints of the local governments which are integral to understanding the effect of the issues presented by the City on the local communities. The Coalition of Watershed Towns as the primary negotiator for the City's watershed regulations and the MOA are in a unique position to address the intent of those regulations and the MOA. The Watershed Communities also have specific information and experience concerning stormwater issues in the watershed and efforts at controlling phosphorus loads that will address the City's issues, especially the claimed impact of secondary growth.

Moreover, with respect to the scale of the proposed project, counsel for the Watershed Communities argued that neither the Watershed rules and regulations nor the MOA prohibited such a development and asserted that "those issues regarding the appropriateness of a large scale development are particularly issues of local concern to be determined by local land use planning commissions, and are not issues of New York City unless there is a direct nexus to water quality." (T at 23.)

The foregoing shows that the Watershed Communities have established their requisite environmental interest in this proceeding in accordance with the requirements of 6 NYCRR 624.5(b)(1)(ii) and 624.5(d)(1)(iii). Moreover, although the original petition of the Watershed Communities as well as the amendment thereof was submitted after the filing deadline of April 23, 2004, provided in the notice of February 11, 2004, the record indicates that the Watershed Communities have demonstrated good cause for the late filing, demonstrated that the late filing will not delay these proceedings, and demonstrated that they can materially assist in the determination of issues raised in this proceeding. As discussed below, the Watershed Communities have identified substantive and significant issues for adjudication and will be able to make a meaningful contribution to the adjudicatory hearing record with respect to (1) Stormwater Impacts and (2) Impacts to Community Character.

RULING THREE

Upon the record, I find that the Petitioners, The Coalition of Watershed Towns, Delaware County, the Town of Middletown, and the Town of Shandaken (Watershed Communities), have met the requirements of 6 NYCRR 624.5(d) in that they have filed a petition that comports with the requirements of 6 NYCRR 624.5(b)(1) and (2), identified issues that are both substantive and significant, demonstrated their ability to make a meaningful contribution to the adjudicatory hearing record with respect to those issues, and demonstrated an adequate environmental interest. Moreover, I find that they have met the requirements of 6 NYCRR 624.5(c)(2)(i),(ii) and (iii) such that their petition is entitled to receive consideration in this proceeding. Accordingly, the Watershed Communities are granted full party status in this proceeding.

The Planning Board of the Town of Shandaken

Deriving its authority pursuant to the provisions of Section 271 of the Town Law, the Planning Board of the Town of Shandaken

is an involved agency for the purposes of the SEQRA review of this project, as provided in 6 NYCRR 617.2(s). Moreover, due to certain zoning restrictions in the Town of Shandaken, a Special Use Permit will be required before project approval at the local level. These Special Use Permits are reviewed by the Town Planning Board. (DEIS, Vol. 1 at 1-26; OHMS Ex. 3.) As indicated in Section 116-39 of the Town of Shandaken Zoning Code, in authorizing a special permit use, the Planning Board must take into consideration such matters as (a) the location and size, nature and intensity of the proposed use; (b) traffic impacts, including site access and parking; and (c) the character and appearance of the proposed use. (Applicant's Exhibit 73 at 11669-11670; hereinafter abbreviated App. Ex. _ at _.) While any special permit use review proceeding by the Planning Board is not a part of this proceeding, the foregoing statutory responsibilities of the Planning Board do serve to demonstrate its environmental interest in this matter, as required by 6 NYCRR 624.5(b)(1). Further, after noting that the proposed project will be located in the Town of Shandaken, the Planning Board's Petition for Party Status states:

> The proposed development is the largest ever considered for the Town. 73% of the Town is Forest Preserve, owned by the State and dedicated by our state constitution as Forever Wild. This project constitutes the commitment of 8% of the remaining developable land resources of the Town.

As will be discussed hereinafter, the Planning Board has raised substantive and significant issues for adjudication and provided adequate offers of proof with respect to each as to (1) Traffic Impacts; (2) Impacts to Community Character; (3) Secondary and Induced Growth Impacts; and (4) Alternatives.

RULING FOUR

Upon the record, I find that the Petitioner, the Planning Board of the Town of Shandaken (Planning Board), has met the requirements of 6 NYCRR 624.5(d) in that it has filed a petition that comports with the requirements of 6 NYCRR 624.5(b)(1) and (2), by a sufficient proffer has raised issues that are both substantive and significant, and has demonstrated an adequate environmental interest. Accordingly, the Planning Board is granted full party status in this proceeding.

New York City Watershed Inspector General

On January 21, 2005, the New York City Watershed Inspector General (NYCWIG) filed a Petition for *Amicus* Status, as well as a brief entitled, "*Amicus* Brief of the New York City Watershed Inspector General Concerning the Scope of Issues that Warrant Full Administrative Adjudication." The parties were permitted the opportunity to respond to this application. The Petition requests that the NYCWIG be given permission by its *amicus* brief to discuss the following issues and provide exhibits in support thereof:

(i) natural conditions at the project site related to water quality, such as soil characteristics, rainfall intensity and construction slopes;

(ii) the technical adequacy of the proposed program and permit to limit contaminants in runoff both during and after construction;

(iii) the sufficiency of the assessment of cumulative growth inducing impacts;

(iv) the adequacy of the integrated pest management program that will govern the use of pesticides and herbicides at the project site; and

(v) wetland delineation and destruction.

The contents of a petition for *amicus* status must not only comport with the requirements of 6 NYCRR 624.5(b)(1), addressing the general contents of any petition for party status, but with section 624.5(b)(3) as well, addressing the additional contents required for petitions for *amicus* status. Pursuant to this latter section, a petition for *amicus* status must:

(i) identify the nature of the legal or policy issue(s) to be briefed which meets the criteria of subdivision 624.4(c) of [part 624]; and

(ii) provide a statement explaining why the proposed party is in a special position with respect to that issue.

In accordance with 6 NYCRR 624.5(d)(2), in order for a party to be entitled to *amicus* status, the ALJ must find

(i) that the petitioner has filed an acceptable petition pursuant to paragraphs 625.5(b)(1) and (3) of [part 624];

(ii) that the petitioner has identified a legal or policy issue which needs to be resolved by the hearing; and

(iii) a finding that the petitioner has a sufficient interest in the resolution of such issue and through expertise, special knowledge or unique perspective may contribute materially to the record on such issue.

As the foregoing regulatory provisions make clear, a party seeking *amicus* status must show that there is a substantive and significant legal issue or policy issue raised by the facts or circumstances of the proceeding that can only be resolved through the part 624 adjudicatory hearing process. The role of the *amicus* party is to inform the ALJ, from its perspective, as to (1) the precise nature and reach of the legal or policy matter at issue, (2) whether and the extent to which the proposed action by the Applicant comports with such legal or policy standard so articulated, and, if appropriate to the circumstances, (3) how the Applicant's proposed action might be modified so as to comport with such legal or policy standard. An *amicus* party may not add to the evidentiary record of the adjudicatory hearing either through the proffer of testimony, the introduction of exhibits, or the cross-examination of other parties. Indeed, as 6 NYCRR 624.5(e)(2) makes clear:

> A party with *amicus* status has the right to file a brief and, at the discretion of the ALJ, present oral argument on the issue(s) identified in the ALJ's ruling on its party status but does not have any other rights of participation or submission.

Although the submission of a brief at this point in the proceeding, as has been done by the NYCWIG, is not necessarily improper, a fair reading of 6 NYCRR 624.5(e)(2) would suggest that an *amicus* brief should be filed at the close of the adjudicatory hearing and, arguably, limited in scope to the issues identified in the ALJ's ruling. The NYCWIG's submitted brief in this matter essentially consists of its April 23, 2004, written comments on the DEIS. The additional exhibits attached to its brief are, in effect, addenda to those comments on the DEIS and will be considered as such only, and not in support of its petition for *amicus* status.

The position of New York City Watershed Inspector General was established by Executive Order Number 86, signed by Governor George E. Pataki on August 19, 1998. The opening paragraphs of its preamble acknowledge the importance of the drinking water resources of the New York City Watershed and the need for vigilant protection of those resources. To that end, the preamble further notes the significance of the Memorandum of Agreement of 1997 "which provides for the development and implementation of a Watershed protection program that maintains and enhances the quality of the New York City drinking water supply system and the economic vitality and social character of the Watershed communities," and concludes, as agreed by the parties, "that a Watershed Inspector General should be appointed to enhance current efforts to protect the New York City drinking water supply from activities that have the potential to adversely affect the New York City Watershed reservoirs and tributaries." (Executive Order Number 86, annexed to the Petition of the Watershed Inspector General.)

As the preamble makes clear, though in practice often enforcement related, the Watershed Inspector General's mandate is to protect the drinking water supply "from activities that have the potential to adversely affect the New York City Watershed reservoirs and tributaries." Since such "activities" would clearly include development projects that could adversely affect water quality, the Watershed Inspector General's interest in this proceeding is appropriate and apparent. Moreover, this is clear from his articulated powers defined in Paragraph 3 of Executive Order No. 86, which provides:

> 3. Powers, Duties, and Responsibilities
>
> To the full extent permitted by law, the Watershed Inspector General shall have the following powers, duties and functions relating to the use, operation and protection of the Watershed: ...
>
> (e) to cooperate with any agency or department possessing regulatory authority relating to the use, operation and protection of the Watershed; ...
>
> (h) to recommend legislative, regulatory and management practice changes; ....

As subsequent discussion in this ruling will indicate, all five of the issues raised by the NYSWIG have been raised by other full parties to this proceeding, ensuring the development of an adequate evidentiary record. However, certain issues raised by

the Watershed Communities and other full parties as to (1) secondary growth issues, (2) community character impacts, and (3) alternatives to the proposed project raise issues of a legal and policy nature to which the Watershed Inspector General, because of his unique perspective, is in a position to make a material contribution to the record. These issues are perhaps most akin to the third issue identified by the Watershed Inspector, the sufficiency of the assessment of cumulative growth inducing impacts.

At Paragraph 6 of its preamble, at page 2, the MOA states:

> [T]he Parties recognize that the goals of drinking water protection and economic vitality within Watershed communities are not inconsistent and it is the intention of the Parties to enter into a new era of partnership to cooperate in the development and implementation of a Watershed protection program that maintains and enhances the quality of the New York City drinking water supply system and the economic vitality and social character of the Watershed communities.

It is the overall responsibility of the Watershed Inspector General to insure that the balance between the goals of economic vitality and the protection of the high quality drinking water supply is maintained, consistent with the vision articulated in the MOA. The Watershed Inspector General is in a position to offer a unique and needed perspective on this regard.

While the Watershed Inspector General's petition for amicus status was not filed until after the deadline provided in the notice of February 11, 2004, it is clear that the issues articulated above did not arise, for the most part, until during the issues conference, the transcripts of which were not fully available until late in 2004. Moreover, there has not been a sufficient showing of unreasonable prejudice to any party, nor will participation by the Watershed Inspector General as an amicus party significantly delay this proceeding.

RULING FIVE

Upon the record, I find that the Petitioner, the New York City Watershed Inspector General, has met the requirements of 6 NYCRR 624.5(d) in that he has filed a petition that comports with the requirements of 6 NYCRR 624.5(b)(1) and (3), has identified both legal and policy issues which need to be resolved by the hearing, and has a sufficient interest in the resolution of such issues and through expertise, special knowledge or unique

perspective may contribute materially to the record on such issues. Moreover, I find that he has met the requirements of 6 NYCRR 624.5(c)(2)(i),(ii) and (iii) such that his petition is entitled to receive consideration in this proceeding. Accordingly, the New York City Watershed Inspector General is granted *amicus* party status in this proceeding. Pursuant to 6 NYCRR 624.5(e)(2), in addition to exercising his right to file a brief, he will be permitted to present oral argument at any subsequent adjudicatory hearing convened in this matter on the issues identified herein in this ruling on his party status.

STANDARDS FOR ADJUDICABLE ISSUES

In accordance with the standards articulated in 6 NYCRR 624.4(c), an issue is adjudicable only if it relates to a dispute between the Department Staff and the Applicant over a substantial term or condition of a proposed draft permit, relates to a matter cited by the Department Staff as a basis to deny the proposed permit and such matter is contested by the Applicant, or is proposed by a potential party and is both substantive and significant.

An issue is substantive if there is sufficient doubt about the Applicant's ability to meet statutory or regulatory criteria applicable to the proposed project, such that a reasonable person would require further inquiry. In determining whether such sufficient doubt exists, the ALJ will consider the issue in light of the permit application and related documents, such as the DEIS and FEIS and the exhibits annexed to each, the proposed draft permit, the content of any petitions filed for party status, the record of the issues conference, and any subsequent written arguments or submissions authorized by the ALJ.

An issue is significant if it has the potential to result in the denial of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit.

Pursuant to 6 NYCRR 624.4(c)(4), where the Department Staff has reviewed a permit application and finds that the Applicant's project, as proposed or as conditioned by the draft permit, conforms to all applicable statutory and regulatory requirements, the burden of persuasion is on the potential party proposing any issue related to the project to demonstrate that that issue is both substantive and significant. This burden of persuasion is met by an appropriate offer of proof. As stated by the Commissioner, "the offer of proof can take the form of proposed

testimony, usually that of an expert, or the identification of some defect or omission in the application. Where the proposed testimony is competent and runs counter to the Applicant's assertions an issue is raised. Where the intervenor proposes to demonstrate a defect in the application through cross-examination of the Applicant's witnesses, an intervenor must make a credible showing that such a defect is present and likely to affect permit issuance in a substantial way. In all such instances a conclusory statement without a factual foundation is not sufficient to raise issues." *In the Matter of Halfmoon Water Improvement Area*, Decision of the Commissioner, April 2, 1982.

In the instant proceeding, the Department Staff has determined that there are no statutory or regulatory prohibitions or restrictions which would preclude issuance of the requested water supply and SPDES permits; a Use and Protection of Waters permit under title 5 of ECL article 15 for proposed road crossings of regulated streams on the property and for the treated wastewater outfall structures to Birch Creek and the Emory Brook tributary; or a Water Quality Certification in accordance with Section 401 of the Clean Water Act. It is the Petitioners' burden to demonstrate that the issues they have raised are adjudicable.

ISSUES PROPOSED FOR ADJUDICATION

WATER SUPPLY AND GROUNDWATER AND SURFACE WATER IMPACTS

Positions of the Parties

CPC

Pointing out that the Big Indian Plateau will withdraw approximately 190,000 gallons per day from Rosenthal Wells 1, 2 and 3, and that the Wildacres Resort will take 230,000 gallons per day from the Village of Fleischmanns, CPC argues that the proposed withdrawal of potable water required by the Applicant's project will significantly impact surface and groundwater resources in the area, as well as jeopardizing the availability of potable water supplies for adjacent users. (CPC Brief, at 111.) These impacts, CPC asserts, preclude the Applicant from satisfying the criteria of ECL 15-1503(2), as well as 6 NYCRR 601.5 and 601.6.

CPC's argument articulates three positions. First, CPC asserts that the pump tests performed by the Applicant failed to comply with sound scientific methods and failed to assess the availability of potable water in, what in its view, is the indigenous stacked bedrock aquifer system. Second, and in this latter regard, CPC argues that the DEIS failed to properly characterize this indigenous stacked bedrock aquifer system. Third, CPC maintains that the DEIS failed to adequately assess the proposed projects's impacts on surface waters.

In support of its position, CPC proffered the testimony of Andrew Michalski, PhD, a Certified Groundwater Professional of Michalski and Associates, South Plainfield, New Jersey. In Michalski's view, proposed pumping rates from the three Rosenthal wells, at the 149 gallons per minute (gpm) authorized by the draft permit proposed by Department Staff, cannot be sustained in the long run, nor can equilibrium be achieved at such pumping levels. Second, the pumping from the Rosenthal Wells would subtract from the base flow of Birch Creek. Likewise, Michalski asserts that the proposed use of the Fleischmann's wells for the Wildacres project would reduce base flow in Emory Brook. Third, at such pumping rates, an extensive lowering of bedrock groundwater levels would occur which would be felt over a large area adversely impacting other groundwater users for miles. Moreover, Michalski asserts that the impacts associated with the Applicant's proposed withdrawal of groundwater will only exacerbate the future cumulative impacts occasioned by other new and larger withdrawals needed by the proposed Belleayre Ski Area, and improvements thereto, as well as the needs of future retail and commercial developments in the area, induced by the Applicant's project. In Michalski's view, additional hydrogeologic information and data are necessary for the entire area in order to adequately assess impacts to groundwater resources and develop a reliable monitoring system to detect impacts to water quality.

Applicant

Essentially the Applicant asserts that since the DEC has issued a draft permit, they have reviewed the data, found it meets criteria, and since the DOH has done the same, that no further analysis is necessary, and the water supply permits for both Big Indian and Wildacres should be issued.

Department Staff

Department Staff's position is similar to that of the Applicant, although Department Staff goes on to assert that it

has reviewed the water supply application and its attached submittals and has determined that, in its opinion, there does not appear to be any hydrogeologic connection between the wells in the area, implying that the pumping of Rosenthal Wells will not affect other wells in the area.

Discussion

In the matter of the proposed water supply permit for the Big Indian Plateau only, and in view of the determinations required to be made before a water supply permit can be issued as set forth in ECL 15-1503(2) and 6 NYCRR 601.6, CPC has raised substantive and significant issues with respect to (1) the adequacy of the proposed water supply to meet the needs of the Big Indian Plateau; (2) whether there will be proper protection of the watershed wherein the wells supplying the Big Indian Plateau are located; and (3) whether the proposed water usage by the Big Indian Plateau project is just and equitable to the affected municipalities, the Town of Shandaken and the Hamlet of Pine Hill, and their inhabitants, and in particular with regard to their present and future needs for sources of water supply.

The position taken by Dr. Michalski as to the stacked bedrock stratigraphy of the aquifer in the area of the proposed project raises questions requiring further inquiry. In support of this position, Michalski criticized the DEIS as implicitly treating the bedrock aquifer in the area as a single homogeneous unit. In so doing, Michalski believes that the Applicant ignored recent hydrologic studies conducted by the USGS, in particular, studies done by Reynolds and others in 2000, and Heisig and others in 2002. (CPC Ex. 80.)

The Reynolds report of 2000, USGS Water-Resources Investigation Report 00-4034, by Richard J. Reynolds, is entitled “Hydrogeology of the Beaver Kill Basin in Sullivan, Delaware, and Ulster Counties, New York.” This area is geographically located immediately to the south of, and contiguous to, the drainage basins comprising the area wherein the proposed project is located. (CPC Ex. 83.)

In examining the stratigraphy of the region, Reynolds concluded:

> The entire Catskill Region, including the Beaver Kill basin, is underlain by the Catskill Formation of Upper Devonian age, which is as much as 6,000 ft thick and consists primarily of a sequence of nonmarine sandstones, shales, and conglomerates. Beds within the

> formation are nearly flat lying and dip slightly to the northwest. The Catskill Mountains were formed by the dissection of a bedrock plateau by streams and glacial erosion. (CPC Ex. 83 at 14.)

Moreover, in addressing the groundwater flow system of the Catskill Formation which underlies the entire area including the area of the proposed project, Reynolds further continues:

> The sequence of permeable sandstone units alternating with less permeable shale units within the Catskill Formation forms a series of stacked aquifers separated by confining units of varying thickness. Ground water within each of the sandstone units can be locally perched near the mountainsides, but is part of a larger saturated zone within each mountain or ridge. (*Id*.)

While Reynolds notes that erosion and weathering processes have made outcroppings of rock and rock closest to the mountainsides more jointed and fractured resulting in the creation of a water table, giving "rise to a stepwise pattern of ground-water discharge from the ridgetop to the valley bottom," Reynolds continues:

> Horizontal joints and permeable bedding-plane fractures typically form at the contact between lithologically dissimilar rock units; therefore, ground water within a saturated sandstone member typically discharges along the contact with the underlying shale unit as a contact spring. These springs can be ephemeral features that may flow only during the spring wet season (March and April), but, if the saturated zones above the springs are thick enough, they may flow all year long. These sandstone units also are saturated where they extend into the core of the mountain, but here they are less fractured or jointed, and ground water within them moves mainly as slow, diffuse flow through small intergranular spaces and small, discontinuous fractures and, therefore, probably contributes little to contact springs. (*Id*. at 14 and 16.)

Contrary to the position taken by Dr. Michalski, the Applicant's expert, Sam Gowan, Ph.D., of Alpha Geoscience, denied that the aquifer in the area is entirely composed of discrete stacked water-bearing layers of bedrock, but is, rather, confined to fractured zones in the upper rock. (T. at 3586) Acknowledging that the stacked bedrock aquifer system is present, however, Dr.

Gowan said, in response to questions from the ALJ (T. at 3585-3586):

ALJ WISSLER: Dr. Gowan, it's your view that the view expressed by Dr. Michalski ... with respect to this stratification of aquifers, you're saying that in your view, that is not the case in this area?

DR. GOWAN: It's really a combination, and I tried to make that clear. Your aquifer, is really that upper part of the rock, it's the fractures in – the fractured zone in the upper part of the rock. The way that this stacked system plays into this, is that as the water is coming off your hillside, coming through these fractures, when it comes to that –

ALJ WISSLER: You might hit some shale vein of some kind that causes some kind of spring to come out of the side of the mountain?

DR. GOWAN: Right. And the shale is fractured too.

ALJ WISSLER: But you're saying that kind of division of the aquifer, ... it's not some layer sandwiched between two impervious layers and stacked in that way?

DR. GOWAN: Right.

ALJ WISSLER: You're saying that's not the case.

DR. GOWAN: That's not the case.

But whether the bedrock aquifer consists entirely of "permeable sandstone units alternating with less permeable shale units" forming "a series of stacked aquifers separated by confining units of varying thickness," as Reynolds notes, or is some combination of these and zones of fractured rock, it is from these water-bearing sandstone stacked layers and fractured zones that, in fact, Rosenthal Wells 1, 2 and 3, will be drawing water.

Moreover, the record suggests that the bore holes comprising the Rosenthal Wells may provide some hydraulic connection between the aquifer's water-bearing layers or zones. Of particular note is a study by Paul Heisig prepared for the USGS in 2002, entitled "Wellbore Short-Circuits in a Fractured-Rock Aquifer, Catskill Mountains, New York – Management Considerations." (CPC Ex. 80A.) Heisig studied the Bataviakill Valley in the Catskill Mountains,

an area lying immediately north of the site of the proposed project. As did Reynolds in 2000, Heisig points out that "the predominate water-bearing zones in the valleys are hydraulically separate, low-angle bedding-plane fractures within the upper 200 to 300 ft of bedrock." (*Id*.) Studying drillers' logs, Heisig concluded "that fractured bedrock is most productive within, or adjacent to, the valley bottom area," and that "[s]aline water in deeper fractures in valley-bottom and hillside areas represents the lower boundary of the aquifer." (*Id*.)

However, for our purposes, as Dr. Michalski pointed out, the importance of Heisig's study is in demonstrating the hydrologic effect that open well bores in bedrock can have, in effect acting as hydraulic bridges between saturated layers. As is pointed out in the abstract of the Heisig study:

> Data on the fractured bedrock-aquifer indicates the open well bores in the bedrock can act as short-circuits within the ground-water flow system. Borehole-geophysical logs and depth-specific, water-quality analyses indicate that such wellbores can interconnect previously isolated fracture zones of differing water chemistry and hydraulic head. Water-level responses during a 48-hour aquifer test (75 gal/min) indicate that the bedrock aquifer has very little storage. Measured and estimated vertical flow in nine observation wells suggest as much as 25 percent of the pump discharge is from a short-circuited flow. This water is drawn (short-circuited) from zones that were naturally isolated from zones that the production well draws water from. Some parts of the aquifer may risk contamination as a result of vertical borehole flow. Pumping of supply wells could induce saline water at depth and some wells may be induced to flow up the wellbores and into the fractures containing fresh water. (Id.)

Dr. Michalski asserted that this short-circuiting effect is evident from (a) the records of Pine Hill Well Number 1, (b) the response of Residential Well Number 4 to pumping at the Rosenthal Wells, particularly in relation to the water-bearing fracture in Rosenthal Well 2, (c) water cascading in Well No. 2, heard audibly, (d) the anomalous water level in well number 3, and (e) the disappearance of flow in a stream below the Marlowe Mansion. (CPC Ex. 80.)

In particular, in Michalski's view, the examination of the well driller log for Pine Hill Number 1 documents that the main

water-bearing fracture, located at 90 feet below the surface, produced 20 gpm versus 30 gpm from the entire 400 feet of this deep bedrock well, indicating that most of the water from this well was produced from that one layer encountered at 90 feet. (CPC Ex. 80 at 6.) Moreover the nature of the stacked aquifers in the area is also confirmed, in Michalski's view, by an examination of Alpha Geoscience's own field records for a portion of the step-drawdown and recovery tests in well PH-1. The data from that test, contained at page 7 of CPC Ex. 80, indicates that a flow of approximately 36 gpm was obtained at a water level elevation of 90 feet, precisely at 89.25 feet. Thereafter, this same well was drawn down to a depth of approximately 145.67 feet, at which point pumping was ceased and the recovery of the well was monitored. According to the well log, the sound of cascading water was heard at the 145 foot depth, and that cascading sound continued to be heard until the water level in the well returned to 89.22 feet, again confirming Michalski's view that the majority of the water in this well was from a saturated zone located approximately 90 feet below the surface.

Michalski asserts that this interconnection of the aquifers referred to by Heisig and the short-circuiting phenomenon are demonstrated by the results of the simultaneous pumping test conducted. Specifically, these phenomena are borne out by observations made of Residential Well Number 4, a bedrock well located approximately 1500 feet from Rosenthal Well Number 1. This bedrock well declined by 23.7 feet during the simultaneous pumping tests of Rosenthal Wells 1,2 and 3, which commenced at 10 o'clock on April 7, 2004, and continued until April 10, 2004. (CPC Ex. 80A at S-7.) Such a phenomenon, Michalski asserts, can only be explained by an interconnection between the water-bearing layers of this stacked bedrock aquifer. Because the Rosenthal Wells and the more shallow bedrock Residential Well Number 4 pierce the underlying stacked water-bearing strata at different depths, the hydraulic connection between them indicated by the tests can only be explained by a hydraulic connection through the well bores of the Rosenthal Wells and Residential Well Number 4.

With respect to unconsolidated wells, that is, wells bored into overlying unconsolidated material above the bedrock aquifer, Michalski asserts that these unconsolidated deposits, in fact, provide recharge to the underlying water-bearing bedrock strata through fractures, and also through the hydraulic connection of well bores in both the bedrock and unconsolidated aquifers. Michalski asserts that this is demonstrated by the Residential Well Number 1 data from the pump test which commenced on April 7, 2004. (CPC Ex. 80 at 15.) Residential Well Number 1 is in unconsolidated material and is approximately 50 feet deep and 675

feet away from Rosenthal Well Number 1. When the pump test was commenced, the depth to water in that well was 18.6 feet. When the pump test concluded on April 10, 2004, the depth to the water was 21.84 feet, indicating that the water level had declined by 3.24 feet due to the pumping effect of the three day simultaneous pumping test. Again, in Michalski's view, this phenomenon can only be explained by the hydraulic interconnection of the well bores in the area with the various water-bearing strata primarily, as well as connections through fractures within the bedrock.

According to Michalski, the same recharge phenomenon that caused water in the unconsolidated aquifer of Residential Well Number 1 to, in effect, provide recharge to replace the waters being pumped out of the bedrock during the simultaneous pump test can be observed in Birch Creek. In Michalski's view, this indicates that the level of Birch Creek will be impacted if water is withdrawn through the Rosenthal Wells for the Applicant's project. CPC Exhibit 80 at page 16 indicates during the simultaneous pump test that water levels in Birch Creek, as observed at the USGS Birch Creek gauge, decreased by several inches due to the pumping of the Rosenthal Wells during the simultaneous pump test of April 7 through 10, 2004. Thus the pumping of water, in Michalski's view, will reduce flow in Birch Creek in two ways. First, pumping would suppress the bedrock or groundwater contribution to the stream flow ordinarily inuring to the stream and, second, pumping would induce water infiltration from the streambed and saturated overburden providing recharge to the bedrock from the streambed and saturated overburden. (CPC Ex. 80 at 13.)

In light of this offer of proof, the hydraulic connection of the strata within the bedrock aquifer as well as the hydraulic connection between those bedrock strata and the surficial unconsolidated aquifer, in particular the material forming the bed of Birch Creek, merits further inquiry.

As to Birch Creek, both the Department Staff and the Applicant assert that no hydraulic connection exists. (DEC Supplemental Ex. 1; App. Ex. 51B, attachment thereto Exhibit E at 14 and 16.) However, the data supplied by the Applicant is at variance with this position and supports that espoused by Dr. Michalski, that, in fact, an hydraulic connection is present. The report of the simultaneous pumping test of Rosenthal Wells 1, 2 and 3 conducted on April 7 through 10, 2004, is annexed as Attachment E to the Conceptual Design Report for the Big Indian Plateau water supply, Applicant's Exhibit 51B. Annexed to this pumping test report is Figure 4, which is a data plot of water

level readings of the two USGS stream gauges and the three shallow well points monitored before, during and immediately after the simultaneous pump test. Despite a fluctuation caused by a 12 hour 1.4 inch precipitation event on April 1, 2004, it is apparent that the levels of Birch Creek and the shallow well points all dropped during the simultaneous pump test of April 7 through 10, 2004.

As a result, Michalski believes that the proposed withdrawal of water at 149 gpm cannot be sustained and that the data supplied by the Applicant supports this position.

This conclusion is also advanced by CPC's expert, Paul A. Rubin, of Hydroquest, Stone Ridge, New York. Mr. Rubin argued that the graphed presentation of the data with respect to the simultaneous pump test provided by the Applicant using a rectangular, but non semi-logarithmic coordinate system, does not provide the same understanding as does that same data when plotted on a semi-logarithmic coordinate system.

In the Conceptual Design Report for the Big Indian water supply, revised May 2004, the results of the simultaneous pumping test of April 7 to 10, 2004, are provided (App. Ex. 51B, Appendix F.), including the results for Rosenthal Well 1. The results for Rosenthal Well 1 are also a part of CPC Exhibit 80, page 20. When results of the test are laid out using a rectangular coordinate system where a unit length of 10 feet of draw down is equal to a unit length of 500 minutes of elapsed time, as the Applicant has done, with draw down in feet on the vertical axis and elapsed time in minutes along the horizontal axis, an average flow rate of 78.5 gpm for Rosenthal Well 1 indicates a draw down in feet from 20 feet to about approximately 90 feet in a period of about 3000 minutes. After the pump test had continued for about 3000 minutes, according to the graph, the pumping rate was reduced from 78.5 gpm to 70 gpm for 500 minutes. At 3500 minutes and for the duration of the test, the pumping rate was further reduced to 63 gpm. Graphed in this manner, the pumping rate following the times it was reduced appears parallel to the time axis, implying that some level of equilibrium had been achieved. However, when that same information is plotted semi-logarithmically, it is apparent that equilibrium was not achieved, and that, in fact, little or no aquifer recharge was occurring. This is clearly illustrated in CPC Exhibits 82 and 82A. Plotting and examining the graph of the drawdown-to-time curve on a semi-logarithmic scale is preferable to the depiction of the same data provided by the Applicant, since the data plotted is actually that of an exponential function. When graphed using a semi-logarithmic coordinate system, the curve of

an exponential function is a straight line, making accurate interpolation between data points, and extrapolation beyond data points possible. Without recharge, the drawdown-to-time curve would continue in a straight line with a negative slope. As recharge steadily occured, however, the drawdown would slow, resulting in a progressively less negative slope, until, at equilibrium, the drawdown curve would be parallel to the time axis of the graph. The prototype plots depicted at page 8 of CPC Exhibit 80 illustrate these principles.

As Dr. Michalski pointed out, if the simultaneous pump test data is graphed on semi-log paper, see CPC Exhibit 80, page 10, it is clear that after 180 days the wells will have been drawn down from approximately 90 to 170 feet. Indeed, as CPC Exhibit 80, page 10, indicates, the draw down after only 1000 minutes of the test had reached 122 feet from 90 feet. Projecting that out would mean that the wells would reach draw down to 163 feet after 180 days.

While the Conceptual Design Report for the Big Indian Plateau water supply, Applicant's exhibit 51B, provides data demonstrating what appears to be some level of recovery of Rosenthal Wells 1, 2 and 3 after the 72 hour simultaneous pump test, it does not provide sufficient data to show that equilibrium, or stabilized drawdown, was, in fact, achieved at any time during the pump test. This fact is implied at page 10 of the report of the simultaneous pump test, Exhibit E of Applicant's Exhibit 51B, where it is stated: "No positive or negative hydraulic boundaries were encountered during the 72-hr pumping test. Inflections on the drawdown ... curves are correlated with slight pumping rate changes...." Indeed, a fair reading of the Report and the protocol indicates that the simultaneous pump test was not intended to determine the pumping rate at which equilibrium, or stabilized drawdown as shown by a stabilized water level in a well subject to pumping at a constant rate, would be achieved.

As the proposed draft of Appendix 5-B of 10 NYCRR, entitled "Standards for Water Wells," at section 5-B.1(b)(19) states: "Stabilized water level is the level of water in a well that has achieved equilibrium during a period of constant rate withdrawal of groundwater (i.e. stabilized drawdown)." Moreover, with respect to the well yield and water flow of public water supply wells, section 5-B.4(c)(1) of the draft Standards states: "For wells in rock a minimum of a 72 hour constant pumping yield test at the requested withdrawal rate is required with a minimum of six hours of stabilized drawdown at the end of the test."

In a letter to the Department as well as the Ulster County Department of Health (UCDOH) dated March 11, 2004, and copied as part of Appendix A of Applicant's Exhibit 51B, Alpha Geoscience, on behalf of the Applicant, proposed the work scope for the simultaneous pumping of Rosenthal Wells 1, 2 and 3. "The primary objective of the pumping test covered in this work scope," the letter states, "is to satisfy the Ulster County Department of Health's (UCDOH), the New York State Department of Health's (NYSDOH) and the New York State Department of Environmental Conservation's (NYSDEC) concepts of stabilization." These agencies, according to the letter, had expressed concern as to whether water levels of Rosenthal Wells 1 and 2 had stabilized during a simultaneous pump test of those wells conducted in November 2002, and requested additional testing of these two wells and Rosenthal Well 3 to show that the three wells "can meet their concepts of stabilization when the wells are simultaneously pumping at their respective rates." (*Id*. at 2.) However, notwithstanding this expressed concern, Alpha Geoscience states in its letter of March 11, 2004:

> It is Alpha's opinion that water level stabilization is not necessary for accurate prediction of well performance, nor is it necessary for the protection of the public against excessive drawdown due to over-pumping. The long-term projections made by Alpha show that the wells are capable of being simultaneously pumped at the tested rates without adverse impacts on neighboring wells and without excessive drawdown in the pumping wells, even during drought conditions. The sustainable yield of a well does not depend on whether the water level in the pumping well has "stabilized". (*Id*.)

In describing the method by which such long-term projections are made, the March 11, 2004, letter continues:

> The analytical method of long-term projection of drawdown data obtained during a constant-rate, aquifer-yield pumping test is specifically used to evaluate whether the aquifer is capable of sustaining the well yield during an extended drought period. This method requires the water level data to be plotted against the log of time. Once the water-level data fall on a straight line on this semi-log plot, a line is drawn through the straight-line portion of the data and projected out for 180 days. The straight-line projection is made in order to simulate conditions wherein the bedrock aquifer receives absolutely no

recharge from precipitation or snow-melt for 6 months, which is a highly unlikely scenario in New York State. It also assumes that no perennial source of recharge (i.e., a river or lake) is encountered, and that no aquifer boundaries are encountered. The well is only considered capable of sustaining the tested yield if there is sufficient available drawdown projected after the 180-day period. (*Id*.)

Finally, though maintaining its position that stabilization is not the goal for the simultaneous pump test of the Rosenthal Wells, Alpha Geoscience notes that "[s]tabilization (i.e., an unchanging water level in the pumping well) during a typical constant rate test can only arise if a source of constant recharge is encountered within the cone of depression."

However, in a letter dated March 23, 2004, a copy of which is part of Appendix A of Applicant's Exhibit 51B, in response to the simultaneous pump test protocol suggested by Alpha Geoscience in their letter of March 11, 2004, NYSDOH advised the Department that it would endorse the protocol subject to certain conditions:

1. An extended simultaneous well yield test of wells R1, R2, and R3 is acceptable. The test must continue for a minimum of 72 hours, and until all three wells demonstrate stabilized drawdown for at least 6 hours.

2. Stabilized drawdown shall mean no further water level reduction in the wells during the 6-hour stabilized pumping period. The NYSDOH Draft Standards for Water Wells defines the stabilized water level as "the level of water in a well that has achieved equilibrium during a period of constant rate withdrawal of groundwater (i.e. stabilized drawdown)". The Draft Standards further state "the stabilized pumping water level shall not <u>fluctuate</u> more than plus or minus 0.5 foot for each 100 feet of water in the well" and "the plotted measurements shall not decrease during the constant flow test period". This definition allows for the water level to fluctuate a reasonable amout above or below the stabilized pumping level. It does not allow for the water level to continue dropping during the stabilization period.

Finally, in response to these NYSDOH conditions and after a conference call among Alpha Geoscience, NYSDOH and the Department, Alpha Geoscience, by letter dated March 29, 2004, and copied as part of Appendix A of Applicant's Exhibit 51B, stated what it understood to be the agreed-upon protocol for the simultaneous pump test:

> The protocol will involve pumping the water level down simultaneously in each of the wells until a level is reached that is a safe distance above the pumps. The discharge rates will then be reduced until rates are reached such that the water levels remain unchanging for a 6-hour period. The total length of the test will be at least 72 hours. We understand that a fluctuating water level, which is not continually dropping, will be allowed during the 6-hour stabilization period, as defined in your March 23, 2004 letter.

During the simultaneous pumping test conducted on April 7 through 10, 2004, the water levels of four local residential wells were monitored. (Report of simultaneous pumping test, Exhibit E and part of App. Ex. 51B at 4.) Residential Well 1 is located approximately 675 feet east of Rosenthal Well 1 and is 50 feet deep and entirely within unconsolidated deposits just above bedrock. (*Id*.) Residential Wells 2 and 3 are respectively located approximately 2760 feet and 3300 feet southeast and downgradient of from Rosenthal Well 1. Residential Well 2 is 8 feet deep and completed in unconsolidated deposits while Residential Well 3 is 145 feet deep completed in bedrock. (*Id*. at 4-5.) Residential Well 4, located approximately 1500 feet east of Rosenthal Well 1, given its depth of 155 feet, is assumed a bedrock well. (*Id*.)

Residential Well 3 is artesian and showed a constant flow during the test while Residential Well 2 showed no change in water level during the test. (*Id*. at 10.) Residential Well 1, however, did experience a drawdown of 3.24 feet during the simultaneous test while Residential Well 4 experienced a drawdown of 23.75 feet. (*Id*. at 10-11 and Tables 8 and 10.) Residential Wells 1 and 4 are less than half the distance from the Rosenthal Wells than are Residential Wells 2 and 3. Moreover, Residential Well 1 is entirely contained within unconsolidated material, while Residential Well 4 is in bedrock. Though not itself currently used as a source of drink water supply, Residential Well 4 does clearly draw from a water-bearing bedrock layer that remains a source of drinking water supply both now and in the future.

While provided in the prior simultaneous pump test of Rosenthal Wells 1 and 2, conducted September 17 to 20, 2002, and cited as the accepted method for drawdown and yield projections in Alpha Geoscience's letter of March 11, 2004, the pump test results of April 7 to 10, 2004, do not include 180 day drawdown projections, a linear depiction where, as noted previously, water level data is plotted against the log of time. (OHMS Ex. 3, DEIS, Volume 3, Appendix E of Exhibit F.) The 180 day projections for Rosenthal Wells 1 and 2, in the previous test, however, indicate drawdown levels of 125 feet for Rosenthal Well 1 when pumped at 57 gpm, and 163 feet for Rosenthal Well 2 when pumped at 71 gpm. These are drawdown levels that exceed the depths of the Residential Well monitored. But, even though not provided, this 180 day drawdown projection, if done with the April 2004 test data would only show greater drawdown, and demonstrate that the stress to both the surficial and bedrock aquifers is only exacerbated, since the initial pumping rates for the latter test were approximately 78.5 gpm for Rosenthal Well 1, compared to 57 gpm in the prior test, approximately 82.5 gpm for Rosenthal Well 2 compared to 71 gpm in the prior test, and approximately 12 gpm for Rosenthal Well 3 which was not even included in the prior test.

The hydraulic connection of at least some of the drinking water supply wells and aquifer sources in the area appears beyond debate. Indeed, Alpha Geoscience states in its report of the test of April 7 to 10, 2004, at page 16: "Water level data collected during the well yield test indicate that the pumping of wells R1, R2, and R3 [the Rosenthal Wells] hydraulically influenced Residential Well 4 and Residential Well 1." Moreover, as Residential Well 1 is in the surficial unconsolidated aquifer and Residential Well 4 is in the bedrock aquifer, and both were simultaneously affected by the pumping test, and the Rosenthal Wells are bedrock wells, it is apparent that there is some hydrogeologically transmissive interface between the surficial unconsolidated and bedrock aquifers. At this time, the extent of that interface is unknown, as are the impacts occasioned by the sustained pumping of groundwater from the aquifer.

While the simultaneous pumping test of April 7 to 10, 2004 demonstrated the viability of the Rosenthal Wells as a source of potable water for the Big Indian Plateau to the satisfaction of NYSDOH, the inquiry required by the Department extends beyond this finding. The Department may not issue a water supply permit unless it first determines that the proposed use comports with the mandates of ECL 15-1503(2) and 6 NYCRR 601.6.

As applicable to the present analysis, ECL 15-1503(2)provides, in part:

> 2. In making its decision to grant or deny a permit or to grant a permit with conditions, the department shall determine whether the proposed project is justified by the public necessity, whether it takes proper consideration of other sources of supply that are or may become available, whether all work connected with the project will be proper and construction safe, whether the supply will be adequate, whether there will be proper protection of the supply and watershed or whether there will be proper treatment of any additional supply, whether the project is just and equitable to all affected municipalities and their inhabitants and in particular with regard to their present and future needs for sources of water supply, ...

Moreover, the implementing regulation for this section of the ECL is 6 NYCRR 601.6, entitled “Action on permit applications,” which provides, in part:

> (a) The department may grant or deny a permit, or grant a permit with conditions.
>
> (b) To issue a permit, the department must determine:
>
> (1) that the proposed project is justified by the public necessity;
>
> (2) that the applicant properly considered other sources of water supply that are or may become available;
>
> (3) that all work and construction connected with the project will be proper and safe;
>
> (4) that the water supply will be adequate to meet the needs of the proposed service area;
>
> (5) that there will be proper protection and treatment of the water supply and watershed;
>
> (6) that the proposed project is just and equitable to all affected municipalities and their inhabitants, and in particular with regard to their present and future needs for sources of water supply; ....

Thus, pursuant to these sections of law, and notwithstanding approval of the Rosenthal Wells by NYSDOH, certain questions remain to be resolved by the Department, including, but not necessarily limited to the following:

1. Will the available groundwater water supply be adequate over time given the rate of daily withdrawal proposed?

2. Given the proposed rate of daily withdrawal and the drawdown noted in the nearest residential wells monitored during the simultaneous pumping test of April 7 to 10, 2004, will there be proper protection of the supply and watershed?

3. As a follow-up to Question 2, at the rates proposed in the draft permit, is there a risk that both the surficial unconsolidated and bedrock aquifers could be dewatered to the detriment of other persons using the same supply?

4. As a further follow-up to Question 2, at the rates proposed in the draft permit, is there a risk that both the surficial unconsolidated and bedrock aquifers could be dewatered to the detriment of the aquatic and terrestrial habitats?

5. Is the proposed consumption of the groundwater by the Big Indian Plateau authorized in the draft permit just and equitable to the affected municipalities, the Town of Shandaken and the Hamlet of Pine Hill, and their inhabitants, and in particular, is it just and equitable with regard to their present and future needs for sources of water supply?

To answer these questions requires a determination of the safe yield of the Rosenthal Wells, that is, the constant pumping rate at which the wells achieve and maintain equilibrium. It is only during the period of equilibrium that the environmental impacts occasioned by the removal of groundwater can accurately be observed.

Equilibrium is a function of the development of the cone of depression that forms when a well is pumped. Equilibrium is achieved when recharge to the aquifer equals the rate of withdrawal from the well, at which point the cone of depression

stabilizes. In achieving equilibrium, recharge to the aquifer occurs in two ways, either from additional transmissive water-bearing sections of the aquifer that are encountered as the cone of depression expands due to pumping, or as the result of a decrease in the rate of pumping.

In explaining these general hydrologic concepts, ALJ Montecalvo, observed at page 7 of his Hearing Report made part of the Decision of the Commissioner in *Matter of the Proposed Modification of a Water Supply Permit Held by the Incorporated Village of Bayville*, 1991 WL 94063 (N.Y. Dept. Env. Conserv.):

> Incidental to pumpage of any well is the creation of a "cone of depression" (i.e., a depression in the surface of the water table or piezometric surface) surrounding the well, the deepest point of which is at the well itself. The volume of aquifer material within the cone is essentially drained of its water by the well. Theoretically, the radius of the cone (called "radius of influence"), from the center at the well to the point where there is no drawdown in the surface due to well pumpage, is infinite. Normal hydrologic practice, however, is to select an amount of drawdown sufficiently small to be considered as no drawdown (e.g., a foot or a foot and a half), assume a constant pumping rate at a certain level, assume a particular length of time for the pumping, and use a mathematical formula (known as the Theis equation) to calculate the radius. In theory, if a well is pumped at a constant rate, a cone of depression will develop around the well and expand in diameter with time until an equilibrium is reached, at which point continued pumpage of the well at the same rate will not cause additional drawdown of the water table or piezometric surface.
>
> The diameter of the cone is dependent upon several factors including the rate of pumpage: the greater the rate of pumpage, the larger the diameter of the cone produced. The diameter also is dependent upon the physical characteristics of the particular aquifer involved; for example, a "confined" aquifer will exhibit effects of pumping at greater distances than aquifers not so confined.
>
> Also incident to the pumping of any well (and actually part of the "cone of depression" concept) is the

> creation of a vertical hydraulic gradient at the well. If the well draws from an aquifer overlain by another aquifer with a less permeable unit in between, pumpage will create an "hydraulic head" difference between the two aquifers and encourage increased percolation from the upper aquifer into the lower.

Beyond this general explanation, two points raised by ALJ Montacalvo are particularly relevant to this discussion. The first is that, with regard to the cone of depression, its diameter "is dependent upon the physical characteristics of the particular aquifer involved; for example, a "confined" aquifer will exhibit effects of pumping at greater distances than aquifers not so confined." (*Id*.) The second point deals with hydraulic gradient, as he notes, "Also incident to the pumping of any well (and actually part of the "cone of depression" concept) is the creation of a vertical hydraulic gradient at the well. If the well draws from an aquifer overlain by another aquifer with a less permeable unit in between, pumpage will create an "hydraulic head" difference between the two aquifers and encourage increased percolation from the upper aquifer into the lower." (*Id*.)

Both of these points support the position proffered by Dr. Michalski, first, that the lowering of bedrock water levels through pumping the Rosenthal Wells at the rate proposed in the draft permit will adversely affect other groundwater users for miles because of the poor water storage capacity of the indigenous bedrock resulting in an ever increasing expansion of the Rosenthal Wells' cones of depression. (See, e.g., CPC Ex. 80.) Second, the drawdown of Residential Wells 1 and 4 observed during the simultaneous pump test of April 2004, suggest a hydrogeologic connection between the unconsolidated and stratified bedrock aquifers, such that pumping from the deeper bedrock Rosenthal Wells would encourage increased percolation from the unconsolidated surficial aquifer, wherein Residential Well 1 is located, as well as the shallower bedrock well, Residential Well 4, to the bedrock strata tapped by the Rosenthal Wells. (*Id*.)

Although Residential Wells 2 and 3 showed no effect from the simultaneous pumping, their respective locations are each approximately twice the distance from the Rosenthal Wells than Residential Wells 1 and 4. The lack of observed effect during the April 2004 pumping test may be due to the fact that the test was not long enough to allow the expanding cone of depression

caused by the simultaneous pumping to intercept those locations. A longer test may, in fact, reveal a hydrogeologic connection similar to that observed between the Rosenthal Wells and Residential Wells 1 and 4.

The Big Indian Plateau water supply Conceptual Design Report makes clear that the Applicant intends to have at its disposal up to 190,000 gdp of potable water supply, to be used as such, with the balance of any unused portion of this daily supply available for irrigation, primarily on its proposed golf course. This position is evident from the Report where it states (App. Ex. 51B at 7.):

> The Big Indian Plateau potable water supply system has demonstrated its ability to meet the maximum daily demand of 190,000 gpd. During those times when there is a demand for 190,000 gpd of potable water, there will be 190,000 gpd of treated wastewater effluent that can be pumped to the irrigation ponds. When potable water demands are less, say 100,000 gpd, there will be 100,000 gpd of treated wastewater effluent that can be pumped to the irrigation ponds, and the “excess” 90,000 gpd of water available, but not needed for potable, can also be provided to the irrigation ponds.

But whether this proposed 190,000 gpd rate of withdrawal can be sustained over the long term is a subject for further inquiry. Moreover, this proposed rate of withdrawal raises the questions posed earlier that must be considered and answered before a water supply permit can be issued.[1]

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[1] As noted earlier, these questions are (1) Will the available groundwater water supply be adequate over time given the 190,000 gpd rate of daily withdrawal proposed?; (2) Given the proposed 190,000 gpd rate of daily withdrawal, will there be proper protection of the supply and watershed?; (3) At the proposed 190,000 gpd withdrawal rate, is there a risk that both the surficial unconsolidated and bedrock aquifers could be dewatered to the detriment of other persons using the same supply?; (4) At the proposed 190,000 gpd withdrawal rate, is there a risk that both the surficial unconsolidated and bedrock aquifers could be dewatered to the detriment of the aquatic and terrestrial habitats?; and (5) Is the proposed 190,000 gpm withdrawal rate just and equitable to the affected municipalities, the Town of Shandaken and the Hamlet of Pine

While the precise nature of the stratigraphy and any cross-connections within the hydrogeologic architecture of the indigenous aquifer remains in question, it is an academic inquiry that need not be adjudicated. What remains in question, however, and must be determined through the adjudicatory process is the actual pumping rate at which equilibrium is achieved upon the simultaneous pumping of Rosenthal Wells 1, 2 and 3. This rate is critical to the determinations required to be made pursuant to ECL 15-1503(2) and 6 NYCRR 601.6 before a water supply permit can be issued. Without knowing the actual sustainable yield of the Rosenthal Wells, these questions cannot be answered.

Section 621.15(b) of 6 NYCRR provides that "[a]t *any time* during the review of an application for a new permit ... the department may request in writing *any additional information which is reasonably necessary to make any findings or determinations required by law*." (Emphasis supplied.) Clearly, empirical data establishing the actual sustainable yield of the Rosenthal Wells, that rate of withdrawal where equilibrium or stabilized drawdown is established, is "additional information which is reasonably necessary to make any findings or determinations required" under ECL 15-1503(2) and 6 NYCRR 601.6. Moreover, as is apparent from a plain reading of Section 621.15(b), such additional information can be requested even after Department Staff has determined the subject permit application to be complete. *See, e.g., In the Matter of the Application of Al Turi Landfill, Inc.*, Rulings of the ALJ, June 19, 1998.

Consistent with prior administrative rulings of this Department, it is clear that a Petitioner can articulate an issue that is both substantive and significant by identifying a material defect or omission in the permit application or its supporting documentation that may adversely affect permit issuance. *In the Matter of Broome County Department of Public Works*, Decision of the Commissioner, June 11, 1984; *In the Matter of Halfmoon Water Improvement Area*, Decision of the Commissioner, April 2, 1982. For the purposes of this proceeding, CPC has met

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Hill, and their inhabitants, and in particular, is it just and

equitable with regard to their present and future needs for sources of water supply?

this burden. Accordingly, I find that the lack of a empirical data from a simultaneous pump test sufficient to establish the actual yield of the Rosenthal Wells at equilibrium is an issue that is both substantive and significant.

In adjudicating this issue, it will be necessary to develop a protocol for the simultaneous pumping test that will ensure that empirical data is gathered during the test from which certain conclusions can be reasonably drawn, including, but not limited to the following:

1. At what constant rate of withdrawal is equilibrium established in Rosenthal Wells 1, 2 and 3?

2. Which residential or public water supply wells should be monitored?

3. Where should monitoring well points be placed and at what depth?

4. When the Rosenthal Wells are at equilbrium, what are the dimensions of the cone of depression thus created?

5. What, if any, other sources, locations or potential locations of potable water supply are located within the delineated Rosenthal Wells' cone of depression?

6. How should the Birch Creek USGS stream gauges be monitored?

7. Where should additional stream gauges be placed and how should they be monitored?

8. How should hydric conditions in adjacent wetlands and uplands be monitored during the simultaneous pump test?

With respect to the Wildacres Resort, the record provides no basis to find that the mandates of ECL 15-1503(2) and 6 NYCRR 601.6 are subject to question as to require further inquiry or preclude issuance of the requested permit.

RULING NUMBER SIX

With respect to the Big Indian Plateau application for a water supply permit, the lack of empirical data from a simultaneous pump test sufficient to establish the actual yield of the Rosenthal Wells at equilibrium is an issue that is both substantive and significant. It is a substantive issue because without this information obtained upon further inquiry, the determinations required by ECL 15-1503(2) and 6 NYCRR 601.6 cannot be made. Moreover, it is a significant issue since it affects issuance of a water supply permit for the Big Indian Plateau. Accordingly, I direct that a simultaneous pump test sufficient to establish the actual yield of the Rosenthal Wells at equilibrium be conducted pursuant to a protocol developed by mutual agreement of the parties, or upon adjudication, if such agreement is not reached.

RULING NUMBER SEVEN

With respect to the Wildacres Resort application for a water supply permit, no substantive and significant issue has been raised requiring further inquiry or affecting permit issuance. I, therefore, direct Department Staff to process and issue the requested Wildacres Resort water supply permit.

AQUATIC HABITAT IMPACTS

Positions of the Parties

CPC

CPC argues that the DEIS fails to adequately assess the potential impacts to aquatic habitat, and particularly to trout populations, that could result from the Applicant's proposed project. (CPC Petition for Party Status, OHMS Ex. 8 at 30.) With respect to the Big Indian Plateau, CPC points out that the proposed project is located in the headwaters of Lost Clove Creek and other tributaries to Birch Creek, which are all, in turn, tributaries to the Esopus Creek. (*Id*. at 31.) Within the

Wildacres Resort, CPC notes, are located various headwaters of tributaries to Emory Brook, all in turn tributary to the Bush Kill. (*Id*.) All of these waters are high gradient, coldwater streams supporting thriving fish fauna populations, particularly trout species. Moreover, all are presently classified Trout Spawning by the Department or have been recommended for such designation. (*Id*.)

Due in large part to the lowering of base flows in these waters caused by the withdrawal of groundwater for the project, as evidenced by the lowering of levels in Birch Creek during the simultaneous pump test in April 2004, CPC asserts that the proposed project will result in the following impacts:

1. Reduction of groundwater levels and loss of base flow in adjacent streams.

2. Increased duration of low flows.

3. Increased water temperature.

4. Increased pollution levels.

5. Modification of stream morphology.

6. Reduction of fish densities and a shift of community structure from one dominated by trout towards generalist, warm water species, such as bluegill. (*Id*. at 32.)

In advancing its argument, CPC proffered the opinion of Piotr Parasiewicz, Ph.D. Dr. Parasiewicz is a Research Associate in the Department of Natural Resources at Cornell University, Ithaca, New York, and is Director of the Instream Habitat Program. He is also an Adjunct Assistant Professor in Aquatic Ecology and Engineering at both the University of Massachusetts at Amherst and the University of Connecticut at Storrs. Moreover, he is a consultant to the US Army Corps of Engineers and a member of the Habitat Restoration Team, an oversight committee of the Onondaga Lake Watershed Restoration project in Syracuse, New York. (Curriculum Vitae of Piotr Parasiewicz, CPC Petition for Party Status, OHMS Ex. 8.) Dr. Parasiewicz stated that the accepted method for calculating minimum stream flows is

the method developed by D.L. Tennant in 1976. (Exhibit J at 2, annexed to CPC Petions for Party Status, OHMS Ex. 8.) In explaining the Tennant method and quoting from him, Dr. Parasiewicz stated:

> Tennant argues that 60% of the average flow, "is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms," that 30% of the average flow, "is a base flow recommended to sustain good survival habitat for most aquatic life forms;" and that 10% of the average flow, "is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms." According to Tennant, flows below 10% of the average flow, "will result in catastrophic degradation to fish and wildlife resources and harm both the aquatic and riparian environments." (*Id*. at 3.)

Noting that the four years of stream flow gauge data from Birch Creek at Big Indian was not sufficient to allow complete application of the Tennant method, Dr. Parasiewicz, nevertheless asserted that the data could be analyzed and flow patterns and the duration and frequency of low flow events determined for Birch Creek. (*Id*. at 2.) From the Big Indian gauge data, during four summer and fall seasons recorded, Dr. Parasiewicz stated that stream flows in Birch Creek

> remained under the 30% Tennant threshold for 63% of the time. During the drought years of 2001 and 2002, flows fell below the 30% threshold for 90% of the time, and for over 70 days without interruption. In addition, flows can stay below the 10% threshold (indicating "catastrophic degradation") for a period of two weeks continuously. In Birch Creek, low flow -durations are likely extended by early withdrawals of water for snowmaking, starting in September. The usual consequences of extended duration and frequency of low flow conditions are elevated temperatures and pollution levels. (*Id*. at 4.)

Despite low flows, however, Dr. Parasiewicz believes that water temperatures in the project area also remain low because the streams are fed by groundwater springs. (*Id*.) Even if nominal, as Dr. Michalski suggests, the groundwater intrusion is sufficient to maintain these low stream temperatures, providing

good habitat for salmonid fish species. (*Id*.) "Ground water intrusions are particularly important for spawning of salmonids," Dr. Parasiewicz notes, "as they are necessary for trout redds and egg survival. Successful spawning of trout is a good indicator of the presence of underwater springs." (*Id*. at 4.)

Noting Dr. Michalski's assertion that ground and surface waters in the area are interconnected, Dr. Parasiewicz concludes: "Consequently, existing ground and surface water withdrawals for domestic use and snowmaking must contribute to the extended duration of low flows in the creeks." (*Id*.)

In Dr. Parasiewicz's view, the primary impact to aquatic fauna will be through modification of the flow regime occasioned first by ground and surface water withdrawals, as discussed, and second, by "faster surface runoff due to increased impervious area, removal of forest cover, filling and fragmentation of wetlands and compaction of soils on the ski slopes." (*Id*. at 5.)

As to the latter concern, Dr. Parasiewicz argues that increased runoff will result in an increase in fine sediments, notwithstanding the presence of the proposed detention ponds. (*Id*. at 5) These fine sediments will enter the area streams and be transported down them. Once in the streams, "[f]ine sediments reduce the interstitial space in the gravel substrate, reducing macro-invertabrate production, as well as the survival of trout larvae, as trout larvae actively utilize interstitial spaces immediately after hatching." (*Id*.) Moreover, the detention ponds will tend to cause an increase in the temperature of the water ultimately flowing to the streams. (*Id*.) Finally, removal of forest vegetation for the project will diminish subsurface water storage capacity within the watershed, contributing to lower stream flows and reducing groundwater recharge available for intrusion into area streams. (*Id*.)

As to the first impact to flow regime, occasioned by ground and surface water withdrawals, Dr. Parasiewicz states that, conservatively, the pumping of the Rosenthal wells could increase withdrawals, as measured at the Birch Creek stream flow gauge, by 0.3 cubic feet per second (cfs). Assuming this to be true, Dr. Parasiewicz states, and in Figure 3 of his report, illustrates:

> Because the majority of groundwater withdrawals take place above the confluence of Birch and Crystal Spring

> Brook, the impact on flows should be measured at the confluence. The drainage area at this point is approximately 7.2 mi^2. Figure 3 presents flows calculated at this location for the period July-October by reducing flows at the Big Indian gauge proportionally to the drainage area (i.e., 57%). The 30% Tennant threshold at this point is *ca*. 4.8 cfs, and the 10% threshold is 1.6 cfs. An additional reduction of flows by 0.3 cfs would increase the durations of flows below the 10% threshold from 11% to 25% (more than twice). In dry years, such as 2001, the flows could remain below this critical level for an entire month. Upstream of the confluence, the flow modification could be more dramatic, and would impact the most valuable fish community in the system. Although this estimate indicates a dramatic change, it is very conservative and does not include any of the flow regime changes described previously. A quantification of such regime changes is possible and highly recommended. (*Id*. at 5.)

The consequences of low flow on fish habitat can be severe, according to Dr. Parasiewicz, including the limitation of fish mobility and an increase in the predation of smaller fish as shallow margins are reduced. (*Id*. at 6.) Moreover, Dr. Parasiewicz observes:

> Reduced flows suppress the separation between juvenile and adult trout habitats, forcing young fish to use high-risk locations. Lower water depth and flow velocities also create habitat that is much less suitable for fluvial specialists that require flowing waters. The expected result is a shift of the fish community structure from specialized species towards habitat generalists. (*Id*.)

Dr. Parasiewicz also argues that the proposed project comprises some 10 to 20 percent of the site and that this construction will result in damage to or the loss of many very small and intermittent or even perennial streams presently part of the indigenous stream network. (*Id*. at 7.) Moreover, Dr. Parasiewicz asserts that the project will not only extend the duration of lower flows in the larger area streams, but the duration of dry spells in intermittent streams, as well. (*Id*.) Such a condition would be particularly detrimental to aquatic

species such as trout which depend in water availability at specific times of the year. (*Id*.) As Dr. Parasiewicz notes:

> Because of their hydrological dynamics, small, perennial and intermittent streams are fragile environments. The organisms living in such streams are highly specialized and depend strongly on a "concerted" hydrological cycle, i.e., one which provides the right flows at the right times. (*Id*.)

To properly evaluate the impacts of stream flow and morphological changes on resident fish populations, Dr. Parasiewicz maintains that a quantitative habitat model needs to be developed for the project site with which hydrological simulations may be run. (*Id*.)

CPC asserts that the DEIS fails to address adequately address these concerns.

Applicant

The Applicant contends that the DEIS has addressed the concerns raised by CPC with respect to aquatic habitat. Specifically, the Applicant notes that the DEIS acknowledges that limited surface waters exist on the project, that these surface waters will not be impounded for use by the project, and that the proposed irrigation ponds will be isolated and separate from these surface waters. (Applicant's Issues Conference Brief at 89.)

The Applicant further argues that the DEIS does note that Birch Creek, Lost Clove Brook and the brooks in Giggle Hollow and Woodchuck Hollow support trout populations. (*Id*.) To protect these streams, forested buffers will be provided, ranging in width from 800 to 2000 feet. (*Id*.) Moreover, the Applicant argues that the proposed stormwater management plan provides further protection to the aquatic habitat as it is designed to control the discharge of even a 100 year storm event. (*Id*. at 90.)

The Applicant disagrees with the conclusions reached by Dr. Michalski with respect to the lowering of base flows in local

streams, particularly Birch Creek, and maintains "that there is no direct hydraulic connection between surface waterbodies in the Birch Creek valley below Pine Hill and the bedrock aquifers utilized by the Rosenthal wells." (*Id*.) Moreover, the concerns raised by Dr. Parasiewicz are "entirely flawed," according to the Applicant, since they are based on Dr. Milchalski's assertion that such an hydraulic connection does, in fact, exist. (Id. at 91.)

In support of its position, the Applicant proffered the opinion of Steven Trader of Alpha Geoscience. In Mr. Trader's opinion, the surficial unconsolidated material through which Birch Creek flows is underlain by a thick glaciolacustrine clay deposit. (T at 4372.) This clay layer, Mr. Trader asserts, acts as a barrier and separates Birch Creek from the underlying bedrock aquifer. (Id. At 4373.) In addition, Mr. Trader noted a two year flow study done of the area's springs and streams. (T at 4360 and Applicant's 51B, Table 1A.) When he compared this field data with the flow predictions made by Dr. Parasiewicz, he found them to be higher. (T at 4365.)

Department Staff

Department Staff argues that the pump tests conducted by the Applicant are sufficient to show "that there is no hydraulic connection between the Rosenthal wells and Birch Creek ... and thus there should be no negative impact on Birch Creek by the withdrawal of groundwater by the project." (Department Staff's Brief at 22.) Moreover, Department Staff asserts that the SPDES effluent discharge limits and monitoring protocols set forth in the permit, particularly for pesticides, will be fully protective of the environment. (*Id*.)

Discussion

As determined earlier in this Ruling, a substantive and significant issue has been presented with respect to the existence and extent of any hydrogeologic connection between the indigenous surficial unconsolidated aquifer and the bedrock aquifer from which the Rosenthal wells will draw water for the Big Indian Plateau, requiring further inquiry in the nature of a simultaneous pump test continued until equilibrium is achieved.

As noted, the potential for this hydrogeologic connection between the surficial and bedrock aquifers is demonstrated by the data collected during the simultaneous pump test conducted in April 2004. For example, Dr. Michalski pointed out that Residential Well 1 showed a drop of 3.24 feet during the April test. (CPC Ex. 80.) Since Residential Well 1 is entirely situated within the surficial unconsolidated aquifer, and the Rosenthal wells are located within the deeper bedrock aquifer, the data suggests percolation of groundwater within the upper surficial aquifer downward into the deeper bedrock aquifer as groundwater at the deeper bedrock level was drawn out of the Rosenthal wells during the pump test.

Moreover, it also appears from the record in this matter that the streambed of Birch Creek itself consists of, and is part of, the same unconsolidated material in which Residential Well 1 exists, reasonably suggesting a hydrogeologic connection among Birch Creek and the Rosenthal wells. This is evidenced by the drop in the level of Birch Creek observed at the USGS gauge during the simultaneous pump test of April 2004, and noted by Dr. Michalski. (*Id*.)

Further, it should be noted that all the other surface water bodies and water courses in the area of the project are also located within the same unconsolidated surficial material as Birch Creek and Residential Well 1. Accordingly, it is reasonable to assume that the levels and base flows of these other surface waters may be lowered if the Rosenthal Wells are pumped at the rates authorized in the draft permit. The resolution of this matter requires further inquiry.

Although the accuracy of the reported data was drawn into question during the issues conference, the spring and stream flow measurements provided in Table 1A of the Conceptual Design Report for the Big Indian Plateau water supply permit (App. Ex. 51B.), even if accepted as valid, do not provide useful information to resolve the question of the impact on base flows, if any, caused by the pumping of the Rosenthal wells at the rate authorized in the draft permit. The data compiled in Table 1A was assembled during the two year period from January 18, 2000 through December 14, 2001. The data does not include any spring or stream flow measurements recorded immediately before, during or after the simultaneous pump test of April 2004, although, as noted, the stream data that was collected at the Birch Creek USGS gauge during the April 2004 pump test showed a drop in stream levels

during the test. Accordingly, how other indigenous spring or stream flows were affected by the simultaneous pump test of April 2004 is unknown. Moreover, since the simultaneous pump test of April 2004 was not run until a state of true equilibrium was achieved, even if such data had been collected, it would not resolve the issue of the impact to base flows that has been raised.

The concerns raised by Dr. Parasiewicz pose issues that are both substantive and significant. These issues cannot be ultimately resolved until the base flows of the affected streams, determined at the point at which the Rosenthal wells are at equilibrium, is known. Each affected stream's base flow, when the Rosenthal wells are at equilibrium, is the starting point from which any analysis of the impacts to aquatic habitat must begin. Moreover, it is only with the knowledge of this baseline flow that meaningful quantitative habitat modeling and hydrological simulation can be conducted.

The drop observed in monitored Residential Wells 1 and 4 and particularly in Birch Creek during the simultaneous pump test of April 2004, a test that was not continued until equilibrium was achieved, raises a substantive issue requiring further inquiry. If the flow of a larger perennial stream such as Birch Creek experienced a decrease during the simultaneous pump test of April 2004, what would be the effect on other, smaller streams in the area? Moreover, if the test had been conducted until equilibrium were achieved, would the base flow in any of the streams, particularly trout spawning streams, have fallen below the 10 percent Tennant threshold? Such questions can only be answered after further inquiry, including quantitative habitat modeling and hydrological simulation.

It must be noted, however, that on this record, CPC's concerns with respect to impacts to aquatic habitat are only relevant as to the Big Indian Plateau portion of the proposed project. The record does not support a finding that a substantive and significant issue as to impacts to aquatic habitat has been raised with respect to the Wildacres portion of the project.

The DEIS fails to provide an adequate analysis the impacts of the proposed project on indigenous fish populations as well as a discussion of the adequacy of proposed mitigation measures. The DEIS acknowledges in a brief survey of existing surface water

resources that area streams, including Lost Clove Brook, Birch Creek, Giggle Hollow Brook, Crystal Spring Brook, Cathedral Glen Brook, and Woodchuck Hollow Brook, are all classified by the Department as either trout or trout spawning streams. (OHMS Ex. 3, DEIS at 3-11 to 3-13.) In addition, the DEIS, in an Addendum to Appendix 20, contains data of fish surveys conducted by the Department in the abovementioned streams within the area of the project. However, the DEIS proposes no mitigation other than forested buffers ranging in width from 800 to 2000 feet along certain lengths of these watercourses. (*Id*. at 3-25.) Without the modeling and simulation proposed by Dr. Parasiewicz, the ability of these buffers to provide adequate mitigation is unknown. Moreover, the need for additional mitigation, if any, is equally unknown.

As Department Staff stated when supplying the Applicant with the fish survey data for the above mentioned streams, contained in the Addendum to Appendix 20, "You will see that all of these streams contain adult and fingerling trout and therefore protection should be given to these streams to ensure that trout and trout spawning habitat is not degraded." (*Id*., Addendum to Appendix 20.)

The abundant presence of trout is one of most important natural resources offered by this area of the Catskills, providing important recreational and economic opportunities. The protection of these trout must remain a paramount concern.

RULING NUMBER EIGHT

With respect to the Big Indian Plateau portion of the proposed project only, CPC has raised issues that are both substantive and significant as to impacts to aquatic habitat occasioned by the project. In particular, issues have been raised concerning the level of base flows for area streams that will result as a consequence of pumping the Rosenthal wells at the rate proposed in the draft permit. For each affected stream, certain questions must be posed and answered, including, but not limited to, the following: With the Rosenthal wells pumping at a state of equilibrium, what base flow can be expected? How will that base flow vary with the season and drought conditions? Will that base flow fall below the Tennant threshold? If so, for what duration? What will be the effect of such a drop in base flow on aquatic habitat, including but not limited to trout spawning and species survival? What, if at all, will be the effect of

sediments transported by runoff during storm events? What precisely are the nature and location of the forested buffers proposed, and will they be adequate to protect trout populations and their habitat?

These questions raise issues that are substantive because to answer them requires further inquiry. Moreover, these questions raise issues that are significant because their answers can affect permit issuance.

STORMWATER IMPACTS

Positions of the Parties

City

The City raises four issues for adjudication with respect to stormwater. First, it argues that the Applicant's hydrological analysis of pre-development conditions at the site of the proposed project is inaccurate and does not represent the actual pre-development site conditions. Second, the City argues that the Applicant's analysis of post-development pollutant loading for Total Suspended Solids (TSS) and Total Phosphorous (TP) is inaccurate. Third, the City argues that the Applicant should not be allowed to expose more than five acres of soil at one time within the watershed of the Esopus Creek. Fourth, the City asserts that the Applicant's operation phase Storm Water Pollution Prevention Plan (SWPPP) for Big Indian is inadequate because it is based on the Applicant's flawed hydrological analysis.

With respect to the first issue it raises, in making its argument that the Applicant's hydrological analysis is inaccurate, the City points out that "a thorough assessment of a site's pre-development hydrology is absolutely essential to developing an SWPPP that will prevent severe water quality impacts from occurring in the post-development phase." (City Final Brief at 7.) Moreover, the hydrological analysis, the City notes, "enables a design professional to understand both the overall proportions of rainfall that ultimately leave a site as stormwater runoff, and also the rate at which that runoff occurs

over time, in relation to a storm event." (*Id*. at 6.) A proper analysis will result in a hydrograph by which the volume of stormwater runoff from a particular precipitation event at a particular point can be determined. (*Id*. at 6-7.) The proper design of the components an effective SWPPP is dependent upon an accurate hydrological analysis. (*Id*.)

In developing its hydrological analysis, the Applicant used the computer modeling program called HydroCAD. Errors in the hydrological analysis conducted by the Applicant, assert the City, include an overestimation of pre-development peak stormwater flows, failure to properly understand and assess the routes that stormwater travels as it leaves the site, a miscalculation of the rate at which stormwater leaves the Big Indian site, and failure to consider or properly analyze pre-existing hydrological features on and off the proposed project's sites. (*Id*. at 7-8 and 16.)

As an example of the overestimation of pre-development stormwater flows leaving the site, the City examined the Applicant's proposed Design Point 2, on the existing drainage plan for the Big Indian Plateau. (See, e.g., Drawing SD-5, Existing Drainage, revised 8/25/04, annexed to App. Ex. 160.) Design Point 2 is at a location on the Big Indian site where stormwater runoff from Giggle Hollow concentrates and is also where NYCDEP maintains a monitoring station called BELLGIG. (City Final Brief at 8.) In its HydroCAD analysis, the Applicant considered the peak flow at various Design Points for a 10-year storm event for the region, being 6 inches of rainfall in a 24-hour period. At Design Point 2, the Applicant predicted that the peak flow would be 618.4 cubic feet per second (cfs) during such a 10-year event. (App. Ex. 160 at 8.) On September 18, 2004, Hurricane Ivan impacted the area, causing 5.25 inches of rain in the Giggle Hollow watershed. Arguing that this event approximates the 10-year storm event, the City stated that the NYCDEP monitoring equipment, located at the same location as Design Point 2, measured a peak flow of 37.0 cfs, far less than the 618.4 cfs predicted by the Applicant. (City Final Brief at 8.) The City further asserts that the difference in the theoretical 10-year 6 inch storm event and the actual storm event of 5.25 inches cannot be accounted for by the 0.75 inch difference between them. (*Id*. at 9.) The City asserts that such an overestimation of peak flow suggests that the Applicant has misused the HydroCAD model and designed an SWPPP based on such overestimations. Accordingly, even if the Applicant asserts that the SWPPP will reduce peak stormwater flows to pre-development

conditions, it has designed a system that will reduce peak flows to those overestimated levels rather than to actual levels. (*Id*. at 10.) Thus, asserts the City, the water quality impacts that will occur from a large increase of stormwater flows in the post-development phase have been ignored. (*Id*.)

In addition to overestimating peak flows, the City argues that the Applicant failed to properly understand and assess the routes that stormwater travels as it leaves the site. (*Id*. at 11.) As an example, it points out what it asserts to be the Applicant's contention that stormwater flows to Big Indian Design Point 1 travel along a 6,600 foot long, 10 foot wide by 3 foot deep swale. But from the site visit during the issues conference, it was apparent, asserts the City, that no such swale exists, but is rather the "fictional creation of a computer model." (*Id*.) Moreover, actual flow, argues the City, does not flow to Design Point 1, but rather leaves the existing railroad bed by a series of culverts. (*Id*.) These culverts were ignored by the Applicant in its hydrological model. (*Id*.) The Applicant must revise the Design Points to reflect actual and not theoretical conditions. (*Id*. at 12.)

The City also asserts that the Applicant failed to properly calculate and apply Time of Concentration (Tc) in its hydological analysis. (*Id*. at 13.) Noting that the proper calculation of Tc requires a consideration of its three components, laminar or sheet flow, shallow concentrated flow, and channel flow, the City argues that the Applicant omitted sheet flow from its Tc calculations. (*Id*.) Sheet flow occurs at the uppermost section of the watershed furthest from an associated design point and is the slowest component of Tc. (*Id*.) Accordingly, by omitting sheet flow from its calculations, the rate of stormwater flow travel time in the Applicant's hydrological analysis is artificially increased, and any resulting hydrograph distorted. (*Id*.)

The omission of sheet flow from the Applicant's analysis is of particular concern to a full understanding of the stormwater flow impacts to the Big Indian Plateau. The City argues that the conditions that create sheet flow are present at the Big Indian Plateau inasmuch as it "is a 'unique' topographical feature with significant natural depressions in the topography and covered by a thick humic layer," capable of holding a considerable quantity of water before releasing it to runoff. (*Id*. at 13-14.) Moreover, the City points out that given its topography, sheet

flow may occur over distances in excess of 150 feet, a fact which the Applicant denies. (*Id*. at 14.) "The Applicant's failure to verify the presence of unusual lengths of sheet flow due to the site's unique hydrology," asserts the City "is akin to its failure to verify the flow data produced by HydroCAD with actual flow data gathered onsite. These failures have produced an inaccurate depiction of the site's actual hydrology." (*Id*. at 15.)

The Applicant reran its HydroCAD analysis using sheet flow in an attempt to illustrate the relative unimportance this parameter in a hydrological analysis. (See, App. Ex. 161.) However, the City argues that this analysis is irrelevant as it was rerun as to one watershed at Wildacres, and not with data unique to the Big Indian site. (City Final Brief at 15.)

The City also asserts that the applicant has omitted channel flow from its analysis of many of the watersheds in both Big Indian and Wildacres. (*Id*. at 16.)

These omissions call into question the hydrological analysis done by the Applicant and the design and adequacy of any proposed SWPPP derived from that analysis, argues the City. (*Id*.)

The City further argued that, with respect to the Big Indian Plateau, the Applicant failed to consider or properly analyze pre-existing hydrological features on and off the proposed project's sites, including wetlands and existing flow paths connecting them, groundwater seeps, sensitive streambed features in Birch Creek such as exposed clay lenses, sensitive soils off-site but in the proximity of Birch Creek that will likely be affected by the proposed project, and existing soil lobes observed along the railroad bed. All of these features need to be identified and the potential impacts of stormwater flows from the proposed project on them analyzed. (*Id*. at 16-19.)

As a second issue for adjudication, the City asserts that the Applicant's analysis of pre-existing pollutant loading for Total Suspended Solids (TSS) and phosphorous fails to consider the impacts on the actual receiving waters and seriously underestimates the pollutant loads emanating from the project site in its pre-existing condition. (*Id*. at 21.)

An accurate model of pre-existing conditions must be developed before pollutant loading impacts post-development can be assessed. (*Id*.) The development of such a model would include "(1) an assessment of the peak flows currently leaving the site; (2) the amount and type of pollutants currently leaving the site; and (3) the land use changes (cover type) that will take place in association with the development." (*Id*.)

The Applicant, however, asserts the City, has ignored local impacts of pollutant loading, instead focusing on the impact of such loadings to the ultimate receiving waters, the Ashoken and Pepacton Reservoirs. As a consequence, the Applicant has determined that the contribution of pollutants by the proposed project will be insignificant. (*Id*. at 22-23.)

Moreover, the City argues that the Applicant's macro approach to pollutant loading analysis, precludes a determination of the impacts of TSS and phosphorous at the locations of the outfalls designated in the draft SPDES permits. (*Id*. at 24.) This is of particular concern for the outfalls flowing to Birch Creek since Birch Creek is tributary to the Esopus Creek which is listed on the New York State Section 303(d) List of Impaired Waters for excessive sediment. (*Id*. at 26.)

The City further asserts that the Applicant has overestimated TSS and phosphorous loads in the pre-development stage, leading to the false conclusion by the Applicant that such loading post-development will not significantly impact surface waters. (*Id*. at 27-29.)

The City also challenges the conclusions reached by the Applicant in its HSPF modeling for the proposed project and provided in Applicant's Exhibit 161. In particular, the City notes that the calibration period for the HSPF model runs from April 2001 to March 2002, and that for this entire period the City had provided the Applicant with actual TP and TSS concentration data. However, the scatterplots of the calibration model runs do not include this City supplied data after September 2001. (City Supplemental Exhibit 3 at 1.) All available data should be used in calibrating the model, asserts the City. (*Id*.)

With respect to the HSPF study generally, the City asserts that the Applicant is simply making the same macro argument it made before as to the relatively insignificant impact of

pollutant loadings emanating from the project site on the Ashokan and Pepacton reservoirs, that is, while changes in TP and TSS may be noticeable in the upper reaches of the local streams, they become progressively smaller downstream. (*Id*.) In response to this observation, the City's water quality expert, Charles R. Cutietta-Olson, stated:

> In both contexts, by acknowledging localized environmental impacts and by focusing instead on larger spatial scales in which local impacts could be considered negligible, the Applicant is asserting that the localized impacts don't matter. From the perspective of water quality protection in an interconnected drinking water supply system, however, local impacts do matter a great deal. Small watersheds are precisely the spatial scale at which land use policy and management decisions are implemented, and so these are the spatial scales in which all those concerned about protecting water quality have to consider the environmental costs of any human activity. To conclude that the impacts from a land use change on water quality are significant only if the change would result in perceptible pollutant loadings in the ultimate receiving waters would lead to the manifestly incorrect conclusion that land use changes do not significantly affect water quality at all. Impacts from land use changes are cumulative; accordingly, their local impacts must be evaluated carefully in order to properly review their overall environmental impacts. (City Supplemental Ex. 3 at 1-2.)

As a third issue, the City argues that the Applicant should not be allowed to expose more than five acres of soil at one time within the watershed of the Esopus Creek. (City's Final Brief at 31.) While the City agrees that the Department may grant a waiver from this requirement of the SPDES General Permit For Stormwater Discharges from Construction Activity, GP-02-01, on a case by case basis, it argues that such a waiver of the 5 acre rule should not be made a special condition of the SPDES permit. (*Id*. at 31-36; City's Reply Brief at 6-7.)

As a fourth issue for adjudication, the City asserts that the Applicant's operation phase Storm Water Pollution Prevention Plan (SWPPP) for Big Indian is inadequate because it is based on the Applicant's flawed hydrological analysis, as set forth above.

(City's Final Brief at 37-40.) In particular, the City questions the plan's proposed conveyance of large quantities of stormwater flow along the railroad bed at Big Indian to a large pond near Design Point 1. (*Id*.)

Department Staff

Department Staff asserts that the City has raised credible concerns regarding the stormwater hydrology of the proposed project site and recommends that these concerns continue to full adjudication. (Department Staff Final Brief at 15.) In amplifying its position, Department Staff notes that differences in the hydrological modeling proffered by the Applicant and reviewed by the City "have not been quantified by either party." (Department Staff Reply Brief at 12.) "Lacking this quantification," Department Staff argues, "the difference in the approaches to modeling the site cannot be determined. Therefore, Staff recommends that this issue, specifically the project's Hydrology-Design Points and Watershed Delineations, continue on to full adjudication." Department Staff cites City Supplemental Exhibit 1.I.a.i-iii, which addresses the stormwater hydrology of the proposed project with particular regard to the design points and watershed delineations of Big Indian/Belleayre Highlands Design Points 1, 2 and 3, and Wildacres Design Points 1 and 2. Concluding that issues have been thereby raised which are both substantive and significant, Department Staff asserts that further adjudication should examine "the bases for the choices of inputs regarding the design points and watershed delineations as well as quantification and discussion of the results obtained through use of those different inputs." (*Id*. at 13.)

CPC

CPC concurs in the position taken by both the City and Department Staff that the stormwater hydrology of the project site is appropriate for adjudication. (CPC Reply Brief at 52.) Moreover, CPC points out additional deficiencies it argues are also appropriate for further inquiry. For example, as to miscalculations with respect to stormwater flows, CPC asserts establishing the correct pre-development flow is not possible since the Applicant "delineated only half of the onsite watershed, improperly excluding the Big Indian Plateau." (Id. at 53.) As to the Applicant's intention to disturb areas greater than five acres during construction, CPC argues the potential

impacts on the surrounding environment from such a variance warrant further scrutiny. (*Id*. at 55.)

With respect to the calculation of pollutant loadings, CPC argues that even though the Applicant chose to replace the WinSLAMM model analysis with the HSPF model as well as a direct calculation method, issues still remain requiring further inquiry. This, CPC points out, is primarily because these latter new sets of calculations were not provided to the parties at the issues conference, but as supplemental exhibits thereafter. Questions as to the scientific methods used and the pollutant projections claimed remain which can only be resolved through the adjudicatory hearing process. (Id. at 55-56.)

CPC notes that the Applicant intends to use the flocculent chitosan acetate in stormwater detention basin prior to discharge of that water. (Id. at 57.) CPC further pointed out that the Applicant had provided literature and conducted testing with chitosan which showed that, at the levels proposed for its use, chitosan was environmentally benign. (*Id*.) However, CPC provided scientific literature in support of its position that, at the levels proposed for its use, chitosan could be toxic to trout. Moreover, CPC argued that the accumulation and persistence of chitosan in soils and its subsequent release during precipitation events merited further inquiry, as well as further testing under actual field conditions. (*Id*.)

Given these uncertainties, and in view of the unprecedented magnitude of the proposed project, current mitigation plans may be insufficient to ensure protection of the site, asserted CPC. These matters are substantive and significant requiring adjudication. (Id. at 58-59.)

CWT

With respect to the quantity of stormwater flows and the pollutant loading from those flows, the Coalition of Watershed Towns (CWT) points out that the Applicant used the same model to project both pre-development and post-development flows. (CWT Reply Memorandum of Law at 5-6.) Accordingly, CWT asserts, "[i]f the models used by the Applicant truly overestimate the predevelopment and post development flow, then the measures proposed by the Applicant will be conservative and potentially oversized." (*Id*.)

With respect to the City's argument that impacts at the outfalls should be modeled, CWT asserts that this would be impracticable and, if applied statewide, only increase the cost of obtaining an approved SWPPP. (*Id*.) Moreover, such modeling in this case is unnecessary since the draft SPDES permit requires monitoring of pollutant concentrations both upstreamand downstream of the project site. Accordingly, the impact of pollutant loading will be apparent. (*Id*. at 7.)

As to the disturbance of more than five acres at a time during construction of the Big Indian Plateau, the CWT points out that the grant of a waiver to allow this is in the discretion of the Department, but only upon a showing that "the measures proposed in the erosion control plan are adequate to address potential erosion issues." (*Id*. at 8.)

Applicant

The Applicant strongly denies that its proposed plans to address stormwater runoff are in any way insufficient. (Applicant's Reply Brief at 7.) Noting that its experts have spent weeks on the proposed project site, it dismisses the argument that it has failed to consider the unique features of the site in developing its stormwater management plan. (*Id*.)

With respect to the use of HydroCAD for stormwater modeling at the project site, the Applicant asserts that this computer model has been used for decades throughout the State "to estimate pre and post development stormwater runoff in terms of quantity, velocity and peak discharges for certain storm events. There is absolutely nothing unique about this site or the Resort that nullifies the validity of HydroCAD." (*Id*. at 8.)

Addressing the intervenor's arguments generally, the Applicant pointed out that throughout the course of the issues conference, it provided the parties whatever further information, computer simulations or revised design drawings they requested. In addition, any supplemental exhibits subsequently proffered by the Applicant did not raise any issues that had not been thoroughly discussed during the issues conference. (*Id*.) Finally, as to the contents of any ultimate SWPPP for the project, the Applicant asserted that the intervenors "ignore the fact that prior to any construction on the project site, fully developed engineering drawings and associated SWPPP's must be

provided to both NYSDEC and NYCDEP for review and approval." (*Id*.)

As to Department Staff's recommendation that stormwater hydrology proceed to adjudication, the Applicant asserted that Department Staff lacked any legal basis pursuant to 6 NYCRR 624.4(c)(1)(i) and (ii) to make such a request inasmuch as it had already issued draft permits and had not met that regulation's requirements which would be to show that a dispute exists between them and the Applicant with respect to a substantial term or condition of the draft permit or a matter cited by them as a basis to deny the permit which is contested by the Applicant. (*Id*. at 9)

As to the City and CPC, the Applicant asserts that neither intervenor has raised an issue that is substantive and significant. (*Id*. at 10.)

In summarizing the City's argument with respect to pre-development flows, the Applicant stated that the City "contends that the pre-development flows are overestimated within hydroCAD and the overestimation will cause additional stormwater impacts since the proposed ponds have allegedly not been designed to handle the large increases in stormwater associated with the proposed development. In other words, if the existing flows are much less, then the large increases associated with the proposed flows will be much greater and therefore the ponds will be undersized. They are mistaken." (*Id*. at 11.)

In response to the City's example of the 37.0 cfs flow observed at its Giggle Hollow monitoring station, BELLEGIG, during Hurricane Ivan as compared to the 618.4 cfs predicted by the Applicant's HydroCAD model for its Design Point 2 at the same location, the Applicant asserts that "Hurricane Ivan was not equivalent to a 10-year design storm in the hydroCAD model. The 10-year design storm in the hydrCAD is 6 inches with the rainfall distribution of a Type II storm." (*Id*. at 12.) The difference, argues the Applicant, lies in the fact that the distribution of rainfall for a Type II Design storm of 10 years and 6 inches of rainfall in 24-hours is not even throughout the 24-hour period. Of the total rainfall, approximately 3.5 inches falls within a one hour period. (*Id*.) But the greatest one hour amount of rainfall experienced at the BELLEGIG monitoring station during Hurricane Ivan was 0.66 inches during the tenth hour of the event. (*Id*. and Exhibit C, attached thereto.)

The Applicant asserts that the HydroCAD model it developed for the project "was used as it was designed to be used and represents a full and fair evaluation of pre- and post-development flows." (*Id*. at 13.) The Applicant pointed out that the model is based upon soils which are classified by certain cover types and hydrologic characteristics. These factors are combined to develop a runoff curve number for HydroCAD simulations, the higher the number, the higher the rate of runoff. (*Id*. at 14.) To develop these essential HydroCAD inputs, "[h]igh intensity soils mapping was performed throughout the site to verify the hydrologic soil groups." (*Id*.)

With respect to the City's assertion that a thick humic layer exists at the Big Indian site, with great water-bearing capacity, the Applicant asserts that the City provided no proof of the existence of this humic layer. (*Id*.) Indeed, argued the Applicant, its expert's "findings at the site, including site specific soil test pit data included in the DEIS, do not show such a humic layer but in the vast majority of borings only a one to two inch organic duff layer." (*Id*.)

Addressing the City's argument that it omitted sheet flow from its calculations at Big Indian thereby artificially increasing the rate of stormwater flow travel time at the site, the Applicant asserts consistency in modeling is required and "that if sheet flow is used in the predevelopment conditions then sheet flow must also be used in the post development conditions, i.e. it is critically important to be consistent or you will inappropriately manipulate the model." (Id. at 15.) Thus, if the Applicant had modeled sheet flow for the plateau of Big Indian, it would have had to model sheet flow for the golf course to be constructed there as well. (*Id*.) But, the Applicant argues, construction of the golf course at Big Indian will not result in steeper slopes at the site, but gentler slopes, which will only further slow down the time of concentration in the post-development phase. (*Id*. at 15-16.) Accordingly, this means that the existing ponds in the proposed stormwater management system "are larger than they need to be to treat post-development stormwater runoff." (*Id*. at 16.)

In addressing the City's argument that it failed to properly understand and assess the routes that stormwater travels as it leaves the site, as exemplified by the present absence of a 6,600 foot long, 10 foot wide by 3 foot deep swale along the railroad bed at Big Indian, but provided for in its designed flow path to

Big Indian Design Point 1, the Applicant asserted that these features would be constructed when final design drawings were approved. (Id. at 17.) The Applicant also addressed the City's assertion that this flow presently does not flow to Design Point 1, but rather leaves the existing railroad bed by a series of culverts which were ignored by the Applicant. Responding to this argument, the Applicant asserted that its

> modeling of the swale and rail bed took the most conservative examination of its conveyance of stormwater by not including flows passing under the railroad bed through the small, often blocked culverts. This approach ensures that the most stormwater that could be conveyed along the swale is shown and this will result in a conservative design of the swale (tending to be larger than necessary rather than smaller) in the final drawings. By carefully conveying stormwater in a redesigned and improved swale, the stormwater will not adversely impact any existing wetlands, erosive soils or the ultimate receiving waters. (*Id*.)

The Applicant argues that the City is incorrect in its assertion it failed to consider or properly analyze pre-existing hydrological features on and off the proposed project's sites, including wetlands and existing flow paths connecting them, groundwater seeps, sensitive streambed features in Birch Creek such as exposed clay lenses, sensitive soils off-site but in the proximity of Birch Creek that will likely be affected by the proposed project, and existing soil lobes observed along the railroad bed. All of these features, to the extent that they are relevant to stormwater flow management, have been considered, asserts the Applicant. (*Id*. at 18.) Citing its consultant's proffer during the issues conference, the Applicant stated

> drainage channels and wetlands are only included in the stormwater analysis, i.e. hydroCAD, if they lie along the longest hydraulic flow - a basic factor in determining the time of concentration with the model. If these channels were included in the model, it would cause the pre-development flows to increase even more which is in direct conflict with [the City's] argument that the pre-development flows have been artificially "increased". (*Id*.)

Denying the City's assertions to the contrary as to local receiving waters, the Applicant argues that "[t]he impacts of the Resort on the quantity and quality of stormwater leaving the developed portions of the project have been thoroughly analyzed." (*Id*. at 19.) The stormwater management system proposed for the project, including, for example, its component micropool detention ponds, has been designed pursuant to the Department's design manual guidelines. Thus, the Applicant asserts "[i]f the ponds have been designed as required by the manual then an applicant meets the performance requirements expressed as removal efficiencies for Total Suspended Solids and for Total Phosphorous." (*Id*.) Moreover, in addition to these performance criteria, the draft SPDES permits issued by Department Staff require monitoring of Total Suspended Solids (TSS) and Total Phosphorous (TP). (Id.)

To address concerns raised during the issues conference, the Applicant replaced its WinSLAMM pollutant loading analysis with an analysis using the Hydrological Simulation Program - FORTRAN (HSPF) model. (Applicant's Supplemental Exhibit 1) While no model can provide complete certainty in estimating TSS and TP loadings, the HSPF it is widely accepted and "commonly thought of as the most comprehensive watershed model in existence by the modeling profession." (*Id*. at Section 1.) Using the model, projections were made for the year 1993 because it was considered a year of normal precipitation in relation to the long term average, was used in the Phase I TMDL for phosphorous, and was one of the four years used in Phase II TMDL. (*Id*. at Section 6.)

For Total Phosphorous (TS), the HSPF model projected pre-development levels of 501.3 kg/yr for Wildacres and 1111.5 kg/yr for Big Indian. However, while the City asserts that these values are an overestimation of TS by an order of magnitude, the Applicant rebuts this argument by pointing out that these values are for the entire HSPF-modeled watershed for Wildacres and Big Indian and not only the area of their respective project sites. (Applicant's Reply Brief at 26.)

Responding to the City's contention that onsite data should have been used in the HSPF model verification and to evaluate TSS and TP loadings, the Applicant asserts that

> [t]his is not appropriate for two reasons: 1) sampling data for TSS and TP are not continuous, nor are the sampling data sufficient to use only field data for

evaluating existing loads, and 2) the standard modeling procedure is to simulate a baseline (existing) condition and a proposed (future with project) condition to predictively evaluate the effects of a project. (*Id*.)

As to concerns raised by the City and CPC with respect to disturbing more that five acres at any one time during construction, the Applicant points out the grant of such a waiver is within the discretion of the Department, to be determined on a case by case basis. (*Id*. at 28.)

As to the concerns raised by CPC with respect to the use of the flocculent chitosan acetate, the Applicant points out that the matter was thoroughly discussed at the issues conference. (*Id*. at 30.) While not required by Department guidelines, the Applicant's proposes its use "to make the Resort's sedimentation and erosion control plans as protective of the environment as practicable." (*Id*.) Moreover, the Applicant notes that its further study of the flocculent undertaken at the Department's request has not been challenged by CPC. (*Id*.)

Discussion

The City and CPC have raised issues with respect to stormwater that are both substantive and significant within the meaning of 6 NYCRR 624.4(c)(1)(iii) requiring adjudication. Moreover, Department Staff have raised questions and concerns with respect to the hydrological analysis undertaken by the Applicant, which if left unresolved, would provide a basis to deny the SPDES permit under consideration. Accordingly, pursuant to 6 NYCRR 624.4(c)(1)(ii) Department Staff has raised an adjudicable issue.

The City has argued that there are wide disparities in the peak stormwater flow projections indicated by the Applicant's HydroCAD analysis when compared to actual flow monitoring data gathered in the field. In support of this assertion, it argued that Hurricane Ivan, which impacted the project area in September 2004, with 5.25 inches of rain in 24 hours, was similar to the Type II 10-year storm of 6 inches of rainfall in a 24-hour period used in the HydroCAD model. At the City's BELLEGIG monitoring station it measured an actual peak flow of 37.5 cfs during Hurricane Ivan. At Design Point 2, the same location as the

BELLEGIG monitoring station, the HydroCAD model projected a peak flow of 618.4 cfs. The Applicant asserted that Hurricane Ivan was not, in fact, a Type II 10-year storm of 6 inches of rainfall in a 24-hour period since, during such an event, approximately 3.5 inches of rainfall would occur during a one hour period. In the case of Hurricane Ivan, the highest one hour level of rainfall recorded at BELLEGIG was only 0.66 inches. While not strictly proportional, it is worth noting that although 3.5 inches is greater than 0.66 inches by a factor of more than 5, the peak flow projected by HydroCAD of 618.4 cfs is far greater than 5 times 37.5 cfs. Moreover, what is clear from this observation, is that discrepancies between the Applicant's HydroCAD model and actual data gathered in the field cannot be explained by a simple exercise in mathematics.

As the City indicated, the Applicant omitted sheet flow and channel flow from its HydroCAD model. Although to address the City's concern, the Applicant did provide an analysis of the impact of sheet flow as a component of the time of concentration in the HydroCAD model, the study was made using an 86.90-acre area at the Wildacres site. (App. Ex. 159.) Since, the topography of Big Indian with its steep slopes and humic soil cover differ from the Wildacres site, it is unclear on this record how the sheet flow analysis provided by the Applicant for Wildacres is applicable to Big Indian, requiring further inquiry.

Moreover, questions have been raised with respect to the Big Indian Plateau as to whether pre-existing hydrological features have been adequately considered prompting further inquiry. These features include wetlands and existing flow paths connecting them, groundwater seeps, sensitive streambed features in Birch Creek such as exposed clay lenses, sensitive soils off-site but in the proximity of Birch Creek that will likely be affected by the proposed project, and existing soil lobes observed along the railroad bed. All of these features need to be identified and the potential impacts of stormwater flows from the proposed project on them analyzed, prompting further inquiry.

The importance of fully addressing these concerns regarding the adequacy of the HydroCAD modeling done for Big Indian and the thoroughness of the consideration given to pre-existing hydrological features is only heightened by the fact that this section of the Esopus Creek, to which Birch Creek is a tributary, is on the New York State Section 303(d) List of Impaired Waters.

As this list indicates, the cause of this impairment is silt and sedimentation due to streambank erosion.

Moreover, both the City and CPC have raised substantive concerns regarding the Applicant's analysis of pre-existing pollutant loading for Total Suspended Solids (TSS) and phosphorous requiring further inquiry. CPC has also raised an issue with respect to the proposed use of the flocculent chitosan acetate in stormwater detention basins, questioning the levels at which chitosan could be toxic to trout and its accumulation and persistence of in soils and its subsequent release during precipitation events.

The City correctly argues that impacts from these pollutants should be evaluated at the point of interface between proposed outfalls and the local receiving water. This is the plain meaning of 6 NYCRR 7501.7(b)(12) which provides:

> Outfall configuration. The applicant shall provide a description of the outfall configuration for each outfall. The description shall provide sufficient information so that the Department can analyze the effect of the discharge on the receiving waters.

While the Ashokan and the Pepacton Reservoirs may be the ultimate recipients of waters from local streams such as Birch Creek and Emory Brook, it is the actual impact of pollutants emanating from the site on those local waters that is of immediate concern, particularly with regard to aquatic habitat and in light of the challenges already facing the Esopus. Accordingly, and accurate model of pre-existing conditions must be developed before pollutant loading impacts post-development can be assessed at the locations of the outfalls designated in the draft SPDES permits.

Moreover, although without setting a compliance limit, the draft SPDES permit for Wildacres requires that stormwater outfalls be monitored on a monthly basis for both TSS and TP. The permit for Big Indian, however, has no monitoring requirement. The development of an accurate model for pollutant loading could lead to the imposition of other or additional monitoring or compliance limit requirements. Moreover, adjudication will allow a more precise understanding of the effects of chitosan acetate on aquatic habitat, and provide a

basis to evaluate the appropriateness of the conditions contained in the draft permit regarding its use.

Whether the HSPF model provided by the Applicant disposes of these concerns is not known at this time. The HSPF study was provided to the parties more than two months after the close of the issues conference record. Its analysis and conclusions should receive the review afforded through the adjudicatory process. Questions have been raised with respect to the calibration of the model, in particular, the selective use of data supplied by the City in that calibration process.

The intervenors have also raised a substantive and significant issue with respect to the exposure of more than five acres of soil at one time during project construction. This is of particular concern within the watershed of the Esopus Creek. At the outset, it is clear that the Department may grant a waiver from this requirement of the SPDES General Permit For Stormwater Discharges from Construction Activity, GP-02-01, on a case by case basis, upon a showing that an erosion control plan has been proposed that is adequate to address potential erosion issues. However, while such a waiver should not be granted in the permit itself, given the sensitivity of the area, the question of a permit provision providing appropriate and special permit conditions to be included in all granted waivers is a substantive and significant issue for adjudication.

In light of these concerns, the adequacy of the SWPPP proposed for the project, and particularly the Big Indian Plateau portion, is be a subject for further inquiry. If that inquiry leads to conclusions other than those assumed by the Applicant as to peak stormwater flows, flow paths, or pollutants emanating from the site, the substance of that SWPPP and the design of its component stormwater management controls could also change.

RULING NUMBER NINE

Pursuant to 6 NYCRR 624.4(c)(1)(iii), the intervenors have raised substantive and significant issues with respect to stormwater which require adjudication. These issues include, but are not limited to (1) the adequacy of the HydroCAD model, its assumed inputs and design points, (2) stormwater flow paths on the project sites, (3) verification of and consistency of the HydroCAD model with actual field data, (4) the level of pre and

post-development stormwater flows, (5) the level of pre and post-development pollutant loadings, (6) the adequacy of the HSPF modeling analysis provided, (7) with respect to wildlife and aquatic habitat, the acceptable level of chitosan acetate in waters and soils, (8) a permit condition delineating special conditions to be included in all waivers from the five acre exposure limit during construction and (9) the adequacy of the Big Indian SWPPP and the design of its various stormwater management controls. These issues are substantive because their resolution requires further inquiry, and they are significant because they could affect permit issuance.

Moreover, pursuant to 6 NYCRR 624.4(c)(1)(ii) Department Staff has raised an adjudicable issue with respect to (1) the basis for the choices of inputs regarding the design points and watershed delineations used in the HydroCAD model, (2) the quantification and implications of the results obtained by those inputs.

IMPACTS TO THE CATSKILL FOREST PRESERVE

Positions of the Parties

CPC

CPC argues that the proposed project will cause significant and unmitigated detrimental impacts to the Catskill Forest Preserve. (CPC Brief at 80.) These impacts will be due primarily to the large increase in visitors to the area occasioned by the project, estimated, asserts CPC, at 637,800 persons annually. (*Id*.) Such an influx of visitors threatens the State constitutionally protected wilderness and wild forest areas of the Catskill Forest Preserve in proximity to the proposed project. (*Id*.) CPC points out that the Catskill Park State Land Master Plan recognizes and intends that wilderness areas "offer opportunities for solitude or a primitive and unconfined type of recreation." (CPC Ex. 38 at 23.) As to protected wild forests, CPC notes that while they can sustain a higher level of human use, the Plan directs that they be managed in such a manner as "to provide those types of outdoor recreation that the public can enjoy without impairing the wild forest atmosphere or changing the character of fragile areas within wild

forest boundaries." (Id. at 34-35.) Given the projected number of visitors to the proposed project, CPC is concerned that these fragile wilderness and wild forest areas could be jeopardized through over-use. (CPC Brief at 83.) This concern is underscored, argues CPC, by the Applicant's express intention that the proposed project integrate "the assets of the Forest Preserve" and "marry the physical assets of the Belleayre Mountain Ski Center and the Catskill Forest Preserve with new facilities." (*Id*. and DEIS, Volume 2, Appendix 3 at 3, OHMS Ex. 3.) Summarizing the opinion of its expert, Chad P. Dawson, Ph.D., a Professor on the faculty of the State University of New York College of Environmental Science and Forestry in Syracuse, such over-use, asserts CPC, "will significantly and adversely impact the opportunities for solitude in use of wilderness areas and some segments of wild forest in the Forest Preserve; cause hardening and widening of hiking trails existing within the Forest Preserve; encroach upon habitat having ecological and scientific significance; significantly and adversely impact biodiversity; and most importantly, eliminate the wilderness character of the Beaverkill Range and Slide Mountain Forest Preserve lands and impact the Shandaken Wild Forest." (CPC Brief at 83-84.) These impacts, argues CPC, have not been evaluated in the DEIS. (*Id*. at 84.)

The proper evaluation of these impacts can be accomplished, asserts CPC, through available computer modeling currently used by the US Bureau of Land Management, the National Park Service, and the US Forest Service. (*Id*. at 86.) The model, called a "recreation behavior simulator" by Dr. Dawson, allows these federal agencies to understand the number of users and the types of use a particular wilderness resource is receiving, thus, enabling more effective management of that resource. (*Id*. and T at 1218.) In summarizing Dr. Dawson proffer, CPC states:

> Model inputs include interviews of existing users, outfitters and managers, analyzed through a variety of algorithms to understand the existing capacity of the Forest Preserve as a wilderness resource; as well as measurements of the physical resource, providing an understanding of campable area, hikable trails, and for example, the length of time a day hiker will be present within the wilderness area due to the length and difficulty of particular trails. Modeling would be performed based upon trail register tallies, and knowledge concerning use of trail registers. User data

may easily be established upon trail registers, and rates of trail register use. (CPC Brief at 86.)

The modeling would provide a baseline understanding of the number of users and types of uses to which the wilderness and wild forest areas in proximity to the proposed project are subject. From this information present impacts to the Forest Preserve can be evaluated, future impacts from increased use assessed, and mitigation measures proposed as appropriate. (*Id*. at 86-87.) Moreover, such an assessment should be made with due regard for the concerns expressed in the Catskill Park State Land Master Plan, the Big Indian-Beaverkill Range Wilderness Area Unit Management Plan (UMP), and the Slide Mountain Wilderness UMP. (*Id*. and CPC Exs. 38, 39 and 40, respectively.) Without this information the proper SEQRA review cannot be made, asserts CPC, arguing that "the DEIS fails to even acknowledge the existence of an impact to the Forest Preserve." (CPC Brief at 88.)

Department Staff

Department Staff asserts that CPC has not raised a substantive and significant issue with respect to impacts to the Catskill Forest Preserve "because (1) a purpose of the Preserve is to provide public recreation; (2) the Catskill Preserve is currently underutilized for recreational purposes, thus, DEC Staff promotes such usage in order to increase visitors; (3) DEC Staff has control mechanisms in place to protect the Park; and (4) Staff offered a special condition to further enhance its knowledge and control over impacts from the Park which may flow from the proposed project." (Department Staff Brief at 8-9.)

Department Staff cites the Catskill Forest Preserve Public Access Plan of 1999. A goal of this Plan, Department Staff points out, was to establish and promote the Forest Reserve as a resource for public recreation. (*Id*. at 9; Department Staff Ex. 1.) Quoting from page 21 of the document, Department Staff asserts that "[t]he Plan seeks to provide 'appropriate access for all - hikers, sportsmen, cross-country skiers, equestrians, mountain bikers, snowmobilers, wildlife observers ....'" (*Id*.)

Department Staff maintains that the Catskill Forest Preserve is currently underutilized and argues that they can determine or estimate trial use based on trail registers, observation of trail conditions and camping permits issued. (*Id*. and CPC Ex. 41.)

Moreover, Department Staff points out that it actively promotes the recreational use of the Preserve and notes that "tens of thousands" copies of the Department's "Catskill Forest Preserve Official Map and Guide" are distributed each year. (Department Staff Ex. 3.)

Department Staff further points out that it has control mechanisms in place to protect the Preserve. (Department Staff Brief at 10.) As to trails, these include measures to control erosion such as the use of rock water bars; the placement of stepping stones and stone staircases; and the redirection of trails, through switchbacks, to limit slopes to less than 10 percent. (*Id*.) Moreover, Department Staff notes that its authority allows it to limit the number of persons using the Preserve's trails if necessary to protect them, limit the number of campers using the Preserve by restricting the number of camping permits issued, and require limited access or temporary closure of portions of wilderness areas to allow rehabilitation and restoration of the area. (*Id*.)

Finally, to ensure that Department Staff can adequately manage the Preserve in view of any additional use occasioned by the proposed project, it has proposed two special permit conditions, which provide:

1. Prior to the start of resort construction, Crossroads Ventures, LLC shall develop a plan to be submitted to NYS DEC for its approval to implement a program to educate and guide resort guests in the use of trails in the Forest Preserve. In developing the plan, the applicant shall consult with the NYS DEC and other appropriate groups, including the NY/NJ Trail Conference to identify area trails, in particular, those which may be the subject of over use, in order to redirect guests to less intensely visited trails. The plan shall include a method of keeping track of resort guest usage of Forest Preserve trails and for seeking feedback from resort guests on trail conditions. The information on guest usage and trail condition shall be compiled into an annual report and submitted to NYS DEC. In addition, Crossroads Ventures, LLC shall provide a monthly report to NYS DEC of usage of Forest Preserve trails.

2. Crossroads Ventures, LLC shall develop a plan to be submitted to NYS DEC for its approval to implement a maintenance program for all trails on its property. This Maintenance program shall emphasize the prevention and minimization of erosion and sedimentation from these trails.

Given the foregoing, Department Staff assert that CPC has not raised a substantive and significant issue with respect to impacts to the Catskill Forest Preserve warranting adjudication.

Applicant

The Applicant points out that the DEIS lays out a recreational plan "to provide opportunities for integration of planned trails on the Belleayre Resort site with existing State hiking trails." (Applicant's Brief at 121.) However, asserts the Applicant, quoting its consultant, Walter Elander, who drafted the recreational plan, "most people who would come to stay at the Belleayre Resort are not going to get out on the forest preserve trails but 'will want to experience the fringes of the natural environment.'" (*Id*.)

Moreover, the Applicant argued that Department Staff had reviewed the recreational plan and, with the addition of the two proposed conditions, believed potential impacts to the Forest Preserve could be sufficiently controlled. (*Id*.)

With regard to the computer modeling analysis suggested by Professor Dawson, the Applicant asserted that "Professor Dawson's concerns were premised on his own 'speculation' of the number of annual visitors projected to visit the Resort, who might use State Trails." (*Id*.) SEQRA does not require an examination of speculative impacts in the DEIS, the Applicant argued. (*Id*. at 122.) Indeed, requiring such a modeling analysis would be an abuse of the SEQRA process, said the Applicant. (*Id*.)

Professor Dawson's concern for the influx of a large number of new users of Forest Preserve trails, asserted the Applicant, ignores "the obvious fact during the height of the winter season from December through March, trail use is virtually non-existent." (*Id*.) "During the shoulder seasons of early spring and late fall," the Applicant continued, "the Resort would have

its lowest population and during the peak summer season, the Resorts' attraction of new visitors through its golf amenities and other planned recreational activities will compete with any purported onslaught of visitation in the Forest Preserve." (*Id*.)

In conclusion, the Applicant asserted: "The fears of extensive trail overuse in an area that is generally underutilized, not withstanding its close proximity to the New York metropolitan area, is an insufficient basis for further investigation, let alone adjudication." (*Id*. at 124.)

Discussion

In articulating a vision for the Catskill Forest Preserve, the Catskill Forest Preserve Public Access Plan of 1999, authored by the Department, states:

> The quality and character of the lives of the people of New York depend upon the quality and character of the natural resources which support our lives. The Catskill Forest Preserve is one of New York's great natural resources. The forest preserve plays an important role in the towns and villages of the Catskill region for residents and visitors alike. The 300,000 acres of "forever wild" public lands receive more than a half million visitors a year who drive the scenic highways of the region on their way to hike, bike, canoe, hunt, fish, camp, and study nature. Surrounding communities depend heavily on access to forest preserve lands as a nature-based tourism attraction that can be the cornerstone of suitable economic development for the region. (Department Staff Ex. 1 at 1.)

The critical importance of the Catskill Forest Preserve to the quality of life enjoyed by all of New York's people is reflected by their inclusion of it in their most fundamental document of government, the New York State Constitution. Article XIV, Section 1, of the New York State Constitution provides:

> The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands.

> They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed.

Moreover, the very high level of protective concern appropriate to this special area of the State is reflected in the various management plans proposed and developed by the Department for its conservation. Such plans include the Catskill Park State Land Master Plan of 1985, the Draft Revision Catskill Park State Land Master Plan of 2003, the Big Indian-Beaverkill Range Wilderness Area Unit Management Plan of 1993, and the Slide Mountain Wilderness Unit Management Plan of 1998.

Crucial to these plans is a clear understanding and articulation of the various land types and uses embraced by the Catskill Forest Preserve. Classification efforts in the Master Plan of 1985 have resulted in the establishment of four categories, Wilderness, Wild Forest, Intensive Use, and Administrative. As the Master Plan of 1985 notes:

> If there is a unifying theme to the classification system, it is that the protection and preservation of the natural resources of the Department-administered State lands within the Park must be paramount. Human use and enjoyment of those lands should be permitted and encouraged, so long as the resources in their physical and biological context and their social or psychological aspects are not degraded. (Department Staff Ex. 2 at 21.)

This same concern for degradation is reflected in the 2003 Draft Revision of the Master Plan, in the context of the possible future designation and classification of Park land, where it is stated:

> The extent of existing facilities and uses which might make it impractical to attempt to recreate a wilderness or wild forest atmosphere is also a consideration. This is not to imply that when present uses or facilities are degrading the resource they should be continued, but their presence cannot be ignored. The unique mixture of public and private land within the Park also requires recognition of facilities and uses on contiguous or nearby private lands. Thus a large

> private inholding subject to or threatened by some form of intensive use might prevent the designation of an otherwise suitable tract of state land as wilderness. (Draft Revision Catskill Park State Land Master Plan of 2003 at 8.)

But if the presence of a use on a contiguous or nearby private parcel of land can preclude a designation of wilderness on a state-owned parcel of land within the Park, it logically follows that where a state-owned parcel of land is already designated as wilderness, no use on a contiguous or nearby private parcel of land should be permitted to degrade that wilderness designation. Thus, where a use on a privately owned parcel of land contiguous to or nearby state lands designated as wilderness is proposed, its impact on, and potential to degrade, the wilderness designation enjoyed by that state land is a proper subject for SEQRA review. Such a review is particularly critical to the Big Indian Plateau portion of the proposed project which lies nearby the Big Indian Wilderness Area, the Slide Mountain Wilderness Area and the Shandaken Wild Forest.

Wilderness is defined in the Catskill Park State Land Master Plan of 1985 (CPSLMP 1985) as follows:

> A wilderness area is an area where the earth and its community of life are untrammeled by man – where man himself is a visitor who does not remain. A wilderness is further defined to mean an area of State land or water having a primeval character, without significant improvements or permanent human habitation. Such an area is protected and managed so as to preserve its natural conditions. Wilderness: (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) offers opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least ten thousand acres of land (and/or water) <u>or</u> is of sufficient size and character as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological or other features of scientific, educational, scenic or historic value. (CPSLMP 1985 at 23, Department Staff Ex. 2.)

It is the preservation of this unique experience of the primeval, untrammeled earth and its community of life, and the opportunity for solitude which it affords, that must be the touchstone for the present environmental impact analysis.

The Applicant asserts that "most people who would come to stay at the Belleayre Resort are not going to get out on the forest preserve trails but 'will want to experience the fringes of the natural environment,'" and that "during the height of the winter season from December through March, trail use is virtually non-existent." (Positions of the Parties, Applicant, *supra*.) However, it is clear from the DEIS that year-round use of the hiking trails and other amenities offered by the surrounding Forest Preserve will be promoted. Appendix 4 and pages 2-16 and 3-216 and 217 of Volume 1 of the DEIS discuss the proposed Wilderness Activities Center. The Center is described in the DEIS as, "[a] four-season facility offering programs in outdoor education." These programs will include outdoor activities such as, "mountain biking, hiking and trail running, snowshoeing, cross country skiing, nature trails, rock climbing, ice climbing, out-of-bounds ski adventures, ice skating, sledding and environmental workshops." (DEIS, Volume 2, Appendix 4.)

Moreover, with respect to the proposed project as a whole, the vision statement in the Recreational Amenities Plan states: "The primary vision for the Belleayre Resort at Catskill Park project is 'to provide residential and recreational facilities that will benefit the community, and enhance the tourism attraction of the area as a four-season recreation destination." (DEIS, Volume 2, Appendix 4 at 3.) The vision statement continues: "The Belleayre Resort at Catskill Park is intended to marry the physical assets of the Belleayre Mountain Ski Center and the Catskill Forest Preserve with new facilities and programs that will enhance these assets for the benefit of both visitors to the resort and the general public." (*Id*.) "[A] place for all the family to have fun, learn and be with nature," and a place where "[t]he visitor can choose his or her environment ranging from shopping in a village to exploring the 'Forever Wild'." (*Id*. at 3-4.) Finally, as part of its environmental education focus, on-site programs will utilize "the Belleayre Mountain Ski Center interpretive trails, the Wildacres trail network and surrounding DEC trails." (*Id*. at 25.)

From the forgoing, it is apparent that the proposed project will impact the Catskill Forest Preserve. Indeed, this impact

could be substantial. The Catskill Forest Preserve Public Access Plan of 1999 (CFPPAP of 1999) notes that in 1996 "over 574,000 visitors took advantage of the recreational opportunities on Catskill Forest Preserve lands. (CFPPAP 1999 at 17.) Appendix D of the CFPPAP of 1999 notes that in 1998, 4,503 persons utilized the Big Indian Wilderness Area while 23,278 persons utilized the Slide Mountain Wilderness Area. (*Id*. at 81.)

The DEIS provides projections as to the number of people who are expected to utilize the proposed project. Based upon an assumed 85 percent occupancy, for the timeshare/vacation club component of the project, 435,860 visitor nights per year are projected. (DEIS, Volume 9, Appendix 26, Table 4-14, at 4-15.) This means the presence of 435,860 people at the site over the course of a year. It is irrelevant whether this number equates to 435,860 separate individual persons each spending one day at the project, or fewer people with some spending multiple days at the project, since the net impact to the Forest Preserve is still the same: the presence of 435,860 people. Similarly, assuming a 60 percent occupancy rate at the 150 room Big Indian Resort and Spa, and a 70 percent occupancy rate at the 250 room Wildacres Resort, the DEIS projects 195,250 visitor nights per year, that is, the presence of 195,250 persons per year at the proposed hotels. (*Id.*, Table 4-17 at 4-21.) Finally, for the Highmount Estates, given 21 homes, a 25 percent occupancy rate, and an average of 3.5 persons per dwelling unit, total visitor nights per year is estimated at 6,707, the presence of 6707 people per year. (*Id.*, Table 4-19 at 4-22.)

Thus, the DEIS projects that the project, at its completion, will bring 637,817 people yearly to this area of the Catskill Forest Preserve. When compared to the numbers cited in the CFPPAP of 1999, the total visitation for the entire Catskill Forest Preserve would be more than double that experienced in 1996. Moreover, the presence 637,817 people each year in this particular area of the Forest Preserve would exceed the total number of persons who utilized the Slide Mountain Wilderness Area in 1998 by a factor of more than 25, and would exceed the total number of persons who utilized the Big Indian Mountain Wilderness Area in 1998 by a factor of more than 140. Finally, even if only one in ten of these 637,817 persons actually entered upon the lands comprising the Slide Mountain and Big Indian Wilderness Areas, they would exceed the 1998 totals at these Wilderness Areas by factors of more than two and one half and fourteen, respectively.

The potential impact of this influx of new visitors to Department hiking trails in the immediate area of the project cannot be overlooked. In the area of the Big Indian Plateau, these trails include the Pine Hill-West Branch Trail, the Lost Clove Trail, the Cathedral Glen Trail, the Belleayre Ridge Trail, the Mine Hollow Trail, the Oliverea-Mapledale Trail, the Seager-Big Indian Trail, the Giant Ledge-Panther-Fox Hollow Trail, and the Phoenicia-East Branch Trail. (CPC Ex. 5.)

One of the primary ways in which the Department monitors wilderness and wild forest use is through trail registers, although as the CFPPAP of 1999 cautions:

> However, estimating wilderness and wild forest use is complicated by several factors. Some trails and many access points do not have trail registers. Even where registers exist, many visitors do not sign in. Studies have shown that the number of people who register at trailhead can vary between 20 and 80 percent. DEC estimates that , on average, registration represents about 60 percent of actual use. By multiplying the number of sign-ins by 1.4, a more realistic number of visitors to wilderness and wild forest is achieved. (CFPPAP of 1999 at 17; Department Staff Ex. 1 at 17.)

By way of example, trailhead tally summaries for McKenley Hollow and Rider Hollow for 1994 through 2003 averaged 1294 and 835 sign-ins, respectively, an average total of 2129. (CPC Ex. 41.) The McKenley Hollow and Rider Hollow trailheads are both in the Big Indian Wilderness Area and in close proximity to the Big Indian Plateau. They are both on the Oliverea-Mapledale Trail. As the Department's public website indicates, a popular hiking loop from them travels over the Mine Hollow Trail, takes in a portion of Pine Hill-West Branch Trail, and provides a view of the Hamlet of Big Indian from the summit of Balsam Mountain. Applying a factor of 1.4 indicates an average of 1811 visitors at McKenley Hollow and 1169 visitors at Rider Hollow, during the period of 1994 through 2003, a average yearly total of 2980. If only one percent of the projected visitors to the proposed project utilize these trails that average would be increased by 6378 visitors per year, increasing it to 9358 visitors per year, three times the use currently experienced on these trails. Naturally, that factor of three would increase if a greater percentage of the visitors to the project utilize these trails.

However, at this time the number of users of the wilderness and wild forest areas in proximity to the proposed project has not been accurately projected, nor have the types of uses anticipated. Thus, at this point in time, it is not possible to reasonably assess or evaluate the environmental impact increased users or the various types of uses may have on wilderness or wild forest areas. Moreover, without this baseline understanding, the deterioration of trails, camping areas, or natural resources could occur, as well as the deterioration of essential infrastructure. Finally, without this baseline understanding, it is not possible to know if the permit condition suggested by Department Staff is adequate to address and mitigate such environmental impacts as may arise.

Given the scope of the proposed project and the close proximity of the fragile and pristine community of life embraced by the Big Indian and Slide Mountain Wilderness Areas and the Shandaken Wild Forest, recreation behavior simulator modeling of the type proposed by Professor Dawson should be undertaken in this matter. Without such an analysis, currently missing from the DEIS, appropriate SEQRA review with respect to impacts to the forest preserve is precluded. As Section 621.15(b) of 6 NYCRR provides, "at any time during the review of an application for a new permit ... the department may request in writing any additional information which is reasonably necessary to make any findings or determinations required by law."

RULING NUMBER TEN

CPC has raised an issue that is substantive and significant with respect to impacts to the Catskill Forest Preserve requiring adjudication. In particular, they have raised a substantive issue by demonstrating that the DEIS lacks the discussion and evaluation of impacts to the Forest Preserve necessary for an appropriate SEQRA review of these impacts to proceed, requiring further inquiry. Moreover, they have raised a significant issue since that analysis could affect permit issuance or result in a major modification of the proposed project. Accordingly, impacts to the Catskill Forest Preserve is an issue appropriate for adjudication.

IMPACTS TO WILDLIFE

Positions of the Parties

CPC

CPC argues that the Applicant's wildlife surveys are insufficient given the location of the project. Without adequate surveys, argues CPC, the effectiveness of any mitigation measures proposed by the Applicant cannot be evaluated. (CPC Supplemental Brief at 44-45.) As an example CPC points to four identified birds of special concern, the Cooper's Hawk, Common Nighthawk, Sharp-shinned Hawk, and the Cerulean Warbler. (*Id*. at 49.) The Cerulean Warbler was sighted at two locations on the project sight, CPC points out, and is a species of high continental concern and one of the highest species of concern on the list of birds for which New York has regional responsibility. (*Id*.) Over the past 35 years, the Common Nighthawk population has severely declined in the northeast and particularly in New York. (*Id*.) While these species may be listed in the DEIS, CPC argues that the surveys done provide no indication as to whether and where these birds of special concern are breeding. This information is critical since species such as the Cerulean Warbler and Common Nighthawk may, in fact, be breeding in those areas of the project site planned for development. (*Id*.) Without this information, argues CPC, it is impossible to ensure that any potentially adverse impacts to such species are mitigated to the maximum extent practicable, and that they are not placed in further peril due to either the project's construction or any proposed mitigation measure. (*Id*. at 45-46.) Thus, CPC argues that additional surveys with respect to these species need to be completed.

Moreover, CPC argues that additional data with respect to the possible presence of timber rattlesnakes in the area requires further inquiry. CPC argues that during the site visits, the presence of appropriate timber rattlesnake habitat was apparent, warranting further investigation. In particular, CPC argues through its expert, Dr. Eric Kiviat, that the timber rattlesnake requires relatively small pockets of open forest canopy to breed and that such pockets were clearly visible during the site visits. (*Id*. at 50.)

Applicant

The Applicant asserts that CPC's arguments are unfounded. (Applicant's Brief at 98.) Indeed, asserts the Applicant "the DEIS contains an extensive discussion of terrestrial and aquatic ecology, including site surveys for mammals, birds, reptiles, amphibians and plants; literature and database reviews and proposed mitigation measures." (*Id*.) Moreover, the Applicant asserts that the DEIS adequately addresses "all potential significant adverse impacts the Resort may have on wildlife, habitat and flora." (*Id*.) The Applicant points out that CPC is merely requesting that more surveys be conducted. More importantly, argues the Applicant, CPC did not make any proffer tending to show that the impacts on wildlife, habitat and flora are significant or that the mitigation measures proposed by the Applicant are insufficient to address any impacts that will occur. (*Id*.)

The Applicant points out that the area the resort will impact is composed of the same type of regularly logged homogeneous forest type found throughout the Catskills. There is absolutely no evidence of any threat to any indigenous threatened or endangered species or plants or animals. (*Id*.)

With regard to mitigation measures, the Applicant points out that the greater percentage of the land composing the project site will remain undeveloped. Of the 27 percent of the site that will be developed, the Applicant intends to replant more than 4100 indigenous trees. Other mitigation measures include limited clear-cutting and the plantings proposed for the Big Indian Resort and Spa building. With respect to wildlife, the Applicant points out that mitigation measures will include "maintenance of under story vegetation and snags, wetlands avoidance, travel corridors and the provision of brush piles." (Id. at 99; see, also DEIS 3-94-110.) Finally, the Applicant is undertaking efforts to assist the indigenous Eastern Bluebird population as well as proposing measures for protecting the habitat of other species such as the Pileated Woodpecker. (*Id*.) Accordingly, the Applicant argues that it has taken the SEQRA requisite hard look and has identified areas of significant impact and proposed appropriate mitigation.

Department Staff

Department Staff argues that its review of DEIS leads to the conclusion that potential impacts the proposed project may have on wildlife species and their habitats have been adequately addressed. (Department Staff Final Brief at 11-12 and Department Staff Supplemental Ex. 2.)

Discussion

For the most part, the surveys and discussion provided in the DEIS indicate that potential impacts to wildlife and plant species occasioned by the proposed project have been adequately evaluated and, where indicated, appropriate mitigation measures have been proposed.

With respect to the reptile survey conducted, the record does not suggest that development of the proposed project will pose any threat to the timber rattlesnake. While the site visits confirmed the presence of flat rock outcrops beneath open areas in the forest canopy, suitable for breeding, the indicia of the timber rattlesnake's presence was not observed. As Department Staff noted, such indicia would include live snakes, dead snakes or shed skin. (Department Staff Supplemental Ex. 2.) The record indicates that the nearest active timber rattlesnake population is 13 miles from the project site, with the closest known population having occurred within 5 miles of the site. (*Id*.) Moreover, as Department Staff noted, "Timber rattlesnakes exhibit very high site fidelity and follow the same migration path year after year, where the maximum distance traveled is less than four miles." (*Id*.)

Similarly, the record does not suggest that development of the proposed project will pose any threat to other indigenous flora or fauna, with four exceptions, the bird species of special concern noted by CPC, the Cooper's Hawk, Common Nighthawk, Sharp-shinned Hawk, and the Cerulean Warbler.

All four of these bird species are on the Department's list of species of special concern at 6 NYCRR 182.6(c). Species of special concern are defined in 6 NYCRR 182.2(i) as

> species of fish and wildlife found by the department to be at risk of becoming either endangered or threatened in New York. Species of special concern do not qualify as either endangered or threatened, as defined in Part 182.2(g) and 182.2(h), at this time and are not subject to the provisions of Part 182. Species of special concern are listed in Part 182.6(c) for informational purposes only.

However, the phrase "for informational purposes only" contained in 6 NYCRR 182.2(i) should not be interpreted to mean that, for the purposes of SEQRA review, the concern and consideration of these species is exhausted when they are enumerated in a survey contained in the DEIS. As 6 NYCRR 182.6(c) makes clear, "The reason for providing a list of species of special concern is for informational purposes *and to encourage actions that would avoid further risk to these species*." (Emphasis supplied.)

While the Cerulean Warbler and Cooper's Hawk have been observed on the site, the DEIS indicates that both the Sharp-shinned Hawk and the Common Nighthawk may or have nested on the site. (DEIS, Volume 7, Appendix 20, OHMS Ex. 3.) Whether these species of special concern are breeding on the proposed project site, and if so, where on the project site, is at this time unknown, requiring further inquiry. Moreover, if it is determined that certain or all of these species are breeding in specific areas of the project site, the question then is, are those breeding areas located in areas to be developed as part of the proposed project? And if they are in areas to be developed, what mitigation measures should be implemented to "avoid further risk to these species" as directed by 6 NYCRR 182.6(c).

RULING NUMBER ELEVEN

CPC has raised a substantive and significant issue with respect to the presence and breeding habits of certain bird species of special concern on the proposed project site, in particular, the Cooper's Hawk, Sharp-shinned Hawk, Common Nighthawk and the Cerulean Warbler. The issue is substantive since a determination of where such breeding may occur on the project site and what mitigation measures should be implemented to avoid further risk to these species requires further inquiry. The issue is significant since it could affect permit issuance.

NOISE IMPACTS

Positions of the Parties

CPC

Given its close proximity to designated wilderness and wild forest areas of the Catskill Forest Preserve, CPC argues that the operation of the proposed project will result in significant noise impacts to users of those sensitive natural surroundings. (CPC Brief at 20.) People impacted by noise from the operation of the proposed project would include hikers, campers, cross country skiers, and other outdoor recreationists. (CPC Reply Brief at 40.) As to the sound expected to emanate from the completed project, CPC states, "the intruding noise will include noise from delivery, maintenance and service trucks and vehicles, noise from the Project guests' vehicles and activities, golf course maintenance and operation, snow mobiles, all terrain vehicles, parties ...." (CPC Brief at 42.) However, asserts CPC, the Applicant failed to analyze these operational phase impacts.

A proper sound impact analysis should begin with the establishment of the ambient sound level experienced by users of the Forest Preserve. (Id. at 42.) In the Preserve, at present, asserts CPC, this ambient sound level "is characterized by a complete lack of intrusion by noise from human activities." (Id.)

CPC expresses concern as to the sufficiency of the Department's policy with respect to the assessment and mitigation of noise impacts and suggests that a "'percent time audible' dose metric analysis" sound impact study could be done here, a methodology espoused by its consultants. (Id. at 44.)

As to the construction phase sound impact study provided by the Applicant in the DEIS, CPC argues that (1) "it does not employ DEC criteria to determine significance," (2) receptors used in the evaluation were not properly located, (3) the study does not "propose specific mitigation techniques as required by

the DEC Noise Policy," and (4) the study "did not fully evaluate noise in calculating dynamiting impacts."

Department Staff

Department Staff argues that the sound impact study provided by the Applicant meets Department requirements, including official Department policy for assessing and mitigating noise impacts. Accordingly, it asserts that CPC has not raised an issue requiring adjudication.

Applicant

The Applicant argues that CPC has not met its burden and has not raised an issue that is substantive and significant with respect to noise impacts. With respect to the Sound Impact Study (SIS) provided in the DEIS in Appendix 22 (DEIS, Volume 8, OHMS Ex. 3.), the Applicant asserts:

> The SIS identified potentially significant noise impacts from construction of the project and where appropriate, proposed mitigation measures. Although not required by regulation or law, Crossroads will also implement Best Management Practices (BMPs) for activities which exceed ambient levels by 6dBA or more, where practicable. Given the temporary nature of noise impacts, coupled with Crossroads' willingness to implement BMPs, there is no issue regarding noise that requires adjudication. (Applicant's Brief at 110.)

Reiterating its assertion that construction noise impacts will be short-term, the Applicant noted that with regard to blasting noise (1) no residential use is closer than 1500 feet from a blast site, thus blast noise will be attenuated, (2) there will be no amphitheater effect since only a portion of the blast noise will be directed toward receptors, as sound will radiate hemispherically in all directions, (3) there will be no reflection of the sound, (4) before blasting a pre-blast survey will be conducted providing resident's with notice of the construction activity and the opportunity to have a pre-blast survey of structures on their property, at the Applicant's expense, (5) blasting will be conducted during weekdays between

the hours of 9:00 AM and 5:00 PM, and (6) all blasts will comply with US Bureau of Mines guidelines. (Id. at 115-117.)

With respect to noise impacts from operational phase traffic, the Applicant asserts that its studies showed that any increase in traffic will not have a significant noise impact. (Id. at 119-120.)

Finally, the Applicant points out that it intends to create a "noise impact hotline" to address future noise issues. (Id. at 121.)

Discussion

Clearly, SEQRA requires that the potential future noise impacts of a proposed project be determined, evaluated and mitigated, as appropriate. But that future analysis is not confined to certain periods or phases in the life of the proposed project but to its entire existence, to the extent that is reasonably possible. The construction phase of the Applicant's proposed project is just that, a phase, albeit eight years in length. It is the operational phase of the proposed project that will continue for decades beyond the initial construction phase.

The Sound Impact Study comprising Appendix 22 of the DEIS provides an evaluation and analysis of sufficient scope and detail and proposes specific mitigation measures for the construction phase of the project. It does not, however, provide any evaluation and analysis of noise impacts associated with the operational phase of the project. Indeed, in the Study's Introduction, the Applicant's consultant makes clear the report considers noise impacts only during the construction phase of the project. (DEIS, Volume 8, Appendix 22 at 1-1, OHMS Ex. 3.)

Although the DEIS does contain a two and one half page discussion of noise impacts during the operational phase of the project, it is limited to a discussion of increases in noise levels anticipated as a result of increased traffic in the area of the project. (DEIS, Volume 1, at 3-173 to 3-175, OHMS Ex. 3.) Moreover, the sound level receptors referred to in that discussion were placed at various locations along NYS Route 28, and not in any location within the Forest Preserve in proximity to the proposed project, such as the Big Indian Wilderness Area.

The DEIS simply does not contain any evaluation and analysis of potential noise impacts on users of the nearby designated wilderness and wild forest areas of the Forest Preserve during the operational phase of the proposed project's life. Without such a study, the SEQRA review in this matter cannot be completed nor any determination pursuant to 6 NYCRR 617.11(d) be made.

That such future noise impacts will occur seems obvious given the Applicant's proposal. Noise impacts will include noise from delivery, maintenance and service trucks and vehicles, noise from the Project guests' vehicles and activities, equipment used in golf course and general landscape maintenance and operation, outdoor activities which could include project site use of personal recreational vehicles such as snow mobiles and all terrain vehicles, and other outdoor activities and gatherings such as receptions and concerts where music will be provided.

A noise impact assessment must be made addressing the potential future noise impacts associated with the proposed project during its operational phase. Moreover, that study should be conducted pursuant to the guidelines provided in Department Program Policy DEP-00-1, entitled, "Assessing and Mitigating Noise Impacts."

That study should consider and seek to provide answers to certain questions, including, but not limited to, the following:

1. What is the ambient sound level in the wilderness and wild forest areas in close proximity to the proposed project?

2. Where should sound receptors be placed? At the project's property line? At those points in the nearby wilderness and wild forest areas most often visited by users of those areas, e.g., view points along hiking trails, lean-tos, or popular camping areas?

3. Once the ambient sound level is determined, what is an acceptable increase over that level?

4. What are the activities that will take place at the project during its operational phase that can be expected to generate noise impacts, e.g., noise from delivery,

maintenance and service trucks and vehicles, noise from the Project guests' vehicles and activities, equipment used in golf course and general landscape maintenance and operation, outdoor activities which could include project site use of personal recreational vehicles such as snow mobiles and all terrain vehicles, and other outdoor activities and gatherings such as receptions and concerts where music will be provided?

5. What will be the decibel levels of those activities? And how will they be perceived by sound receptors in the wilderness areas, sound receptors located in the same places where ambient levels were determined? And how do those results compare to the baseline ambient levels determined at those receptor locations in answer to Question 1, above?

6. As a result of this noise impact study, is any mitigation indicated? If so, what?

7. Are there operational phase noise impacts that cannot be mitigated? If so, what are they?

8. If there are noise impacts that cannot be mitigated, are there solutions that can be implemented, e.g., modification of the project or restricting the hours during which certain activities are permitted to occur?

These are all areas requiring further inquiry. Accordingly, a noise impact study for the operational phase of the project, which is not presently part of the DEIS, must be done.

By identifying this omission in the DEIS, CPC has made an offer of proof that has identified an issue that is both substantive and significant. As stated by the Commissioner, "the offer of proof can take the form of .... the identification of some defect or omission in the application." In the Matter of Halfmoon Water Improvement Area, Decision of the Commissioner, April 2, 1982.

Moreover, Section 621.15(b) of 6 NYCRR provides that "*at any time* during the review of an application for a new permit ... the department may request in writing *any additional information*

which is reasonably necessary to make any findings or determinations required by law." (Emphasis supplied.) Clearly, a noise impact study evaluating noise impacts on the nearby Catskill Forest Preserve, in particular, the Big Indian Wilderness Area, occasioned by the project after construction and during its operational phase is "additional information which is reasonably necessary to make any findings or determinations required" under SEQRA. I direct that such a study be done.

As to questions of logistics such as the appropriate locations for sound level receptors and the development of an appropriate protocol for the noise impact study, these can be the subject of further adjudication or mediation by the Department, at the Commissioner's direction.

RULING NUMBER TWELVE

By identifying an omission in the DEIS with respect to the lack of a noise impact study addressing the operational phase of the proposed project, CPC has raised an issue that is substantive and significant. In particular, given its close proximity to designated wilderness and wild forest areas of the Catskill Forest Preserve, noise impacts to users of these areas occasioned by the operation of the proposed project must be considered and evaluated, requiring further inquiry. Since such further inquiry is required, the issue is substantive. Since the noise impact study could result in a major modification of the proposed project, the issue is significant.

Moreover, pursuant to 6 NYCRR 621.15(b), I am directing that the study be done.

TRAFFIC IMPACTS

Positions of the Parties

CPC

At the issues conference, CPC argued that the Applicant's traffic impact study was inadequate as it was based on certain

erroneous determinations and/or assumptions. These determinations and/or assumptions included (1) selection of an unrealistic completion date for the project of 2008; (2) underestimation of the base annual percentage of background growth in traffic, even if the project were not developed; (3) failure to identify peak trip generation by the proposed project; (4) failure to accurately assess traffic volumes at certain key intersections, such as NYS Route 28 and County Route 49A; (5) the omission of shuttle and car trips from the project to and from the Belleayre Mountain Ski Center (BMSC); (6) to assess impacts to the entire NYS Route 28 corridor, especially from Interstate 87 to the project site; (7) failure to assess certain hidden costs to users of the NYS Route 28 corridor, e.g., increased travel times, congestion and loss of productivity; (8) failure to assess seasonal changes in traffic patterns, e.g., during the summer months; and (9) failure to consider the anticipated growth of the Belleayre Mountain Ski Center. (CPC Brief at 47-58.)

Although the Applicant revised its traffic impact study to reflect many of these concerns, CPC argues that the Applicant's traffic impact analysis remains deficient in several respects. First, the revision does not account for seasonal change, particularly during the summer months, when the golf courses proposed by the Applicant will cause increased traffic. (CPC Reply Brief at 40.) Increased volume in the summer months is corroborated by data from NYSDOT, but is ignored by the Applicant, argues CPC. (Id.) Second, the traffic growth factor utilized by the Applicant fails to take into account the future growth of the BMSC. (Id.) Third, the Applicant used facilities that were unrepresentative of the proposed Resort, in projecting trips generated by the project. (Id. at 41.) Fourth, the Applicant omitted shuttle trips to and from the NYS Route 28 corridor, as well as traffic impacts to that corridor. Fifth, it is unclear whether NYSDOT's review was actually based upon inaccurate information. (Id.)

Department Staff

Department Staff asserted that although it is lead agency in this matter for SEQRA review, it would defer to the review and opinion of the NYSDOT as to the traffic impacts occasioned by the proposed project. Department Staff stated that it "relies on the expert opinion of the NYS Department of Transportation ('DOT'), the agency that regulates the roadways, in which the DOT found that the improvements proposed as a part of the project were

'appropriate', as long as they received proper approval as part of the highway work permit process." (Department Staff Brief at 6.)

Applicant

The Applicant pointed out that the NYSDOT had been involved in the traffic impact analysis for the proposed project since the development of the Final Scoping Document. (Applicant's Brief at 125.) Moreover, the traffic impact analysis undertaken by the Applicant had addressed every issue raised by the NYSDOT and its methodologies and conclusions were found acceptable to them. (Id. at 128.) Finally, the NYSDOT has reviewed the revisions to the traffic study made by the Applicant to reflect the concerns made by CPC, and has continued its approval of the analysis. (Applicant's Reply Brief at 62; and see, App. Ex. 18, 19 and Supplemental Ex. 11.)

Discussion

The record indicates that the NYSDOT has reviewed the traffic impact analysis undertaken in this matter, including its revisions, and has approved its methodologies and conclusions. (See, e.g., App. Ex. 19.) Most recently, in a letter to the Department dated November 10, 2004, NYSDOT stated:

> We have completed our review of Creighton Manning Engineers Memorandum (Dated: June 18, 2004) and have the following comments to offer:
>
> 1) The additional analysis conducted by CME (Build scenario of year 2014), manual turning movement counts at the Route 28/County Road 49A intersection, and other assumptions made (including growth factor and peak hour) are acceptable to the Department.
>
> 2) The analyses performed for SEQRA purposes (earlier submittals and this build scenario of 2014) by CME (applicant), satisfactorily covers all the traffic related items the Department requested as part of scoping document.

3) Mitigation proposed as part of this project would be reviewed by our Traffic Engineering and Safety Group as part of Highway-Work-Permit review process.

4) As always, we would like to remind you that a State Highway Work Permit will be required for any curb cuts and/or work within the NYS Route right-of-way. An application and final site plan should be forwarded to this Department's local residency office, as soon as possible, to initiate the review process. (Exhibit 11, annexed to Applicant's letter of November 11, 2004, in response to supplemental submissions filed by CPC.)

While arguably dispositive of the matter of traffic impacts in this case, it is clear that any review undertaken by NYSDOT, or its approval of any matter, rests ultimately on the integrity of the assumptions made in the underlying analysis provided to it for its review. What is problematic in the present matter are the assumptions in the Applicant's traffic analysis dealing with the future growth of the Belleayre Mountain Ski Center. These concerns raise issues that are both substantive and significant.

In a memorandum dated May 24, 2004, and revised June 18, 2004, responding to certain comments regarding traffic impacts, the Applicant's traffic consultant stated:

A parking study was also conducted during the data collection on Saturday, January 17, 2004 at the Belleayre Mountain Ski Resort. The parking study indicated that the parking lots were over capacity, with vehicles also parked on the internal ski area road shoulders, indicating that significant additional growth in daily skier attendance at the ski area will not occur until additional plans are developed and implemented that add more parking or if there is a mode shift with additional skiers arriving by motor coach. Therefore, the 2014 analysis accounts for full growth of the Bellearyre Mountain Ski Center based on the latest approved Unit Management Plan (UMP) dated May 1998. A comparison of the skier days at Belleayre for

> the 2002-2003 and 2003-2004 seasons indicates that the number of skiers increased by less than a half a percent. A comparison of the previous two seasons (2001-2002 and 2002-2003) indicates a growth in skier days of 24% occurred between these seasons. Additional significant peak day vehicle traffic growth at Belleayre beyond what is assumed in the supplemental traffic study is not feasible without the addition of new facilities at the Mountain. Skier generated traffic at Belleayre is at its maximum for the current approved plan and is operating at its existing capacity on peak days. (App. Ex. 18 at 2.)

From these observations, the Applicant asserts: "Discussions of growth at the ski center beyond the latest UMP are speculative and not included in the Applicant's analysis." (Applicant's Reply Brief at 62.)

But assumptions such as "growth in daily skier attendance at the ski area will not occur until additional plans are developed and implemented that add more parking or if there is a mode shift with additional skiers arriving by motor coach" and "skier generated traffic at Belleayre is at its maximum for the current approved plan and is operating at its existing capacity on peak days" will prove invalid if the Ski Center achieves the goals set forth in its current UMP and as articulated in the DEIS.

The current UMP for the Belleayre Mountain Ski Center was adopted in May 1998. In a summary at the outset of the document it states that proposals in the UMP "concentrate on improving and updating facilities to accommodate a projected peak attendance of 4,500 skier/day." (App. Ex. 82.)

Moreover, the DEIS states: "Between 1998 and 2002 there has been an increase in skier visits of almost 100% from a low of approximately 74,000 to a high of 142,000. Management of the Ski Center aims over the next few seasons to attract 200,00 to 225,000 skier visits. The Lodging Bureau of the Ski Center estimates that there is a current shortfall of 500 hotel rooms to accomodate present volumes and this shortfall will rise to 1,000 hotel rooms when current skier targets are achieved." (DEIS, Volume 1, at 1-7.)

Thus, it is false to assume that the traffic impacts associated with the Ski Center are somehow fixed. Indeed, the project's proponents sight the increased use of the Belleayre Mountain Ski Center as a reason for the project's development.

However, it is also apparent from DEIS that the Ski Center anticipates and seeks this growth, whether the proposed Resort is built or not. But this means that traffic impacts from the Resort will not only add to but exacerbate traffic impacts from increased growth at the Ski Center.

The traffic impacts occasioned by the growth of the Ski Center must be considered along with the traffic impacts induced by the proposed project. This consideration should also include a reexamination of present traffic control infrastructure and proposals. For example, increased volumes of traffic through the Route 28/CR 49A intersection may suggest that the level of service will be unacceptable, even with a traffic signal light, requiring a reconfiguration of the intersection, as perhaps, by construction of a rotary.

RULING NUMBER THIRTEEN

CPC has raised a substantive and significant issue with respect to the effect the planned growth of the Belleayre Mountain Ski Center will have on traffic impacts occasioned by the proposed project. The issue is substantive since its resolution requires further inquiry. The issue is significant since it could affect permit issuance or result in a major modification of the proposed project.

VISUAL IMPACTS

Positions of the Parties

CPC

CPC argues that the DEIS does not adequately evaluate and assess visual impacts occasioned by the proposed project. (CPC Brief at 32.) In particular, CPC asserts that the visual impact

study undertaken by the Applicant failed to identify important views from state owned lands within the Catskill Forest Preserve, including views from hiking trails and off-trail sites and camping areas, as well as other public venues along the NYS Route 28 corridor. (Id. at 33 and CPC Reply Brief at 38.) Within the Forest Preserve, for example, CPC noted that the DEIS did not consider views from Simon's Rock, and other significant views from trails on Halcott Mountain or Balsam Mountain. (CPC Reply Brief at 38.)

CPC also argued that the methodology employed by the Applicant in preparing its visual impact analysis did not comport with the Department's policy for assessing and mitigating visual impacts in several ways. Implementation of the Department's visual impact policy, in CPC's understanding, is a process reviewed and verified by Department Staff consisting of four steps:

1. An applicant's inventory of aesthetic resources of statewide significance;

2. An applicant's visual assessment made using either graphic viewshed and line-of-sight analysis, or other visual simulation or digital viewshed analysis;

3. An applicant's assessment of the potential significance of any defined visual impact; and

4. DEC's review of the "reasonableness and efficacy" of an applicant's proposed mitigation strategies, or a direction that such mitigation strategies be submitted, and, when appropriate the imposition of permit conditions consistent with those strategies. (CPC Brief at 35-36.)

With respect to the first step in the above process, CPC argued, through its proffered expert, that the Applicant's inventory of aesthetic resources did not include resources such as (1) Simon's Rock, a Department designated viewpoint which, in the future, will be cleared to afford views of the Big Indian plateau; (2) sections of NYS Route 28, which has been recommended for designation as a scenic byway; (3) areas adjoining the

project site which have been designated Priority Areas and proposed for acquisition under the New York State Open Space Plan; and (4) sufficient locations in the designated wilderness and wild forest areas near the proposed project. (*Id*. at 36-37 and CPC Ex. 3B.)

As to the second step, CPC challenged the adequacy, accuracy and thoroughness of the visual assessment undertaken by the Applicant, particularly as that assessment relates to community character. In this regard, for example, CPC's expert noted that the computer modeled viewshed analysis provided by the Applicant in Figure 3-25A of the DEIS indicates that much of the project will visible from NYS Route 28. But, argues CPC's expert, in an apparent disregard for community character related views, such views are dismissed by the Applicant as "insignificant due to the factors of distance, screening by roadside vegetation, short duration of views or the viewing angle in relation to the direction of travel." (CPC Brief at 37; CPC Ex. 4 at 2; DEIS, Volume 1, at 3-148, OHMS Ex. 3.) This conclusion, argues CPC, is due to the Applicant's failure to include a sufficient number of viewpoints along NYS Route 28 in its analysis. (CPC Brief at 37.) Other views were inadequately addressed or not addressed, asserts CPC, including views of the Big Indian Resort from Red Mountain road and views of the Wildacres resort from other roads such as Red Mountain Road and Hog Mountain Road, as well as views from the Owl's Nest. (*Id*.) In addition, views from vistas experienced by off trail backpackers and campers were not considered in the visual assessment. (*Id*.)

CPC also asserted that the Applicant's visual impact assessment was flawed by its failure to use the line-of-sight analysis suggested in the Department's guidance. (*Id*.) Moreover, CPC argued that the photo simulations in the visual assessment provided by the Applicant did not accurately represent the seasonal changes experienced at the proposed site throughout the year. (CPC Reply Brief at 38.) Finally, CPC argued that the effects of the project's lighting on the night sky had not been adequately considered and analyzed.

In conclusion, CPC asserted that the Applicant had not met its burden, imposed by the Department's guidance, that it demonstrate by clear and convincing evidence that the visual impacts of the proposed project will not diminish the public's enjoyment and appreciation of a listed aesthetic resource. (CPC Brief at 39.) Accordingly, with respect to visual impacts, the

Commissioner cannot make the requisite findings under 6 NYCRR 617.11(d)(5).

Department Staff

Department Staff argues that the visual impact analysis provided by the Applicant comports with the Department's policy and satisfies the requirements of SEQRA. (Department Staff Brief at 6) In Department Staff's view the Applicant "produced an appropriate inventory of aesthetic resources, conducted a thorough and accurate visual assessment, appropriately assessed the potential significance of the impact of the project, and employed reasonable and effective mitigation strategies that would mitigate the effect on the resources of statewide concern, to the maximum extent practicable." (*Id*. at 7.) Moreover, Department Staff asserted, the digital viewshed and photo simulations provided by the Applicant exceeded the more rudimentary line-of-sight profile analysis suggested by the Department's guidance. (*Id*.) Thus, Department Staff argues that CPC has not established an adjudicable substantive and significant issue with respect to visual impacts occasioned by the proposed project.

Applicant

The Applicant asserts that CPC has failed to make any proffer of "evidence tending to show that the visual impacts of the project are significant or that the mitigation measures undertaken in accordance with the [Department's guidance] are insufficient to address the minimal landscape changes that comprise the visual impacts of the Resort." (Applicant's Brief at 134.)

Stating its understanding of the applicable law in the matter, the Applicant asserts that, in accordance with past Commissioner's decisions, "[i]ssues related to visual impacts are adjudicable when the visual impact analysis submitted as part of the DEIS is inadequate ... or when the Commissioner determines that there are significant adverse visual impacts that have not been and cannot be mitigated to the maximum extent practicable consistent with social, economic, and other essential considerations." (*Id*. at 135.) However, the Applicant argues that in this matter no adjudicable issue has been raised by CPC.

The Applicant asserts that the visual impact analysis provided in the DEIS complies with applicable Department guidance and has been reviewed with approval by Department Staff. (*Id*. at 138.) The DEIS itself contains an extensive discussion of visual impacts, the Applicant points out, particularly in Volume 1, Section 3.8.4 at pages 3-141 through 3-170 and Figures 3-26 through 3-49; and in Volume 7, Appendix 21. (*Id*.) This discussion was further supplemented during the issues conference with the receipt into the record of various additional materials which "included additional photographs and simulations of 'views' identified by CPC and others during the issues conference and during the site visits, particularly those involving the State trails in proximity to the Resort, inclusive of the Pine Hill West Branch trail to and from Balsam Mountain," including Simon's Rock. (*Id*.)

As part of the Visual Impact Study (VIS), states the Applicant, "an inventory of aesthetic resources was conducted," which included a windshield survey to evaluate views along NYS Route 28, and discussions with local residents and governmental officials to identify public resources with potential views of the proposed project. These discussions resulted in the identification of "the Town of Shandaken Park, the Belleayre Mountain Ski Center, and the Belleayre Day Use Area near Pine Hill, among others." (*Id*. at 139.) Thereafter, a viewshed analysis was developed using "USGS topographic maps and section lines drawn at intervals radiating out from the proposed project's clearing limits." (*Id*.) The next step was to develop cross-sectional drawings and sight lines to determine which views would be blocked by existing topography. "The goal," asserts the Applicant, "was to focus the study on areas of the Resort that actually could be visible from a chosen location (i.e. a location identified as part of the inventory process)." (*Id*.) By utilizing Geographic Information System (GIS) data and appropriate computer software, visibility maps were generated depicting areas in the proximity of the proposed project from which views of the project would be possible. (*Id*.) Examples of these maps are shown at Figures 3-25A, 3-26 and 3-27 in DEIS, Volume 1. (OHMS Ex. 3.) Moreover, from this information, says the Applicant, a Digital Elevation Model (DEM) was developed which allowed its consultants "to estimate the areas where the project prosed may be seen." (Applicant's Brief at 140.) Subsequent field verification and photographs, says the Applicant, "provided data for the creation of visual simulations of the worst case viewpoints - 'those sites which would have the greatest potential for project visibility.'" (*Id*.) In developing the simulations, states the Applicant, colors and textures were

chosen to simulate those of existing building surfaces and landscapes. (*Id*.) The visual simulations thus generated allowed the depiction of Big Indian and Wildacres resorts from various vantage points, resulting in simulations such as Figures 3-29 through 3-44A in the DEIS. (*Id*.)

The Applicant also points out that it has proposed numerous measures to mitigate the visual impact of the proposed project. (*Id*.) These measures, it asserts, include the design of the Big Indian Resort in a manner consistent with the present plateau's contours and including roofs covered in vegetative greenery and the repositioning and redesign of buildings, as necessary. (*Id*. at 141.)

As to CPC's criticism that the visual impact analysis in the DEIS is inadequate because line of sight profiles were not included, the Applicant asserts that not only are such profiles not required by Department guidance, but that its computer simulation modeling provides the far more sophisticated analysis required in this matter, given the proposed project's location. (*Id*. at 142.)

The Applicant also rejects CPC's claims that the visual impact analysis is inadequate because of its failure to evaluate views from Rose Mountain, the Hamlet of Pine Hill, the summit and slopes of Belleayre Mountain, or sections of NYS Route 28. (*Id*.) As to Rose Mountain, the Applicant points out that it is not accessible to the public, and thus not a representative viewpoint. (*Id*. at 143.) As to the Hamlet of Pine Hill, the Applicant asserts that field evaluation confirmed that views of the proposed project would be blocked by the slopes of the Big Indian plateau. (*Id*.) As to Belleayre Mountain, the Applicant points out that views from this location are discussed in the DEIS at pages 3-147, 3-148, and 3-153, and such Figures as 3-43, 3-44, 3-44A, 3-46 and 3-46A, and were the subject of a site visit during the issues conference. (*Id*.) As to views from NYS Route 28, the Applicant asserts that such views involve "limited visibility of clearings with structures." (*Id*.) Moreover, NYS Route 28 views were discussed in the DEIS with the conclusion that such views of the project would be brief or even not discernable. (*Id*. at 144.)

As to lighting, the Applicant asserts that this "was discussed in great detail in the DEIS" and that it "is committed to using the most up to date lighting technologies to limit light

spillage while addressing safety concerns." (*Id*. at 145.) Mitigation measures will include use of short light poles, light fixture cutoffs, and use of low intensity lighting. (*Id*.) Moreover, citing Applicants Exhibits 6A and 6B, the Applicant notes that its consultant "prepared a drawing showing the approximate appearance of the Resort lighting at night based upon the intensity of the lights shown on the photometric drawing." (*Id*.) Finally, the Applicant notes that the Belleayre Mountain Ski Center utilizes "nighttime lighting for snowmaking and grooming operations occurring on the ski slopes throughout the winter nights." (*Id*. at 145-146.)

In conclusion, the Applicant asserts that "[w]hile it is true that certain portions of the project are visible at a limited number of locations, the Resort minimally changes the viewscape. There has been no convincing showing that this change in views will be substantive and significant." (*Id*. at 146.)

Discussion

As part of its environmental review pursuant to SEQRA, in evaluating the visual and aesthetic impacts of a proposed project on resources of statewide significance, the Department is guided by the mechanism provided in its Program Policy DEP -00-2, issued July 31, 2000, and entitled "Assessing and Mitigating Visual Impacts." (Hereinafter referred to as Visual Impacts Program Policy and abbreviated VIPP.) This mechanism is a four step process undertaken by an applicant and reviewed and verified by Department Staff.

The first step in the process requires the applicant to develop an inventory of aesthetic resources of statewide significance. To assist in preparing this list, an enumeration of fifteen categories is provided in Section V(A) of the VIPP, at page 3, entitled "Inventory of Aesthetic Resources." The purpose of the list of categories is to provide a template for applicants to use to distinguish aesthetic resources of statewide significance from those of local significance, the latter presumably protected through local controls such as zoning and planning regulations. What is made clear from the specific examples cited after each category in the "Inventory of Aesthetic Resources" enumeration, however, is that the inventory of aesthetic resources of statewide significance prepared by an applicant must be specific. A general narrative of file searches made, data bases reviewed, maps examined, interviews engaged in

or windshield surveys undertaken is not sufficient. The list that is the Inventory of Aesthetic Resources is a list of specific areas and locations. It must be clearly articulated, delineated and set forth, as exhaustively as is reasonable given the nature and location of the proposed action. The reason for this specificity is made clear by the second step of the process, Visual Assessments.

As Section V(B) of the VIPP, at page 5, entitled "Visual Assessments" states:

> In all visual assessments, significant resources must be identified along with any potential adverse effects on those resources from the proposed project. If, in staff's judgment, a place designated in any of the above categories [Inventory of Aesthetic Resources] may lie in the viewshed of the proposed project then a visual assessment should be required to confirm or refute this potential.

This visual assessment is accomplished by a line-of-sight evaluation made between control points established in both the listed resource and the proposed project. (*Id*.) The term "control points" is defined in the glossary of the VIPP, at page 10, as:

> The two end points of a line-of-sight. One end is always the elevation of an observer's eyes at a place of interest (e.g. a high point in a State Park) and the other end is always an elevation of a project component of interest (e.g. top of a stack of a combustion facility or the finished grade of a landfill).

Moreover, the VIPP requires that the establishment of control points "include a worst case scenario" which "means establishing the control points that reveal any project visibility at an aesthetically significant place." (*Id*. at 5.)

From the foregoing, it is clear that the visual assessment contemplated by step two in the process cannot be successfully executed without a complete and explicit inventory list as required by step one. There are two primary reasons for this conclusion. First, without a thorough and accurate inventory, a

resource of significance could be omitted and overlooked. Second, only when the resource is clearly identified in step one can a determination be made as to the number and placement of control points within its boundaries required for an adequate and meaningful step two visual assessment.

The appropriate number and placement of control points within the listed resource of significance will be a function of that resource's use. For example, the use of a designated wilderness area is not limited to its hiking trails. Backpacking, camping, fishing, and the presence of unique natural features and vistas may identify off-trail areas popular with users of that designated wilderness area which should be identified as control points for any step two visual assessment.

An equally important concern in the visual assessment in step two, is the appropriate radius of the visual impact area to be considered. While five miles is generally reasonable, a greater distance may be indicated for larger proposed projects. In such cases the applicant must document that impacts to resources of significance at such greater distances have been considered and, where possible, "provide a clear demonstration that impact to any resource of statewide concern is insignificant." (*Id*.)

The third step in the process is the determination of the significance of the visual impacts demonstrated to exist as a result of the visual assessment undertaken in step two. As the VIPP in Section V(C), at page 5, entitled "Significance," states:

> Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried resource, or one that impairs the character or quality of such a place.

With particular regard to larger proposed projects, the VIPP continues:

> Proposed large facilities by themselves should not be a trigger for a declaration of significance. Instead, a project by virtue of its siting in visual proximity to

> an inventoried resource may lead staff to conclude that there may be a significant impact. For example, a cooling tower plume may drift between viewers standing on an overlook at a State Park thereby blocking the view of the panorama. Staff must verify the potential significance of the impact using the qualities of the resource and the juxtaposition (using viewshed and or line-of-sight profiles) of the proposal as the guide for the determination. (*Id*.)

The fourth step in the process at Section V(D) of the VIPP is entitled "Mitigation." Where impacts have been identified as significant, "mitigation may reduce or eliminate the visibility of the project or alter the project's effect on the scenic or aesthetic resource in some way." (*Id*. at 6.) Various mitigation strategies are discussed under three categories. The first of these mitigation categories involves design and siting considerations. This would include the use of screening; relocation of project elements; use of color and design to camouflage or disguise a project; reducing the height of a project building to reduce its viewshed; downsizing the project; the use of alternate technologies, where appropriate; use of non-specular materials; and lighting. (*Id*. at 6-7.) With regard to lighting in particular, the VIPP notes:

> Consideration should be given to off-site light migration, glare and "sky glow" light pollution. Lighting requirements, through best engineering practices, should not exceed the functional requirements of the project. (*Id*. at 7.)

The second mitigation category is maintenance, reducing visual impacts through proper maintenance of buildings and grounds. The third category is offsets whereby "a decline in the landscape quality associated with a project can, at least partially, be 'offset' by the correction" of another existing significant visual impact. (*Id*. at 8.)

Notwithstanding Departments Staff's important role in verifying that the applicant has taken each of the four steps required in the visual impact assessment and mitigation process, the VIPP makes clear in its conclusion:

> [I]t is the burden of the applicant to provide clear and convincing evidence that the proposed design does not diminish the public enjoyment and appreciation of the qualities of the listed aesthetic resource. ... An applicant's mere assertion that the design is in harmony with or does not diminish the values of the listed resource is insufficient for the purposes of reaching findings. Instead, an applicant must demonstrate through evidence provided by others e.g. recognized architectural review boards, comparative studies that are clearly analogous, or other similar techniques, that the public's enjoyment and appreciation of the qualities of the aesthetic resource are not compromised. (*Id*.)

In the SEQRA review of the present matter, the overriding concern must always be the significance of the visual impacts occasioned by the proposed project on the users of the Forest Preserve. The phrase "users of the Forest Preserve," however, is broader than only those who choose to recreate within its borders, but also includes local residents, business people, visitors to the local towns and hamlets, travelers along area highways, and those whose wilderness experience will be limited to surveying its scenic beauty from its fringes. The visual impact study in the DEIS, and even as supplemented at the issues conference, does not provide an analysis thorough enough to determine what the impacts of the project will be on those users of the Forest Preserve. The reason for this lies in the fact that the visual impact analysis provided by the Applicant does not fully comport with the requirements of the Department's VIPP.

As noted above, the first step in the procedure requires the specific delineation of the inventory of aesthetic resources. Such an inventory is not provided in the DEIS. While the DEIS states that "an inventory of aesthetic resources was conducted" the discussion of that inventory is limited to various tasks undertaken by the Applicant including several database file searches, a review of trail maps, interviews, a windshield survey, and a consideration of views from the Belleayre Mountain Ski Center. (DEIS, Volume 1, at 3-151 to 3-153.) The DEIS does discuss a Visual Impact Assessment (VIA) for the proposed project which,

> evaluated two aspects of the project's potential visibility. The first aspect deals with the extent of

> the area within a five mile study limit where the project may be visible. The second aspect is a description of the character and significance of the project's visibility from the areas identified in the limits of visibility analysis. The first aspect is a quantitative estimate, the second aspect is more a qualitative description of the character of the project's visibility.

This process resulted in the viewshed analysis figures provided in Volume 1 of the DEIS at, e.g., Figures 3-25, 3-25A, 3-26, and 3-27. Figures 3-26 and 3-27 depict areas within a five mile radius from which portions of the project may potentially seen. Thereafter, two sets of points were developed for consideration, "target points" at the proposed project which could be potentially viewed by an observer and "observer locations" from which the project could be potentially viewed. (*Id*. at 142.) These target and observation points are depicted generally on Figures 3-25 and 3-25A. While the target points were "selected for their prominence or potential for greatest visibility," the observer points were "selected as a result of the initial limits of visibility analysis and field verification work. The selection of the observation points is intended to either be representative of views from a general area or represent specific known points of concern such as public use areas, parks and roadways." (*Id*. at 3-143.)

While the DEIS goes on to generally discuss the observer points and the potential views of the proposed project from them (*see*, *Id*. at 3-144 through 3-151), it is impossible to tell if the Applicant's analysis considered views from all listed resources of statewide significance within the project area since no inventory of such resources was ever prepared. And, moreover, it is impossible to tell if significant locations within each of those resources of statewide significance were considered. An example of such an omitted significant location is Simon's Rock. Although this visual impact was evaluated by the Applicant and made part of the record at the issues conference, it illustrates the flaw in the Applicant's visual impact analysis. An accurate visual assessment, required by step two of the Department's VIPP, requires a complete inventory of aesthetic resources in accordance with step one. Only then can representative control points be selected at both the site of the proposed project and at the site of the listed resource. Only then can a visual assessment be made with respect to visual impacts to that listed resource and its significance determined.

For example, consider the five mile radius depictions of areas with potential views of the Big Indian and Wildacres components contained in Figures 3-26 and 3-27, respectively. Although it may be true that even if a specific inventory list was prepared, many of these listed locations would lie within the areas of potential visibility shown in the figures, this does not tell us if the visual impact of the project from those locations is significant. Control points (observer locations) for these locations would have to be selected and the same modeling and photo simulation undertaken as has been provided by the Applicant in the DEIS for other locations.

Moreover, unless the nature of the resource of statewide significance is specifically articulated, it is impossible to determine how it is utilized by users of the forest preserve, and impossible to determine where within it control points should be located.

While the computer modeling utilized by the Applicant provides a sophisticated analysis tool that is appropriate to the nature of the project, it does not go far enough since it does not show that all listed resources of statewide were considered, nor significant locations within them. Moreover, it is also impossible to determine if the observation points selected by the Applicant for analysis are, in fact, representative. For example, the views from the Big Indian Wilderness Area, such as from the summit of Balsam Mountain, are views from the hiking trail, suggesting that only the views of hikers are representative when considering the visual impacts of the proposed project on this location within this resource of statewide significance.

While an area for adjudication, the development of a comprehensive list of aesthetic resources of statewide significance should not be an onerous task, nor should the selection of control points (observer locations) at or within each listed resource. Moreover, with the input of this data, the Digital Elevation Model (DEM) should easily provide the needed VIPP step two line-of-sight analysis, subject to verification in the field. As DEIS points out:

> The DEM allows the user to view the topography of a given area in a three-dimensional computer model. It essentially creates a surface which represents the terrain of the study area. The surface can then be

> rotated and viewed from any direction and lines of sight assessed from anywhere inside the study area. (*Id*. at 3-159.)

Accordingly, further inquiry through adjudication should include consideration of (1) aesthetic resources of statewide concern to be included in the VIPP inventory; (2) selection of appropriate control points within those listed resources; (3) the significance of any visual impacts provided by the DEM analysis of these inputs; and (4) mitigation measures, as appropriate.

The visual impact analysis in the DEIS also raises concerns with respect to seasonal changes that will be experienced at the project site, requiring further inquiry. At the outset, it should be noted that the palette of colors used to depict the buildings and landscape in the Applicant's visual simulation process is reasonable, but only for the warmer months. (See, e.g., Figures 3-28, 3-34A, 3-42A, and 3-42B.) As noted earlier, this project will be a four season facility. In particular, this raises questions with respect to the significance of the visual impacts caused by the Big Indian Resort in the winter months. Not only will the surrounding environment and its foliage change with the season, the Big Indian Resort building will change as well. Its roof foliage will change with the seasons, too. In the summer months, the building may well seamlessly match the ridge line of the top of the former plateau, partially removed to construct the Resort, but will it do so in the winter months? The DEIS provides no analysis of this wintertime condition. Indeed, the scale model of the Big Indian Resort and Spa shown in Figure 2-13, depicts a view of the building in the warmer months. The DEIS does note, however, in discussing the proposed plan for the building:

> The pioneering design which resulted tucks the entire facility into the very contours of the Big Indian plateau and, further, overplants the tiers with rooftop greenery which mimics the flora of the adjacent forest floor. Most of the formally exposed parking areas were consolidated into the structure as a covered parking garage. By virtue of these redesign improvements, the impact at the ridgeline is, thus, virtually eliminated, and the impact from Balsam Mountain is rendered insignificant. (Id. at 3-168.)

But as is clear from this passage in the DEIS, the significance of visual impacts caused by the Big Indian Resort during the winter has not been considered, requiring further inquiry.

More than mere ambiance, one of the distinctive characteristics of the wilderness experience is the deep darkness of the night sky. As the Catskill Park State Land Master Plan of 1985 (CPSLMP 1985) states: “A wilderness area is an area where the earth and its community of life are untrammeled by man ... having a primeval character ... [offering] opportunities for solitude ....” (CPSLMP 1985 at 23, Department Staff Ex. 2.) But obviously that “earth and its community of life” is not confined to the lands and waters of the planet’s surface, but to the sky above as well. Since the night sky is one of the important assets of the Catskill Forest Preserve, all reasonable steps should be taken to guard against its degradation, particularly from light pollution. As noted earlier, the Department’s VIPP states:

> Consideration should be given to off-site light migration, glare and “sky glow” light pollution. Lighting requirements, through best engineering practices, should not exceed the functional requirements of the project. (*Id*. at 7.)

While the DEIS contains a brief discussion of lighting at the project’s site and provides plans indicating the location of light fixtures (see, e.g., DEIS, Volume 1, at 3-166 and 3-167; Figures 3-47 and 3-48; and project Drawings SL 1 to SL 14), it makes no attempt to consider the effects of “off-site light migration, glare and ‘sky glow’ light pollution” on nighttime users of the Forest Preserve such as campers and backpackers, and particularly in the wilderness areas. Nor does it provide any in-depth analysis of the effects of light pollution occasioned by the proposed project on nearby residents. The observer points considered in the Applicant’s visual impact study in the DEIS were confined to daylight views.

Exhibits 6A and 6B provided by the Applicant, are little more than colored in copies of DEIS Figures 3-47 and 3-48 and do no provide a basis upon which to evaluate the significance of light pollution caused by the proposed project. Additional analysis should be done, requiring further inquiry.

The DEIS notes that the night sky in the area of the project is already subject to sky glow caused by snowmaking operations at the Belleayre Mountain Ski Center and states: “Not only are the lights themselves directly visible from these locations, but there is significant light scattering off of blowing snow, and light bounce from the snow-covered ski trails.” (*Id*. at 3-166.) However, it should be noted that the Ski Center only operates during the winter months and does not offer nighttime skiing. By contrast, the proposed project is a four season resort that will operate twenty-four hours a day, seven days a week, year round, and will always require lighting of some kind. Therefore, during darkness, some degree of sky glow will always be emanating from the site. Moreover, this sky glow would be exacerbated on those occasions when the Big Indian or Wildacres Resorts host special events, such as outdoor concerts, requiring the use of floodlights or other high intensity lighting fixtures.

The problem of light pollution and sky glow could be particularly severe at the Big Indian Resort. The Big Indian plateau is actually a lower ridge of Belleayre Mountain and lies in a hollow formed by Belleayre Mountain and Balsam Mountain, which surround it. Higher elevation view points along hiking trails and from other off-trail sites on those mountains look down upon the plateau. This whole area will be constantly impacted by visible lights and sky glow from the Resort. The views from Balsam Mountain in Figures 3-34A and 3-36A illustrate how visible Big Indian will be during the day, therefore, lights and glow will be equally clearly visible at night from those same locations in the Big Indian Wilderness Area.

Finally, sky glow from the project will be visible from local higher elevations such as Rose Mountain and Monka Hill, and from surrounding higher elevation State designated areas to the north and east such as the Shandaken Wild Forest, the Halcott Mountain Wild Forest, the West Kill Wilderness Area, and the Slide Mountain wilderness Area.

Moreover, from the forgoing, it is apparent that sky glow from the project will be visible well beyond a five mile radius from the project.

RULING NUMBER FOURTEEN

CPC has raised substantive and significant issues warranting adjudication with regard to the visual impact study provided by the Applicant in the DEIS, and as supplemented at the issues conference. These issues include (1) information lacking in the visual impact study such its failure to provide the inventory of aesthetic resources required by the Department's VIPP, as well as an assessment of the significance of the visual impacts occasioned by the proposed project on those listed resources, (2) the failure of the visual impact analysis to consider the effect of seasonal changes on viewsheds, particularly those including the Big Indian Resort, and (3) the failure to evaluate the impacts of light pollution. These issues are substantive because their resolution requires further inquiry. These issues are significant since they have the potential to result in a major modification of the proposed project. Moreover, without resolution of these issues, the commissioner will be precluded from making the findings required by 6 NYCRR 617.11(d)(5).

IMPACTS TO COMMUNITY CHARACTER

Positions of the Parties

CPC

Distinguished by their particular attributes and unique connection to the Catskill Park, CPC asserts that the community character of the hamlets and villages in the proximity of the proposed project will be adversely impacted by its development. (CPC Brief at 16.) As its expert, Thomas L. Daniels, Ph.D., a Professor of City and Regional Planning at the University of Pennsylvania, noted, "The Catskill region is famous for its clean air, clean water, forest, mountains, villages and hamlets, people, lifestyles, recreation activities and aesthetic values. These are the features that give the Catskill region its sense of place and community character." (*Id*. at 17; T at 3983.) The proposed project, argues CPC, would adversely affect elements contributing to that community character such as fly fishing, which has only begun to be reestablished after flooding in 1996, hiking, backpacking, and the sense of solitude engendered by the Catskill forests. (*Id*. at 19-22.)

Citing ECL 8-0105(6), CPC notes that SEQRA protects "existing community or neighborhood character." Moreover, CPC asserts that, unlike times past, when the local economy depended on the presence of large hotels, economic growth today is in the hamlets of the region. (*Id*. at 22.) Asserts CPC: "While the large hotels did not survive, the hamlets did, and in fact have begun to once again prosper, growing organically based upon the natural resources in a sustainable fashion based upon the natural resources, instead of being dependent upon a handful of large employers in a proverbial "company town" scenario." (*Id*.) This growth in the hamlets was evident in the site visits during the issues conference and in streetscapes included in CPC Exhibit 94. (*Id*. at 23.) Indeed, argues CPC, these hamlets are "active and growing business and residential centers whose revitalization efforts epitomize the smart growth goals and ideas articulated in the" West of Hudson Economic Development Study for the Catskill Watershed Corporation of 1998, prepared by Hamilton, Rabinovitz & Alschuler, Inc., and the Route 28 Corridor study of 1994. (*Id*. and App. Exs. 71 and 83, respectively.) "In fact," asserts CPC, "it is the very success of building self sustaining, quality communities based upon the principles of smart growth that residents ... are fearful of losing from 'upscaling' these communities through the introduction of an exclusive, 'world-class' resort with gated communities." (*Id*.)

CPC also notes that other environmental impacts from the proposed projects will adversely impact the community character of the local village and hamlets, including visual, noise and traffic impacts. (*Id*. at 28-30.)

With respect to local zoning regulations and planning efforts, CPC argues that while they may be of assistance in defining community character, they are not determinative. (*Id.* at 24.) A project of the magnitude proposed will have regional impacts beyond those that can be controlled through zoning regulations. Its impacts will be felt by the local communities and the entire surrounding area. (*Id*. at 25.) With respect to planning, CPC asserts that only the Route 28 Corridor study has been officially adopted by the Towns of Shandaken and Middletown, and that this study seeks to promote the growth of the local hamlets and villages. (CPC Reply Brief at 22.) The proposed project threatens this effort, however, asserts CPC, stating, "Through the introduction of exclusive gated residential communities and the unprecedented large scale development of two hotels, two golf courses, and an attendant 'city', the project will overwhelm the architecture, hamlets and natural resources

including the solitude and scenic vistas currently viewed as integral to the communities' character." (*Id*.) Moreover, CPC argues that any deference to local zoning must also be tempered by the proposed project's proximity to the constitutionally protected Catskill Park, the environmental resources of which are "placed at risk by [the proposed project] are intimately linked to this area's sense of place; its community character." (*Id*. at 23.) CPC also asserts that the New York City Watershed Memorandum of Agreement of 1997 (MOA) does not preempt the requirements of SEQRA with respect to an evaluation of impacts to community character. (*Id.* at 24.)

Finally, CPC, in relating its community character concerns to the issue of alternatives it has also raised, asserts:

> CPC is not opposed to development on the Project site and has consistently stated an alternative that is smaller and located lower in the valley limiting development to the western side of the property adjacent to the High Mount Ski center may mitigate the most significant and adverse environmental impacts. As [noted elsewhere], the DEIS' failure to provide or even acknowledge possible alternatives is a significant and substantive failure that limits a rational discussion of community character impacts and must be addressed." (*Id*. at 25.)

Department Staff

Department Staff asserts that the DEIS provides the information necessary for the Department, as lead agency for SEQRA, to take the requisite hard look at potential impacts to community character. (Department Staff Reply Brief at 3-5.) Pointing out that the DEIS includes extensive information with respect to impacts to the physical environmental setting of the proposed project, Department Staff argues that local zoning and land use controls will ensure that the character of the community is protected. (*Id*. at 3-4.) Asserts Department Staff:

> The DEIS includes, among other things, a thorough discussion of traffic issues, land uses, inputs from local governments, impacts on police and fire resources and the capabilities of such resources, area demographics, and extensive information regarding the

physical features of the area. See, Applicant's Supplemental Exhibits 19, 20, 21. The project's sponsor will be required to comply with the zoning laws of the Towns of Shandaken and Middletown, which control their respective zoning laws and what they deem to be the significant characteristics (positive or negative) of their communities, which in turn gives the localities control of the secondary impacts (police, fire, medical) of the proposed project. (*Id*. at 4.)

Accordingly, Department Staff asserts that CPC has not raised a substantive and significant issue with respect to community character impacts justifying adjudication.

CWT

While taking no "position on whether the noise impacts, visual impacts, traffic impacts, aquatic habitat, and other traditional environmental impacts need" be adjudicated, the Coalition of Watershed Towns (CWT) argues that community character should not adjudicated as a separate issue. (CWT Reply Brief at 1.)

Moreover, in considering whether impacts to community character are significant within the meaning of SEQRA, CWT asserts that deference must be given to be given to local zoning laws and adopted land use plans. (*Id*. at 3.) Citing 6 NYCRR 617.7(c)(1)(iv) and (v), CWT states that "in order for there to be a significant impact on community character, it must either be a material conflict with an existing community plan or the proposed project must impair the character or quality of the community character." (CWT Brief at 38.)

Applicant

The Applicant acknowledges that potentially adverse impacts to community or neighborhood character are an appropriate area for inquiry under SEQRA. (Applicant's Brief at 147.) However, it argues that CPC has not raised a substantive and significant issue in this regard, and that, indeed, CPC's proffer on the issue of community character reflects "a selective view of zoning requirements, local and regional studies and a perspective which is generally out of sync with the views of long-term residents

and elected officials responsible for local land use decisions." (*Id*. at 146.)

The Applicant points out that the proposed project is consistent with local zoning laws and with the goals and findings expressed in numerous economic development studies of the area, including the Route 28 Corridor study and the West of Hudson Economic Development Study for the Catskill Watershed Corporation. (*Id*. at 150; Applicant's Exs. 71 and 83.) Moreover, noting the revitalization efforts underway in the local communities to increase tourism, the Applicant argued that CPC's proffer failed to demonstrate how the presence of the proposed project would adversely impact those efforts. (*Id*. at 147-148.)

The exercise of the Department's discretion in this matter to adjudicate issues of community character, the Applicant urges, "should be tempered by local jurisdiction and local planning for the project involved." (*Id*. at 149.) The Towns of Shandaken and Middletown have special permit and site plan and subdivision approvals which the Applicant must obtain before development of the project can begin. Accordingly, the local zoning and planning boards in the Towns will be able to address community character issues. (*Id*. at 150.) In conclusion, the Applicant asserts:

> There is no need for the Department to attempt to adjudicate what is clearly and merely a difference of vision of community character by some of the private and not-for-profit parties to this proceeding. The home rule accorded to the local governments in respect to regulation of land use should be respected in this case. (*Id*. at 152.)

Discussion

ECL 8-0105(6) explicitly provides: "'Environment' means the physical conditions which will be affected by a proposed action, including ... existing community or neighborhood character." Accordingly, impacts to community character are subject to review under SEQRA, and, when appropriate, to adjudication pursuant to 6 NYCRR part 624. Moreover, impacts to community character may be reviewed and evaluated independent of any other physical environmental impact that may be occasioned by the proposed project. As the Court of Appeals has noted in *Chinese Staff and*

Workers Association v. City of New York, 68 N.Y.2d 359, 502 N.E.2d 176, 509 N.Y.S.2d 499, 503 (1989):

> Thus, the impact that a project may have on population patterns or existing community character, with or without a separate impact on the physical environment, is a relevant concern in an environmental analysis since the statute includes these concerns as elements of the environment. That these factors might generally be regarded as social or economic is irrelevant in view of this explicit definition.

In discussing the elements embraced by the concept of community character in the area of the proposed project, Professor Daniels observed:

> The Catskill region is famous for its clean air, clean water, forest, mountains, villages and hamlets, people, lifestyles, recreation activities and aesthetic values. These are the features that give the Catskill region its sense of place and community character. Community character is also an economic asset. It describes how the natural environment and built environment interact with each other, and it generally defines the local quality of life. (T at 3983-3984.)

This same understanding of community character was expressed by Peter A. Liebowitz, AICP, of the consulting firm AKRF, when he noted in his proffer on behalf of the Applicant, “we totally agree that the community character of the [NYS Route 28] corridor is defined by the hamlets and the village combined with the natural setting and we think that is fairly well expressed in a broad range of public policy ....” (T at 2863; *see also* App. Ex. 84 at Slide 3.)

Prominent among the studies undertaken for the area is the *West of Hudson Economic Development Study for the Catskill Watershed Corporation* of 1998, prepared by Hamilton, Rabinovitz & Alschuler, Inc., *et al*. The study articulates four program areas for the Corporation to address in administering the Catskill Fund for the Future, the first being the local hamlets and villages. At page 16, the study notes:

> Hamlets and villages are the Watershed's most important asset. They are the nodes that tie the region together. They provide community character - a major element of the Catskill Watershed image, and provide vital retail and commercial services to local residents and tourists. Enhancement of the hamlets and villages represents a major element in an economic development strategy for the Catskill Watershed. Attractive and vital hamlets and villages provide an important anchor for the tourist economy, encouraging visitors to stay in the region for longer than a drive-through visit. (App. Ex. 71 at 16.)

Perhaps the most important economic development study undertaken for the area, however, is the *Resource Protection and Economic Development Strategy for the Route 28 Corridor* of 1994. (App. Ex. 83.) Referred to as the Route 28 Corridor study, it has been adopted by both the Towns of Shandaken and Middletown. At page 20, the study notes: "Existing hamlets and villages have unique character and can become focal points for development." (*Id*. at 20.) Moreover, the study articulates six goals and objectives. Goals 1 and 3 through 5 provide:

> 1. The combined tourist attractions and facilities of the Central Catskills must be developed simultaneously to provide the critical mass necessary to create a major destination to attract new visitors and packaged and marketed in a manner consistent with vacation patterns of the 1990's. While an integrated long-term development can and should be phased, phase 1 must be of a scale sufficient to garner significant new tourist appeal and investment interest.
>
> 3. Necessary infrastructure (sewage disposal and water supply) must be provided to allow concentration and expansion of development in Phoenicia, Shandaken, Pine Hill and Fleischmanns, and strategies integrating the remaining hamlets along Route 28 into a viable economic future must be developed.
>
> 4. Development opportunities outside the Villages and hamlets should be limited to those major tourist facilities which require large sites in scenic

locations, subject to necessary measures to protect the sensitive environment.

5. Four-season, long term tourist visitation must be encouraged by stimulation of a diversity of activities which serves a broad cross-section of the “family” tourist market. (*Id*. at 20-21.)

The foregoing discussion leads to several conclusions. First, the community character of the area is defined by the hamlets and villages in their unique environmental setting surrounded by the Catskill Forest Preserve. Second, preserving and enhancing the quality of life enjoyed by those hamlets and villages is of paramount concern. Third, the development of a resort facility within the area is compatible with the community vision articulated in the economic development studies which have been undertaken. Fourth, major tourist facilities should not be developed within the hamlets and villages themselves. Fifth, the development of a four-season tourist market should inure to the mutual benefit of the hamlets and villages and any resort facility proposed. In this fifth regard, the “smart growth” planning espoused by the above studies and articulated by AKRF at Slide 9 of its issues conference presentation on July 12, 2004, is of particular note. Recognizing that there is a “mutually beneficial relationship between the resort and hamlet revitalization,” the AKRF presentation enumerates certain “key elements of smart growth and good planning” which include:

> Clusters active amenities around intensive use area of Belleayre Ski Center

> Brings customers to area, but does not overwhelm area with new economic spending; long term introduction of new activity

> Program and Design complements and does not replicate Village functions

> Provides the resources to build environmentally sensitive architecture and site plans

> Does not impede or compete with existing demand for other hotel price points

> Provides resort amenities that will benefit whole corridor, particularly for hamlet economies that are adjacent but do not have the land available

> Resort can add customers to existing amenities in corridor and region (see Appendix 3 DEIS: Recreation Amenity Plan) (App. 84 at Slide 9)

This analysis, however, for the purpose of SEQRA review, leads to a fundamental question of balance, which must be the subject of further inquiry through the adjudicatory process. In particular, at this point, certain questions remain unanswered, including:

1. Will the project, if developed as proposed, overwhelm the existing hamlets and villages to the significant detriment of their present quality of life?

2. If such significant detriment to the quality of life of the hamlets and villages would result, should the proposed resort be reduced in scale or its elements be reconfigured in a manner so as to avoid this consequence?

3. What, if any, alternative configuration of the proposed resort can be achieved that would still provide the critical economic mass necessary for the resort's success and drive the economic revitalization of the hamlets and villages?

Such questions of balance as they concern impacts to community character are clearly within the purview of SEQRA review and appropriate for adjudication. Indeed, such an inquiry reflects the legislature's intent in the enactment of SEQRA. ECL 8-0103(7) states:

> It is the intent of the legislature that the protection and enhancement of the environment, human and community resources shall be given appropriate weight with social and economic considerations in public policy. Social,

economic, and environmental factors shall be considered together in reaching decisions on proposed activities.

RULING NUMBER FIFTEEN

CPC has raised substantive and significant issues with respect to the impact the proposed project will have on the community character of the hamlets and villages in the area of the proposed project. The issues are substantive as they address questions of balance that can only be resolved through further inquiry. The issues are significant since they could result in a major modification of the proposed project. Moreover, their resolution is essential before any determination may be made pursuant to 6 NYCRR 617.11(d)(2) and (5).

SECONDARY AND INDUCED GROWTH IMPACTS

Positions of the Parties

NYC

The City argues that the DEIS fails to accurately assess the potential of the proposed project to induce population growth and residential uses in the local communities, as well as additional commercial development, particularly along the NYS Route 28 corridor. (City Brief at 48.) This new induced growth will cause "increases, in among other things, impervious surfaces and stormwater flows, which have the potential to affect watercourses critical to the City's water supply, such as Birch Creek, Emory Brook, the Esopus Creek, and the East Branch of the Delaware River." (*Id*.) Such potentially adverse and significant impacts should be analyzed before any SPDES permit is issued, argues the City. (*Id*.)

The City asserts that the case study analysis in Section 6 of Appendix 26 of the DEIS provides a flawed understanding of the secondary growth impacts that will be occasioned by the proposed project. This, the City asserts, is because the case studies chosen, Windham and Gore Mountain in New York and Mount Greylock in Massachusetts, are not analogous to the proposed project at Belleayre. (*Id*. at 49.) The Windham and Gore Mountain examples

consider secondary growth at facilities which are primarily ski resorts and not a golf resort such as the proposed project, while Mount Greylock is not yet operational and, thus, cannot inform the present analysis. (*Id*.) More comparable developments, argues the City, would be Snowshoe Mountain in West Virginia and Mountain Creek in New Jersey. (*Id*.; *see,* New York City Petition for Full Party Status, Appendix A.5, OHMS Ex. 7; and City Ex. 5.) These latter case studies, argues the City, illustrate impacts associated with "improvement of roadway access during the early stages of development; capitalization by other developers speculating on the increased tourism associated with the project; the conversion of residential property to non-residential uses; the creation of housing communities to compete with the development; rapid increases in housing and land pricing; and development in and/or near host communities with sewer service." (*Id*.) Specifically, the City notes, such localized impacts would include increases in "impervious surfaces, lawns, phosphorous loads, fertilizer and pesticide use, stormwater flows, wastewater flows and water usage." (*Id*.)

The City asserts that "the DEIS' reliance on its case studies is misplaced and misleading, resulting in an inadequate review of the Project's potential induced growth impacts." (*Id*. at 50.) The City also notes that the U.S. Environmental Protection Agency shares its concern in this regard and, along with the City, questions the conclusion stated in the DEIS that "it is unlikely that the Belleayre Resort would create a particularly large secondary growth in terms of new development ...." (*Id*. citing DEIS, Volume 9, Appendix 26 at 6-23, OHMS Ex. 3.)

The City also argues that the Applicant's analysis using the RIMS II model to analyze the multiplier effect of increases in employment and spending occasioned by the project is inappropriate since it is static, providing only momentary glimpses of that effect. (*Id*.) The REMI model, utilized by its consultant, should have been used, asserts the City, since it is a dynamic model which "more accurately predicts that the economic 'shock' of the Belleayre Resort will lead to higher wages and a population increase, which will in turn create more demand for housing and services that may result in adverse environmental impacts." (*Id*.)

Because of its reliance on inappropriate case studies and computer modeling, the City asserts that the DEIS fails to

account for the impacts that will arise from the demand for new housing induced by the proposed project. (*Id*. at 51.) While the DEIS states, says the City, that the project will not result in any new residential units, the City's REMI model

> predicts that residential capital stock in the primary market area will increase by approximately $15.75 million in its first decade, resulting in 158 new residences and increasing by 50% the rate of housing growth recorded in the 1990s. [citations omitted] An additional 155 residences will be built outside the primary market area. [citations omitted] The impacts associated with such development were not identified or analyzed in the DEIS. [citations omitted] (*Id*.)

The City points out that the Applicant has not rebutted this proffer, but, rather, claims that the City's analysis is flawed in its assumptions as to unit cost and size. (*Id*.) The Applicant now predicts that 58 to 78 residences will be built during the first decade of the proposed project. (*Id*.) But notwithstanding this concession, argues the City, the Applicant has still not analyzed the potential impacts that will be occasioned by these new residences. (*Id*. at 52.)

The City also argues that the DEIS fails to accurately consider the impacts from new commercial development due to the proposed project. (*Id*. at 52.) In particular, the City challenges the conclusion in the DEIS that much of the more than 76,000 feet of new retail space that will be needed with the development of the project will be accommodated within the existing hamlets and villages. (*Id*.) The City asserts, however, that its proffer "that, due to a typical business's desire for enhanced access, parking and visibility not available in villages and hamlets, there would be significant development pressure to accommodate much, if not all, of this induced demand along NYS Route 28." (*Id*.) Such development along the Route 28 corridor, already seen with the proposed expansion of the Margaretville Motel, a hotel proposed outside Pine Hill and proposed residential development

> will result in impacts on important streams in the vicinity of project [*sic*.], such as stream temperature alterations and contamination from stormwater runoff. [citations omitted] In particular, developments on the Big Indian side of the corridor will likely drain into

> Birch Creek; developments on the Wildacres side will likely drain into Emory Brook. Both are major tributaries to City reservoirs. Thus, increases in impervious surfaces and natural resources modifications resulting from new residential and commercial development have not been adequately considered in ... the DEIS. (*Id*. at 53.)

In conclusion, the City reiterates its main concern that the Applicant has failed to consider the impacts that will be occasioned by the new residential and commercial uses induced by the proposed project. Asserts the City:

> [T]he Project has been predicted to induce 323 housing units and the conversion of between 975 and 1,625 acres of land for residential uses, in addition to commercial development along Route 28. In addition, while the DEIS predicts that impervious areas could increase by only 12 acres as a result of total induced growth, the REMI analysis predicts that induced growth could lead to more than 55 acres of impervious surfaces. [citations omitted] This induced growth could result in significant adverse impacts not identified or analyzed in the DEIS. Therefore, the SPDES permits cannot be issued, and the issue is fit for adjudication. (*Id*. at 54.)

CPC

CPC "fully concurs with the analysis of and conclusions drawn by [the City's proffered experts] on secondary growth issues." (CPC Brief at 61.) CPC also points out the impacts to community character that will be caused by the secondary growth induced by the proposed project. (*Id*. at 59-60.) As does the City, CPC challenges the Applicant's assertion that secondary commercial development will be concentrated in the hamlets and villages, but will most probably occur along the Route 28 corridor. (*Id*. at 62-63.) CPC also argues that the DEIS fails to account for the induced commercial growth that will arise to service the needs of "resort workers and those visiting but not necessarily staying at the resort but drawn to the area to investigate time-shares or other resort amenities." (*Id*. at 63.) Moreover, CPC argues, through its proffer made by Professor Daniels, that "'the presence of the Belleayre Resort will spur demand for new vacation/second homes off the project site but

within a fairly easy driving distance.'" (*Id*. at 64.) The impacts of such demand however have not been analyzed in the DEIS. (*Id*.) Finally, given the lower wages received by employees of the resort, it is unlikely that they will commute long distances to work, and therefore, the need for local affordable housing will be exacerbated. (*Id*. at 66.) However, these needs have also not been considered in the DEIS. (*Id*. at 66-67.)

Applicant

The Applicant argues that SEQRA does not require that every environmental impact be considered in a DEIS, only those which pose a significant adverse effect. (Applicant's Brief at 152.) Thus, while there were differences between the expert conclusions proffered by the Applicant and the City, they "did not demonstrate any potential for significant adverse environmental effects." (*Id*.) "Moreover," asserts the Applicant, "assuming *arguendo*, that [the City's] consultants are correct with regard to the level of secondary growth, including commercial and residential development, their projections still do not raise a substantive or significant issue." (*Id*.)

The Applicant points out that there is no dispute that an estimated 75,000 to 80,000 square feet (s.f.) of additional retail and service uses would be induced in the Route 28 corridor as a result of the project. (*Id*. at 153.) The only issue is where in the corridor that development could take place, and this is not a subject for adjudication under 6 NYCRR part 624. (*Id*.) The Applicant asserts, however, that revitalization efforts noted in the hamlets support its contention that secondary commercial growth will likely occur in those communities. (*Id*. at 154.) In any event, argues the Applicant, such development will have only a "minor impact." (*Id*.) Moreover, any such activity would be subject to the New York City Watershed Regulations, which would further diminish the effects of any such commercial development. (*Id*.)

With respect to induced residential development, while maintaining that the City's projection of 158 housing units should be reduced by half, the Applicant points out that even this number of homes coupled with 80,000 s.f. of commercial growth, in the City's own calculations, showed that only 15 kilograms (kg) of phosphorous would be contributed to the Watershed over a 10-year period from this induced development.

(*Id*. at 154-155.) Additionally, the Applicant points out that any such "growth would be subject to local subdivision approval and New York City Watershed Regulations." (*Id*. at 155.)

The Applicant also asserts that the City's claim that the proposed Resort will cause land use changes for residential purposes on 975 to 1,625 acres over a 20-year period following construction of the Resort is exaggerated. (*Id*.) This is because of the City's assumption that each of 323 housing units projected to be built between the Towns of Olive and Andes in that 20-year period would occupy 3 to 5 acres. Yet, points out the Applicant, this is at variance with the City's own assumption that the 158 housing units projected to be developed within the first 10 years of the Resort would result in the creation of only 7 acres of impervious surface. (*Id*.) The City's arguments in this regard are based on pure speculation, asserts the Applicant. Moreover, notes the Applicant: "The estimates prepared by [the City] have failed to consider vacant units, resale of existing occupied housing and conversion of existing and seasonal housing." (*Id*. at 155-156.)

As to the case studies, the Applicant points out that the City agreed to their selection during the scoping process. (*Id*. at 156.) Such studies are not required under SEQRA. They are illustrative and can be helpful and instructive, but are not intended to be the basis of agency decisionmaking. (*Id*.) Windham, the Applicant points out, is, in fact a community with two golf courses. (*Id*.)

In conclusion, the Applicant asserts that neither of the proffers made by the City or CPC raises an issue that is substantive and significant warranting adjudication. (*Id*.)

Discussion

Where commercial and residential development induced by the proposed project will likely occur along and within the Route 28 Corridor, is to a large extent, beyond the purview of this review. That such development will likely occur is not. Zoning regulations and land use plans adopted by the local municipalities will determine whether such development takes place along Route 28, or within the hamlets and villages. Moreover, any such development will have to comport with the New York City Watershed Rules and Regulations.

For the purposes of the present SEQRA review, however, the record indicates that both the intervenors and the Applicant are in general agreement on two points. First, they agree that approximately 75,000 to 80,000 s.f. of new commercial uses will be induced by the proposed project. Second, they agree that the proposed project will induce the development of new residential homes, the City suggesting that 158 units will be constructed over the first ten years of the project, the Applicant arguing that 58 to 78 homes will be built, depending upon whether they are 2000 s.f. or 1000 s.f. structures. (App. Ex. 84 at Slide 43.)

The potential impacts of this new residential construction are not accounted for in the DEIS. When compared to the entire study area considered in Appendix 26 of the DEIS, along Route 28 from Boiceville to Margaretville, the impacts of such new residential construction may seem insignificant. However, when considered relative to the communities closest to the proposed project, the significance of such impacts is apparent. For example, according to the 2000 U.S. Census, the Village of Fleischmanns and the Hamlet of Pine Hill have populations of 351 and 308, respectively. Even assuming 3 persons per household, if a fair percentage of that new residential construction is developed in those communities, the impact to local population growth will be obvious and significant. Moreover, the impacts to local infrastructure and municipal services cannot be overlooked. New residential construction will impact local roads, water distribution, sewer collection, and wastewater treatment. It will place additional burdens on local police, fire, and medical emergency services. However, the DEIS analysis ignores these impacts from new induced residential construction, while at the same time assuming the full non-impacted availability these services for the Resort. To illustrate, the DEIS makes assertions such as “it is unlikely that the Belleayre Resort would create a particularly large secondary growth in terms of new development and rapid increases in demands for labor or influx of new residents to meet expanding labor demand.” (DEIS, Volume 9, Appendix 26 at 6-23, OHMS Ex. 3.) Moreover, the DEIS states: “Since the Resort is estimated to result in negligible new seasonal or year-round housing construction, the impacts are anticipated to be insignificant.” (*Id*. at 7-16) Given the size of the hamlets and villages within the immediate vicinity of the proposed project, however, new residential construction of even 58 homes cannot be said to be insignificant.

Finally, as the City has pointed out, the presence of this new residential construction presents a significant potential threat to local water quality, including increases in impervious surfaces, phosphorous loads, fertilizer and pesticide use, stormwater flows, wastewater flows and water usage.

RULING NUMBER SIXTEEN

The City has raised substantive and significant issues with respect to secondary and induced growth impacts. In particular, these issues concern the new residential development that will be induced by the proposed project and the impacts associated therewith. These issues are significant because their resolution requires further inquiry. These issues are significant because they could affect permit issuance or result in a major modification of the proposed project.

CUMULATIVE IMPACTS

Positions of the Parties

CPC

CPC asserts that cumulative impacts must be considered in two contexts. First, CPC notes that cumulative impacts associated with the planned expansion of the Belleayre Mountain Ski Center (BMSC) and the proposed project have not been examined in the DEIS. (CPC Brief at 141.) Second, CPC asserts that it has also made a proffer that raises substantive and significant issues with respect to cumulative impacts from the project itself. In particular, such cumulative impacts arise from various other impacts including traffic impacts, impacts to community character, water supply impacts, aquatic habitat impacts, impacts to the Catskill Forest Preserve, and secondary growth impacts, all occasioned by the proposed project and exacerbated by the presence of the BMSC. (*Id*.) What has not been fully assessed, however, asserts CPC, are the cumulative impacts that will be occasioned by the expansion of the BMSC. Accordingly, CPC argues that the Department's future plans for the development of the BMSC should be disclosed. Such

disclosure, asserts CPC, is required for a proper SEQRA review in this matter. (*Id*. at 142.)

Quoting from the *SEQRA Handbook* of 1992 at page 41, CPC notes that cumulative impacts

> are impacts on the environment that result from the incremental or increased impact of an action(s) when the impacts of that action are added to other past, present and reasonably foreseeable future actions. Cumulative impacts can result from a single action or a number of individually minor but collectively significant actions taking place over a period of time. Either the impacts or the actions themselves must be related.

Moreover, the *SEQRA Handbook* continues:

> Cumulative impacts must be assessed when actions are proposed to or will foreseeably take place simultaneously or sequentially in a way that their combined impacts may be significant. Assessment of cumulative impacts is limited to consideration of probable impacts not speculative ones....

Since the actions which are the proposed project and the expansion of the BMSC are both reasonably foreseeable and their respective development and operation will take place simultaneously, CPC argues that the cumulative impacts from the two projects must be assessed. (*Id*.) To do so, however, CPC argues, requires that the Department release the present draft Unit Management Plan (UMP) for the Belleayre Mountain Ski Center. (*Id*. at 143.)

Moreover, CPC argues that the proposed expansion of the BMSC is more than mere speculation. (CPC Reply Brief at 68.) The draft UMP, CPC argues, has been the subject of public discussion and Department Staff have, in fact, discussed the expansion with members of CPC. (*Id*. at 144.) Moreover, asserts CPC, some provisions of the draft UMP have already been implemented. (*Id*.) In CPC's view, the nexus between the BMSC and the proposed project has been fully established on the record of the issues conference. In addition, the expansion of the BMSC

Center as well as the construction of the project, CPC points out, will occur within the same time frame. Accordingly, CPC asserts: "Information in the draft UMP should be released to the public and analyzed so the cumulative impacts from these adjacent projects can be publicly identified and assessed as early as possible in the planning stages of these actions as required by SEQRA." (*Id*. at 145.) Without such disclosure, argues CPC, the Department cannot fully consider all the environmental impacts occasioned by the proposed project. (*Id*.)

In conclusion, CPC reiterates its position that cumulative impacts from traffic, impacts to community character, induced secondary growth impacts, impacts to the Forest Preserve, impacts to the water supply and impacts to aquatic habitat have all amply demonstrated the need to adjudicate the cumulative impacts of the proposed project. (*Id*. at 145-149.)

Department Staff

Department Staff points out that the draft UMP for the BMSC has not yet been released to the public and is still under review. (Department Staff's Reply Brief at 4.) At this point, any information in that draft document would be speculative and, therefore, not relevant to the instant SEQRA review. (*Id*.) Moreover, Department Staff notes, once a new UMP for the BMSC is released by the Department, that UMP will be, itself, subject to the SEQRA review process. "At that time," asserts Department Staff, "potential cumulative impacts of the possible expansion of the BMSC can be analyzed along with the proposed Crossroads Resort." (*Id*.) Accordingly, Department Staff asserts that CPC has not raised a substantive and significant issue with respect to cumulative impacts as that issue relates to any proposed expansion of the BMSC. (*Id*. at 5.)

Applicant

The Applicant argues that SEQRA does not require an applicant to speculate about environmental impacts. (Applicant's Brief at 158.) "The starting point for the consideration of the environmental impacts of any proposed action," asserts the Applicant, "is that it be 'proposed' and contain a sufficiently defined plan to facilitate the analysis of potentially significant environmental impacts. In the case of the expansion of the Belleayre Ski Center neither key element is present."

(*Id*.) Citing a Court of Appeals decision addressing cumulative impacts, *Programming & Systems, Inc. v. UDC*, 61 N.Y.2d 738, 739 (1984), the Applicant notes that the Court held that SEQRA review "is not required until a specific project plan ... is actually formulated and proposed." (Applicant's Brief at 158.) This is not the case in the present matter, asserts the Applicant. (*Id*.) Any proposed expansion of the BMSC in the form of a revised UMP has not yet been disclosed to the public.

Discussion

The consideration of potentially significant cumulative impacts occasioned by a proposed project is fundamental to a proper SEQRA evaluation. The Department's implementing regulations at 6 NYCRR 617.9(b)(5)(iii)('a') provide that all draft or final environmental impact statements (EIS) must include

> (iii) a statement and evaluation of the potential significant adverse environmental impacts at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence. The draft EIS should identify and discuss the following only where applicable and significant:
>
> > ('a') reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts

As the previously noted guidance in the *SEQRA Handbook* suggests, the collective effect of various environmental impacts over time can themselves result in an environmentally significant cumulative impact. Moreover, the simultaneous development and operation of two or more proposed projects may also cause significant cumulative environmental impacts. But in order to consider the combined impacts of two or more projects, those projects must have been actually proposed. This is the clear meaning of the *SEQRA Handbook* section quoted by CPC, above: "Cumulative impacts must be assessed when actions are proposed to or will foreseeably take place simultaneously or sequentially in a way that their combined impacts may be significant."

In this proceeding, CPC has argued that disclosure of the draft UMP for the BMSC is essential to a full evaluation of the

cumulative impacts occasioned by the proposed project as well as any proposed expansion of the BMSC. In support of its position, CPC cites the DEIS, which asserts:

> Between 1998 and 2002 there has been an increase in skier visits of almost 100% from a low of approximately 74,000 to a high of 142,000. Management of the Ski Center aims over the next few seasons to attract 200,000 to 225,000 skier visits. (DEIS, Volume 1, at 1-7.)

In addition, CPC cites a March 5, 2003, article appearing in the *Catskill Mountain News*, wherein it is reported that the BMSC seeks to attract more than 250,000 skier visits per year, with some days seeing as many as 7000 to 9000 skiers. (Exhibit A annexed to CPC Affirmation in Support of Motion for Discovery, dated June 2, 2004.)

Notwithstanding these factual references, however, the disclosure of the current draft UMP for the BMSC is not necessary for a full review of the cumulative impacts occasioned by the Applicant's proposed project and any expansion of the BMSC. The reasons for this conclusion are twofold. First, the draft UMP is at this time still under review. As such, it is not a specifically defined project and remains speculative, precluding its utility in this proposed project's environmental review. This is consistent with the law and guidance cited above. Second, and most important, the disclosure of the draft UMP is unnecessary. The record of the issues conference is more than adequate to allow a full consideration of the cumulative impacts associated with any expansion of the BMSC. For while the draft UMP is not part of the record, the current actually adopted UMP for the BMSC of May 1998 is part of the record. That UMP sought to improve the facilities of the BMSC to enable it to serve up to 4500 skiers per day. (App. Ex. 82, Summary of Final UMP for BMSC.) The UMP of 1998 notes that there are, on average, 125 ski days per season. (*Id*. at 2.) But this means that as of the adoption of this UMP in 1998, the possibility existed that more than 550,000 skiers could visit the BMSC annually, far exceeding the 225,000 or 250,000 potential skier visits cited in the DEIS or the article noted above. The layout and configuration of any expansion of the BMSC is irrelevant to a discussion of cumulative impacts occasioned by the Applicant's proposed project. What is relevant and what is known is that a far greater number of persons could visit the BMSC than ever before. The cumulative

impact of this greater number of persons on the area coupled with the proposed project furnish sufficient reason for further inquiry.

The cumulative effect of impacts from traffic, impacts to community character, induced secondary growth impacts, impacts to the Forest Preserve, impacts to the water supply and impacts to aquatic habitat occasioned by the proposed project alone warrant further inquiry. The greatly increased number of persons who could utilize the neighboring BMSC only exacerbates these cumulative impacts justifying adjudication of this issue.

RULING NUMBER SEVENTEEN

CPC has raised substantive and significant issues with respect to the significant adverse cumulative impacts occasioned by the proposed project alone, as well as exacerbated by the projected increased usage of the BMSC. These issues are substantive since their resolution requires further inquiry. Moreover, they are significant since they can affect permit issuance or result in a major modification of the proposed project.

ALTERNATIVES

Positions of the Parties

CPC

CPC argues that the alternatives analysis in the DEIS does not provide the level of detail needed for the Department to rationally find that the alternative selected by the Applicant (the project as proposed) best minimizes environmental impacts as required by SEQRA. (CPC Issues Conference Brief at 128.) Asserting that the single most controversial element of the proposed project is its size and scale, CPC points out that only a total of 18 pages of the 59 page discussion of alternatives, contained in Section 5 of the DEIS, actually addresses lower-build or smaller-scale alternatives, alternative locations, alternative uses for the site, and the no-action alternative. (*Id*. At 132.) Moreover, CPC argues that the discussion of these

alternatives is cursory and does not provide the level of detail needed to meaningfully evaluate the respective environmental impacts of the various alternatives. (*Id*.)

In support of its position that reasonable lower-build or smaller-scale alternatives to the project do exist and should have been analyzed in the DEIS, CPC proffered the opinion of John Alschuler, Ph.D., of the consulting firm of Hamilton, Rabinovitz & Alschuler, Inc., New York City. While not intended as an exhaustive list, Dr. Alschuler proposed four alternative development schemes each of which, in his view, "could achieve a more desirable balance between economic viability and environmental impact" than the project as proposed. (OHMS Ex. 8, CPC Petition for Party Status, Exhibit Q, page 3.) These alternatives were summarized by CPC in its issues conference brief as follows:

> 1) A Wildacres Alternative that envisions a golf course, hotel and some residential units on the western parcel, with the eastern parcel being sold to the state or city and protected in perpetuity as forest lands;
>
> 2) A Reduced Scale Residential Alternative that envisions an all-residential development at reduced scale, perhaps in combination with a single golf club, and a sale of the remaining portion of the site to a public entity for creation of a nature preserve;
>
> 3) A Nature Amenity Alternative that envisions a destination development focused on alternative outdoor activities and recreational attractions other than golf – such as an equestrian center, a facility for mountain biking and hiking, and/or a yoga retreat center; and
>
> 4) A Single Golf Course (on western parcel) Alternative that envisions a mixed vacation and residential development on the western parcel only, possibly with a golf school and a nature preserve, developed over a smaller site assemblage. (CPC Issues Conference Brief at 134.)

CPC challenged the Applicant's apparent focus on the projected economic rate of return of the project and its reliance

on this rate of return as being the determinative factor in selecting the project as presented over other possible alternatives. Asserting that such an economic analysis is not the proper legal test to be applied in a consideration of alternatives pursuant to SEQRA, CPC argued "[t]he bulk of the Applicant's DEIS alternatives discussion focuses on the economics of the proposed project, and purports to show that the proposed action is economically viable and that smaller-build alternatives would be economically unsatisfactory. Therefore, under Applicant's self-serving logic, smaller-build alternatives need not be analyzed." (*Id*. at 136.)

The central guiding principle in the Applicant's economic analysis, CPC pointed out, is the concept of the Internal Rate of Return (IRR), which CPC explained as "an analysis of the relationship between what an investment costs, what the investor earns, and what level of risk the investor faces." (*Id*. at 137.) However, in the opinion of Dr. Alschuler, the Applicant did not perform a proper IRR analysis. A proper IRR analysis would project return on invested capital. But in this matter, the Applicant projected a return based on total cost, a misapplication of the IRR concept. (*Id*. at 138.) In paraphrasing Dr. Alschuler's comments at the issues conference, CPC asserted that the Applicant's IRR analysis "is like calculating what you make or lose when you sell a house, based upon the price of the house instead of on the equity you have put into the house." (*Id*. at 140.)

Rejecting the Applicant's IRR analysis as determinative in a SEQRA review of alternatives, CPC argued:

> Even if the Applicant had proven that the proposed action was the most profitable choice for the project sponsor, which it did not, that conclusion alone would not be sufficient to relieve the applicant of performing a thorough review of alternatives. SEQRA nowhere states that only the design that maximizes a developer's profits need be considered.

NYC

The City argues that the Applicant has failed to provide a range of reasonable alternatives to the proposed project for the Department, as lead agency, to consider in addressing the

environmental impacts of the proposed project. (City of New York's Proposed Issues for Adjudication and Supporting Memorandum of Law, at 41.) Moreover, the City asserts that the DEIS improperly relies on the economic study undertaken by the Applicant to show that any configuration of the project's components other than that proposed is unfeasible. (*Id*.)

The City views the lack of a discussion of reasonable alternatives in the DEIS as an attempt by the Applicant to evade the environmental assessment of alternatives required by SEQRA, undermining the public and governmental scrutiny contemplated by the law. (*Id*. at 42-43.) The City asserts further that the range of alternatives that should be considered included project configurations of a lesser scale or magnitude, as well as a consideration of the no action alternative. (*Id*. at 43-48.)

From an economic standpoint, the City also argues the IRR analysis conducted by the Applicant fundamentally distorts the comparative feasibility of the alternatives. This is because for each configuration considered, the Applicant chose to calculate the IRR for the resort component separately from the detached housing component. (*Id*. at 44.) The Applicant had asserted that only the project as proposed would meet the economically viable threshold of an IRR of more than 14 percent, in this, case 14.7 percent. (*Id*.) The City's expert, RKG Associates, employing the same IRR methodology used by the Applicant, applied it to three possible project configurations, in each case aggregating the resort facilities and the detached housing component. The three configurations considered were development of (a) the project as proposed, (b) the Big Indian Plateau only, and (c) the Wildacres resort only. In the opinion of RKG Associates, this calculation showed the following IRRs: 23.2 percent for the project as proposed, 22.2 percent for the Big Indian Plateau only, and 19 percent for the Wildacres Resort only. (*Id*.)

Applicant

The applicant maintains that the discussion of alternatives in the DEIS is appropriate to the SEQRA review required in this matter. Arguing that not every conceivable alternative be considered, the Applicant asserts that only a reasonable range of alternatives as determined by the lead agency be considered. (Crossroads Ventures, LLC, Issues Conference Brief at 160.)

Pointing to various regional planning studies done in recent years, the Applicant stresses the economic significance of the proposed project to the region. (*Id*. at 162.) The project, argues the Applicant, would be a source of jobs, providing increased tourism opportunities for local residents and businesses, and stimulate the economies of the local hamlets and villages. (Id. at 162.) But to achieve this goal requires that the Applicant propose a project that would be attractive to the kind of hotel operator who has sufficient resources to implement the planned project. (*Id*. at 166.) According to the Applicant, this means a project with an IRR of 14 percent or greater. (*Id*.) In the Applicant's view, and in the proffered opinion of its experts, only the full resort configuration with the development of the Big Indian Plateau and the Wildacres Resort as proposed will achieve an IRR greater than 14 percent. (*Id*.)

Arguing that "SEQRA recognizes a correlation between the need to consider alternatives and the level of unmitigatable significant adverse environmental impacts that might arise," the Applicant asserts that both it and the Department Staff "have concluded that for each of the environmental effects that might arise from the Belleayre Resort, the potential for significant adverse effects have been adequately mitigated either by the selected design or through NYSDEC proposed permit conditions to the permits." (*Id*. at 164.) Accordingly, argues the Applicant, since only a resort with an IRR of more than 14 percent achieves the Applicant's project objectives, and since the project as proposed adequately mitigates significant environmental impacts, no other consideration of alternatives is legally required under SEQRA. (*Id*. at 164-165.)

Department Staff

Department Staff agrees with the Applicant and argues that the alternatives analysis provided in the DEIS is adequate. (Department Staff Issues Conference Reply Brief at 11.) As Department Staff noted: "Because the sponsor worked in the beginning of this assessment process to minimize, if not eliminate potential adverse impacts, and since there has been no finding, at this time, that such significant adverse impacts exist, it is unnecessary to require the project sponsor to consider, in even greater detail, other project alternatives." (*Id*.)

Discussion

While the format of a DEIS is flexible and need not be encyclopedic, certain elements must be included within it, among them an adequate discussion of alternatives to the proposed activity. As 6 NYCRR 617.9(b)(5)(v) mandates, the DEIS must contain "a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed."

But the "comparative assessment of the alternatives discussed" mandated by this regulation is not to be undertaken by the lead agency and the applicant acting alone. Rather, it is a process that invites, indeed, requires, public participation. The development of the DEIS, and the process that culminates in an FEIS, is an open and public one. This fact was made clear by the Court of Appeals in *Webster Associates v. Town of Webster* 59 N.Y.2d 220, 464 N.Y.S.2d 431 at 433-434 (1983) when it stated:

> The purpose of requiring inclusion of reasonable alternatives to a proposed project is to aid the *public* and governmental bodies in assessing the relative costs and benefits of the proposal. To be meaningful, such an assessment must be based on an awareness of all reasonable options other than the proposed action. The degree of detail with which each alternative must be discussed will, of course, vary with the circumstances and nature of each proposal. (Emphasis supplied.)

Moreover, as an aside, under the unique circumstances in *Webster Associates*, the Court found the failure of the DEIS to include a thorough discussion of a possible alternative site for a proposed shopping center was not fatal. But in so concluding, the Court pointed to certain facts in the record, in particular noting that the general public was "thoroughly familiar with" the alternative site for the proposed shopping center and that "[t]he relative merits of the two proposals had been the subject of extensive publicity and of debate by public officials and the general public." (*Id*.)

In this case, the actual discussion of alternatives other than the project as proposed contained in Section 5 of Volume 1 of the DEIS comprises approximately nineteen pages. Section 5.1, at page 5-1, entitled "Alternative Locations," discusses in one page the various other locations for the project considered by the Applicant. The consideration of alternative locations was driven by the Applicant's primary "objectives of providing a high quality resort to complement the existing recreational facilities at Belleayre Mountain Ski Center, providing a four-season destination resort, and spurring the revitalization of the economy, especially in Shandaken and Middletown." (OHMS Ex. 3, DEIS at 5-1.) Other alternative locations were rejected because of their failure to meet these objectives, due to lack of proximity to the Ski Center, wetland or other topographic concerns, or lack of commercial availability. (*Id*.)

Section 5.2 of the DEIS, at page 5-2, entitled "Alternative Use of the Site," discusses in that one page the as-of-right development of the Applicant's property permitted by the zoning laws of the Towns of Shandaken and Middletown. These zoning laws would allow only an as-of-right residential use of the property. While the Applicant provided sketch layouts depicting the lots of a possible residential development of the site, annexed to the DEIS as Figures 5-1, 5-2 and 5-3, it ultimately rejected such residential development as inconsistent with its expressed goals. As the Applicant noted:

> The applicant's objective is to develop a world class four season destination resort which cannot be achieved by residential development. Moreover, this as-of-right alternative is less economically attractive and less financially feasible than the one proposed in this document [the DEIS]. (*Id*.)

Section 5.3 of the DEIS is entitled "Alternative Layouts." Pages 5-2 through 5-5 of this section discuss the feasibility of golf course developments at both the Big Indian and Wildacres sites given the respective locations and topography. The DEIS concludes that such development at both sites is viable. (*Id*. at 5-4 to 5-5.)

Subsection 5.3.2 entitled "Alternative Buildings and Building Layouts" summarizes, in little more than half a page, the change in design of the Big Indian Resort and Spa building, the reduction in retail space at Wildacres, and the reduction of

the number of the total number of lodging units in the proposed project, all in response to concerns raised by the public. (*Id*. at 5-5.) Moreover, the section points out that the Wildacres hotel, originally proposed as a number of separate buildings was redesigned as one building "to improve the ease and efficiency of operations of the various resort functions and reduce the amount of impervious area." (*Id*.) The earlier building designs referred to in this section are illustrated in Figures 5-6, 5-7 and 5-8.

The discussion at Subsection 5.3.3, entitled "One Golf Course and One Hotel Complex Alternative," comprises two paragraphs and less than half a page. The proposal of developing a golf course in one location, either at Big Indian or Wildacres, and a hotel at the remaining location is summarily rejected because it "is not practical and would not provide a desirable product for potential Resort guests." (*Id*. at 5-6.) Separating the two uses would result in the loss of "a value premium," for as the DEIS states:

> The impetus behind the project is to create a four-season recreational destination resort. Separating a golf course from the lodging component is contrary to the major objective of the project. The recreation and lodging components need the interconnectedness so that guests realize the sense of place when the two general uses are combined in close proximity to each other.

Subsection 5.3.4 of the DEIS, entitled "Either an 'East Resort' or a 'West Resort' Alternative," discusses the alternative of the development of either the Big Indian Plateau or the Wildacres Resort parcels alone. Though supported by a table, Table 5-2, and certain figures, Figures 2-1 and 2-2, as well as the financial analysis in Appendix 27, this section of the DEIS is comprised of seven pages.

Figures 2-1 and 2-2 are merely general layout plans of the Big Indian Plateau and Wildacres Resort sites, respectively, reduced to fit on an 11 by 17 inch page. Table 5-2, entitled "Alternative Table - Summary of East and West Project Components," is a two page chart divided into four columns. In the first column are listed 42 separate parameters delineating various economic, topographical and environmental factors. The remaining three columns are headed "Proposed Project," "Big Indian Plateau (East) Only," and "Wildacres Resort (West) Only."

Values of the various parameters are expressed numerically, such as the parameter “Total Area of Assemblage (ac.)” resulting in 1960 acres for the proposed project, 1242 acres for Big Indian, and 718 acres for Wildacres. Similar numeric values are provided for parameters posed such as “Capital Investment,” “Permanent Full-time Jobs,” “Average Daily Water Demand (gpd),” and “Impervious Surfaces Within the Assemblage,” this latter parameter being expressed as a percentage of the total acreage of the assemblage.

The underlying justification for the numeric values expressed in Table 5-2 is not easily ascertained for all the parameters posed and needs further amplification. However, while many of the numeric values in Table 5-2 address purely economic parameters, some do provide useful comparative environmental data. For example, for the parameter “Average Daily Water Demand (gpd),” the values are 251,452 gpd for the proposed project, 114,817 gpd for Big Indian, and 136,635 gpd for Wildacres. Moreover, for the parameter “Impervious Surfaces Within the Assemblage,” the values are 4.29 percent for the proposed project, 4.20 percent for Big Indian, and 4.55 percent for Wildacres. When these percentages are multiplied times their respective assemblages of acreage, the following acreage of impervious surface for each assemblage results: 84.08 acres for the proposed project, 52.16 acres for Big Indian, and 32.67 acres for Wildacres.

Similarly, the numeric values throughout Table 5-2 are larger for the project as proposed and often merely reflect the combined total of the Big Indian and Wildacres components. But purely from the standpoint of the totality of potential environmental impacts, the numbers suggest that the level of such impacts would be less if either the Big Indian or Wildacres option alone was pursued. However, the level of detail with respect to potential environmental impacts contained in the DEIS, or in Table 5-2, is not sufficient to allow the comparative environmental impact analysis contemplated by SEQRA. This deficiency is particularly apparent for those parameters which cannot be numerically quantified, for example, visual impacts, noise impacts and stormwater impacts.

As to visual impacts, the parameter in Table 5-2, entitled “Visual,” for the proposed project states:

> Project visibility limited to a few locations across the valley, north of NY Route 28 (Owl's Nest and Wood Road) as well as the upper lodge at Belleayre Mountain Ski Center. Highly screened view of the project site exists off of the trail to Balsam Mountain.

For the Big Indian Plateau (East) Only option, the table states:

> Project visible from the Owl's Nest as well as the upper lodge at Belleayre Mountain Ski Center. Highly screened view of the project site exists off of the trail to Balsam Mountain.

For the Wildacres Resort (West) Only option, the table states:

> Project visible from Wood Road as well as the upper lodge at Belleayre Mountain Ski Center.

As to noise impacts, the parameter in Table 5-2, entitled "Sound," for all three project options states:

> Limited number of receptors temporarily affected by construction sound.

As to stormwater impacts, the parameter in Table 5-2, entitled "Stormwater Management," for all three project options states:

> System designed to capture and treat water quality volume, treat a 25-year storm event, and safely pass a 100-year storm. Runoff rates the same as pre-development conditions.

To reiterate the mandate of SEQRA expressed in 6 NYCRR 617.9(b)(5)(v): "The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed." As is clear from the foregoing references to the DEIS discussion of alternatives in Section 5 and to Table 5-2, the level of detail provided by the Applicant is not sufficient to permit the

comparative assessment required by law. Further inquiry is required.

Moreover, SEQRA requires a comparative assessment of physical and environmental impacts, not primarily economic impacts. This is made clear in the definition of the term "environment" contained in ECL 8-0105(6) which provides:

> "Environment" means the *physical conditions* which will be affected by a proposed action, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance, existing patterns of population concentration, distribution, or growth, and existing community or neighborhood character. (Emphasis supplied.)

In addition, the Legislature has made clear that economic considerations are not the only or determining factor in the SEQRA review process. Along with social factors, economic factors are to be considered with environmental factors in reaching any SEQRA decision. As ECL 8-0103(7) states:

> It is the intent of the legislature that the protection and enhancement of the environment, human and community resources shall be given appropriate weight with social and economic considerations in public policy. Social, economic, and environmental factors shall be considered together in reaching decisions on proposed activities.

Here, the Applicant's analysis in the DEIS is primarily economic. For example, in a discussion of a Big Indian only or Wildacres only alternative, while asserting that the project as proposed will minimize or avoid environmental impacts, the DEIS, at page 5-7, states:

> Most important, detailed market and fiscal analyses undertaken by the applicant show that [a Big Indian only or Wildacres only option] is not a reasonable or feasible alternative to the proposed action in that any reduction or elimination of a project element results in either an increased risk to overall marketability and financial viability, or an unacceptably low financial return on investment.

The DEIS summarizes the economic study provided by the Applicant's consultant, HVS Consulting Services, Mineola, New York, in Appendix 27. With respect to the possible proposal to develop only the Big Indian site or the Wildacres site, HVS considered five scenarios, in addition to detached residential units at either site, which as-of-right residential use, as noted earlier, was rejected by the Applicant as not consistent with its objective to develop a world class four season destination resort. (OHMS Ex. 3, DEIS at 5-2 and 5-10.) The five scenarios considered were: (1) the project as proposed, (2) elimination of the golf club at Wildacres, (3) elimination of the golf club at Big Indian, (4) elimination of all of Wildacres, and (5) elimination of all of Big Indian. (*Id*. at 5-10.) In each of these five scenarios the detached lodging units were not included in the financial analysis. In the view of the Applicant and its consultant, development of the detached units at either Big Indian or Wildacres would only be appropriate if the hotels and golf clubs were first successful. (*Id*. at 5-11.) The Internal Rate of Return (IRR) analysis conducted with respect to these five scenarios is summarized in Table 5-3, on page 5-12 of the DEIS. As the table shows, only the project as proposed, under the Applicant's analysis yields an IRR greater than the 14 percent threshold suggested by this method of evaluation.

As noted above, however, CPC has argued that the IRR methodology has been misused or inappropriately applied by the Applicant in this matter. Moreover, the City has argued that the same data the Applicant reviewed, but with the detached residential units included, yields an IRR greater than 14 percent for each of the three scenarios, being the project as proposed, Big Indian alone, or Wildacres alone. Thus, even to the extent that economic factors, though not alone determinative, should be considered in a SEQRA review of alternatives, a substantive and significant issue has been raised by both CPC and the City.

In concluding the discussion on the Big Indian only or Wildacres only alternative, the DEIS states:

> The *East or West Alternative* is not considered a reasonable or feasible alternative based on the information on market and financial viability summarized above and found in their entirety in Appendix 27 of the DEIS. It is unlikely that this alternative would ever attract sufficient equity investment or financing or, if built, would be

> marginally performing or scaled back to a substantially lower quality development without the integration of well designed and high performance environmental standards.
>
> Further, based on the extensive investment in design details and mitigation measures to minimize or avoid adverse impacts associated with full development of the project, the need for further consideration of the *East or West Alternative* has not been established. (*Id*. at 5-13.)

The No-Action Alternative is considered in Subsection 5.10 of the DEIS. (*Id*. at 5-55 to 5-59.) In the Applicant's view, the no-action alternative would have several negative repercussions. First, it would not result in the imposition of the land use restrictions proposed as part of the project, that is, that lands undeveloped would remain natural. (*Id*. at 5-55.) Second, it would not serve the planning goals of either the Town of Shandaken or the Town of Middletown to develop tourist and recreational opportunities within their respective borders. (*Id*. at 5-55 to 5-57.) Third, it would not bring either temporary construction jobs or permanent operation phase jobs to the area. (*Id*. At 5-58.) And fifth, it would not add to the tax revenues of the various local and county municipalities, fire districts and school districts. (*Id*. at 5-59.)

As noted at the outset, 6 NYCRR 617.9(b)(5)(v) mandates that the DEIS must contain "a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed." In this matter it is clear that the DEIS is deficient. First, and in accordance with the definition of "environment" contained in ECL 8-0105(6), there has been little, if any, comparative environmental data provided by the DEIS with respect to "the *physical conditions* which will be affected by a proposed action, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance, existing patterns of population concentration, distribution, or growth, and existing community or neighborhood character." (Emphasis supplied.) Though by no means an exhaustive list, this requires an examination of certain questions not addressed in the DEIS, for example:

1. What are the physical environmental impacts that would result from the development of the Big Indian site only?

2. What are the physical environmental impacts that would result from the development of the Wildacres site only?

3. What are the physical environmental impacts that would result if the project components as proposed were all developed on the Wildacres site, and Big Indian left in a natural state?

4. How should the Big Indian proposed development be modified if well pumping tests reveal that the available supply of water is less than originally proposed?

5. Which alternative best serves the needs of the affected communities?

6. Given the special character of the Catskills and their unique place in the history of New York State, which alternative best protects them, while at the same time promoting and enhancing the experience of them?

As to the economic analysis undertaken by the Applicant, questions have been raised by both CPC and the City as to the proper application of the IRR analysis methodology and the results thereby obtained. But in this economic analysis, certain questions remain unanswered by the DEIS. Again, while not an exhaustive list, these economic questions would include:

1. Will the project as proposed overwhelm the local economies?

2. Is the local labor pool adequate to meet the needs of the project as proposed, or would a smaller project provide a more reasonable match between jobs and available labor?

3. How will the project affect local housing costs and the availability of affordable housing for project employees?

4. Will the tax revenues generated by the project cover the cost of the municipal services local communities will have to provide?

These environmental and economic matters raise issues that are substantive and significant, requiring further inquiry.

RULING NUMBER EIGHTEEN

Both CPC and the City have raised issues with respect to the adequacy of the alternatives analysis in the DEIS that are both substantive and significant. The lack of sufficient environmental and economic detail to allow the comparative analysis contemplated by SEQRA is substantive requiring further inquiry. Moreover, this deficiency in the DEIS is significant since it can affect permit issuance. Accordingly, alternatives to the proposed project is a matter for adjudication.

ISSUES NOT REQUIRING ADJUDICATION

FORESTRY IMPACTS

Positions of the Parties

CPC

CPC asserts that the development of the proposed project will result in unacceptable impacts to the area's forest tracts and the local forest products industry due to the parcelization of land and the fragmentation of forest it will cause. (CPC Brief at 58.) Parcelization occurs when a forest tract is divided among an increasing number of owners. Fragmentation occurs when the loss of working forest occurs through conversion of that forest to another use. (*Id*.) Utilizing a computer model called GEOMOD in its analysis, CPC's expert argued that the rate of loss of working forest is a function of its distance from a "growth node" such as a ski center or a resort development. (*Id*.) The proposed project will be such a growth node causing parcelization as more individuals seek property within its proximity, and causing fragmentation from those direct ownership uses as well as the development of the infrastructure need to support them. (*Id*. at 90.) This conversion of the working

forest landscape will ultimately cause the collapse of local forestry businesses. (*Id*. at 91.)

Department Staff

Department Staff agues that the DEIS appropriately identified and analyzed forestry impacts. Moreover, they assert, the DEIS specifically addressed the local timber industry. (Department Staff's Brief at 14.)

Applicant

The Applicant rejects the position taken by CPC and points out that CPC's proffer fails to identify "which timber harvesting activities within the region would be adversely affected" by the project. (Applicant's Brief at 124.) Moreover, the Applicant argues that although the GEOMOD computer model utilized by CPC's expert may be appropriate for broader local and regional planning efforts, it is not intended to assess potential impacts from specific projects. (*Id*.)

In addressing CPC's concerns with respect to parcelization and fragmentation, the Applicant's expert, AKRF, Inc., asserted:

> much of the new development generated by the proposed Belleayre Resort at Catskill Park could be accommodated within the underutilized properties within the hamlets and along the Route 28 corridor. This new development will not result in significant amounts of forest fragmentation or parcelization and new development will be guided, if not constrained, by the New York City Watershed Rules & Regulations and local zoning to areas already excluded from the "working landscape." (Applicant's Supplemental Submission 3.)

In conclusion, the Applicant asserts, "the arguments advanced by CPC with respect to forest fragmentation and parcelization fail to demonstrate how the Belleayre Resort would have any direct impact on the working landscape of timber operations in the Catskills or how the environmental impact statement was deficient with respect to secondary effects on timber operation." (Applicant's Brief at 125.)

Discussion

The DEIS notes that forestry continues to be practiced in the area, with logging occurring particularly on privately owned wooded forest tracts west of the proposed project site. (DEIS, Volume 1, at 3-137, OHMS Ex. 3.) While the presence of once used logging roads was apparent during the various site visits, there was no indication of any recent logging activity on the site.

As the Applicant pointed out, CPC's proffer provided no assessment of the present forest products industry in the area, nor did its proffer indicate how that industry would be negatively impacted by development of the proposed project.

Moreover, with respect to parcelization and fragmentation, CPC failed to show how local zoning, planning, and architectural review controls were inadequate to ensure orderly growth in the local communities consistent with forestry concerns.

RULING NUMBER NINETEEN

With respect to impacts to forestry as a result of the proposed project, CPC has not raised a substantive and significant issue warranting adjudication.

WASTEWATER SPDES IMPACTS

Positions of the Parties

At the issues conference, the City argued that discharges from the Wildacres and Big Indian wastewater treatment plants (WWTPs) to the irrigation ponds must be subject to the same effluent limitations and monitoring requirements as the discharges to surface waters. Reviewing the proposed SPDES wastewater permits, the City argued that the monitoring requirements and effluent limitations for the irrigation ponds are less stringent than the effluent limitations for the surface water discharges, even though they will be receiving effluent from the same WWTPs. (City Petition for Full Party Status, OHMS Ex. 7 at 30-32.) In particular, the City noted that the

irrigation ponds did not have effluent limitations or monitoring requirements for pH, Biological Oxygen Demand, Settleable Solids and Residual Chlorine. (*Id*.) There is no justification for the different treatment of the different effluent flows. The Applicant, argued the City, could bypass treatment units at the WWTPs, that are required by the draft SPDES permit, by discharging to the irrigation ponds instead. (*Id*.) There is no justification to suggest that wastewater discharged to the irrigation ponds rather than to surface waters will be less harmful to the environment. (*Id*.)

As a second wastewater issue, the City argued that the flow limitations set forth in the draft permits do not reflect the actual sewage flows expected at the project because the Applicant has incorrectly modeled the hydraulic loading estimates for both WWTPs. (*Id*.) In particular, the City argued that the Applicant had characterized proposed flow from the ballroom and auditorium sections of the Big Indian and Wildacres resorts at 3 gallons per day per seat (gpd/seat). The City argued, however, that the proper figure should be 20 gpd/seat. This would increase the sewage by 4000 gpd at Big Indian and 14,000 gpd for Wildacres. (*Id*.) Moreover, the City argued that at both the Big Indian and Wildacres sites other factors suggested that hydraulic loading had been underestimated by approximately 1700 gpd at each site's WWTP. (*Id*.)

The Applicant argued that the two WWTPs at Big Indian and Wildacres were state-of-the-art facilities. Moreover, it argued that effluent will be highly treated and will be used, whenever possible, for irrigation at the proposed golf courses, rather than using groundwater resources. (Applicant's Final Brief at 31-33.) With respect to the design of the plants, the Applicant argued that the design was conservative and there are many factors including in the estimate of flow ensuring that the plants will be able to treat such wastewater flows as may be experienced. (*Id*.)

With respect to the City's desire that treated effluent from the two WWTPs be subject to the same effluent limitations and standards without regard to whether the treated effluent is discharged to the irrigation ponds or the designated receiving waters, the Applicant indicated that it had no objection to a condition in the respective SPDES permits reflecting this change. (*Id*.) Subsequently, the proposed draft SPDES permits were revised accordingly by specifying a single monitoring point for

each WWTP prior to discharge to either surface water or the irrigation ponds. (*Id*.)

Department Staff argued that since the WWTPs were conservatively designed and could accommodate even the overages projected by the City, and that since the effluent limits of the SPDES permits had been changed to reflect the City's concerns, no substantive and significant issue remained for adjudication. (Department Staff Brief at 4.)

Discussion

At the issues conference, the Applicant's experts proffered information with respect to the design of the proposed WWTPs, outlining various conservative measures that had been incorporated in the design of the plants. (See, generally, T at 151-185.) The Applicant's experts pointed out that the flow parameters in the SPDES permits were so conservatively estimated that even an error of 14,000 gpd would not compromise either the functioning of the plant or water quality. (*Id*.) The City agreed if the WWTPs' design was as indicated by the Applicant, then the additional flows of concern to them would, in fact, be accommodated. (*Id*.)

With respect to the effluent limits of discharges from the WWTPs, it is apparent that they have been changed in response to the City's concerns. Moreover, in its final brief and reply, the City did not address these WWTP issues.

RULING NUMBER TWENTY

A substantive and significant issue has not been raised with respect to the design of the proposed WWTPs or with respect the draft SPDES permits, as revised. Accordingly, no issue for adjudication has been raised regarding wastewater.

APPLICABILITY OF THE MINED LAND RECLAMATION LAW

ECL 23-2701 et seq.

Positions of the Parties

Although not addressed in its final brief following the close of the issues conference, CPC argued as part of its Petition for Party Status that the State's Mined Land Reclamation Law (MLRL) was applicable in this matter requiring the Applicant to obtain a mining permit for certain blasting and earthmoving activities it proposes to undertake as part of the project, in particular the excavation of detention ponds for treated wastewater. (OHMS Ex. 8 at 65-67.) While noting that ECL 23-2705(8) and implementing regulation 6 NYCRR 420.1(k) both state that the term mining, as used in the MLRL, does not include the excavation, removal and deposition of minerals from construction projects, CPC pointed out that this exception does not apply to the creation of water bodies. Such water bodies would include the detention ponds proposed by the Applicant, asserted CPC, necessitating the issuance of an MLRL permit. (*Id*.) Moreover, CPC argued that given the magnitude of the earthmoving activities proposed by the Applicant, an MRLR permit would require the Applicant to submit a mining plan which would provide a plan for site reclamation and financial surety to fund the same should construction of the project be begun but not completed, in accordance with 6 NYCRR parts 422 and 423. (*Id*.)

The Applicant argues that the detention pond excavations proposed in this project fall within the construction exemption articulated in ECL 23-2705(8) inasmuch as they are merely one aspect of the larger construction plan for the proposed resort. (Applicant's Brief at 26.) Such a position is consistent with the Department's application of the construction exemption in past cases which, the Applicant asserts, demonstrates the Department's willingness to allow "construction projects involving excavations to proceed without the necessity of a formal mining permit when it is clear that the reclamation goals of the MLRL will be met." (*Id*.) In support of this position, the Applicant provided the opinion of Gregory H. Sovas, P.E. of Spectra Environmental Group, Inc., and former Director of the Department's Division of Mineral Resources. (App. Ex. 3.) Concurring that the proposed project is a construction project within the meaning of ECL 23-2705(8), Mr. Sovas pointed out that the water bodies exception in ECL 23-2705(8) was added to the definition of mining in order to close a loophole which enabled

some mine operators to avoid MLRL regulation. (*Id*. at 2-3.) Attached to Mr. Sovas's opinion is a copy of a DEC Division of Mineral Resources memorandum dated May 4, 1992, providing a list of activities exempt from the mined land reclamation law, including the construction of a pond with a surface area of less than two acres. In his analysis, however, Mr. Sovas points out that former Commissioner Cahill, then DEC General Counsel, determined in Declaratory Ruling DEC 23-09, that the applicants in that matter could construct a 7.9 acre pond without an MLRL permit, provided all excavated material remained on site. (*Id*. at 3.)

The Applicant points out that all material excavated will be kept and used on site and not removed from the site, and thus, will not trigger the commercial transaction element of the definition of mining stated in ECL 23-2705(8). (Applicant's Brief at 29.) Finally, noting the legislative history of the MLRL, the Applicant points out that the proposed project is not among the "substantial, commercial mining operation[s]" the law was intended to regulate. (Id. at 30.)

The Department Staff asserts that the project falls within the construction activity exemption obviating the need for an MLRL permit. The retention basins are but a part of the larger construction plan for the entire project, Staff points out, and concludes, "[a]ll of the proposed excavation is intertwined together into this larger construction activity, and therefore, all the activity enjoy the benefit of the exemption." (Department Staff's Brief at 5.) There is no need for the surety contemplated by the MLRL in this case because the construction of the proposed project, in effect, provides the very reclamation that the surety is designed to guarantee. (*Id*.) Moreover, the creation of the detention ponds is also, in effect, the reclamation of the excavations creating them. In support of this position, Department Staff cites the abovementioned DEC Division of Mineral Resources memorandum dated May 4, 1992, which states, "[s]pecific water bodies defined under the Construction and Agricultural categories [delineated in the memorandum] and small general purpose-recreational ponds may also be exempt where a reclamation is inherent in their construction." (*Id*.)

Discussion

In determining the applicability of the MLRL in this matter, it is first necessary to determine if the excavation of the

proposed detention ponds is within the purview of the activities regulated by the MLRL. The term mining is defined at ECL 23-2705(8). The definition is in two parts, the first part defining what activity constitutes mining, and the second part articulating activities which are exempted from that definition. The first part of ECL 23-2705(8), the definition, states:

> "Mining" means the extraction of overburden and minerals from the earth; the preparation and processing of minerals, including any activities or processes or parts thereof for the extraction or removal of minerals from their original location and the preparation, washing, cleaning, crushing, stockpiling or other processing of minerals at the mine location so as to make them suitable for commercial, industrial, or construction use; exclusive of manufacturing processes, at the mine location; the removal of such materials through sale or exchange, or for commercial, industrial or municipal use; and the disposition of overburden, tailings and waste at the mine location.

The second part of ECL 23-2705(8), the exemptions, states:

> "Mining" shall not include the excavation, removal and disposition of minerals from construction projects, exclusive of the creation of water bodies, or excavations in aid of agricultural activities.

By the express language of this section of the ECL, the creation of water bodies is not excluded from the definition of mining. Since the detention ponds proposed by the Applicant are water bodies, the provisions of the MLRL do apply to the Applicant’s activities resulting in their creation. The question, however, is not the applicability of the MLRL, but whether the provisions of ECL 23-2711 are triggered by the Applicant’s proposed activity in excavating the detention ponds necessitating the procurement of an MLRL permit from the Department.

The answer to this question is not resolved by the Division of Mineral Resources guidance memorandum dated May 4, 1992, since that guidance applies only to ponds with a surface area of 2 acres or less. As is apparent from an inspection of the plans submitted by the Applicant, for example, Drawing SD-7, of the Big

Indian Plateau, the size of the proposed detention ponds will exceed 2 acres. (OHMS Ex. 4.)

In order to require an MLRL permit, the activity engaged in must constitute "mining" as defined in the first part of ECL 23-2705(8). But in order to constitute mining within the meaning of that definition and, thus, require an MLRL permit, the excavation activity must entail "the removal of [excavated] materials through sale or exchange, or for commercial, industrial or municipal use." In this case, the Applicant intends to stockpile onsite all materials excavated during earlier phases of the construction, including materials generated during the excavation of the detention ponds, for use in the construction of subsequent phases of the project. (Applicant's Brief at 29; DEIS 2.2.6(B)(2), at 2-36 to 2-38, OHMS Ex. 3.) Thus, while the MLRL applies in this matter, no permit is required since no removal of the excavated "materials through sale or exchange, or for commercial, industrial or municipal use" is contemplated. However, as then DEC General Counsel Cahill ruled in the application of Diane and Edward O'Neal, Declaratory Ruling DEC 23-09 (1996), so similarly here, should the Applicant seek to remove any extracted materials from the site for sale or exchange, or for commercial, industrial or municipal use, it must procure an MLRL from the Department to do so.

RULING NUMBER TWENTY-ONE

While the MLRL is applicable to the proposed activity of the Applicant in the proposed creation of the water bodies that will be the detention ponds, no MLRL permit is required since all excavated materials will remain onsite, there being no contemplated removal of such materials through sale or exchange, or for commercial, industrial or municipal use. Accordingly, no substantive or significant issue is thereby raised requiring adjudication.

APPLICABILITY OF THE NEW YORK CITY WATERSHED MEMORANDUM OF AGREEMENT OF 1997, THE NEW YORK CITY WATERSHED RULES AND REGULATIONS, AND THE PUBLIC HEALTH LAW

Positions of the Parties

CPC

CPC takes exception to any assertion by the Applicant or the Coalition of Watershed Towns (CWT) that the project as proposed is the type of economic development activity envisioned by the provisions of New York City Watershed Memorandum of Agreement of 1997 (MOA). (CPC Brief at 7.) After quoting from various sections of the MOA, CPC notes, "the Watershed Agreement provided no specific language either authorizing or restricting specific economic development projects. Thus, it is incorrect to claim that the proposed Belleayre Resort development was envisioned or somehow authorized by the Watershed Agreement." (*Id*. at 9.)

With respect to SEQRA, CPC asserts that the MOA does not diminish the obligation of a lead agency to conduct a full environmental review. (*Id*. at 10.) In particular it quotes the MOA at Paragraph 181(g), page 143: "Nothing in this paragraph is intended to diminish the right of the local, state, or federal government to enforce all applicable provisions of local, state and federal law." (*Id*.)

Arguing that the present project was not envisioned by some of the signatories to the MOA, CPC cites a letter from the USEPA, dated March 23, 2004, to the Department stating, "'[W]e must note that the size and scope of this project are significantly greater than anticipated by EPA when we agreed to the City's revised Watershed Rules and Regulations and signed the MOA.'" (*Id*. at 11.)

CPC also asserts that secondary growth issues, in particular, development along the Route 28 Corridor, are not foreclosed nor circumscribed by the MOA. (*Id*.) For example, the New York City land acquisition provisions of the MOA do not preclude secondary growth nor, in CPC's view, is that growth

precluded by the MOA's provisions with respect to the obligations imposed under its sewage treatment provisions.

CWT

CWT argues that the New York City Watershed Rules and Regulations place severe restrictions on both existing and new development within the Watershed. (CWT Brief at 2.) These restrictions, particularly with respect to sewage disposal and impervious surfaces, "significantly influence or effect the size of development and its location within the Watershed." (*Id*. at 6.) With respect to sewage treatment, "[t]he net effect of the Watershed Regulations," argues CWT, "is that small or medium-sized commercial development can take place only where there is an existing publicly owned wastewater treatment plant that has adequate capacity to accept its waste." (*Id*. at 9.) In most cases, the cost to construct and operate an onsite wastewater treatment plant for a small or medium-sized commercial development is prohibitive. (*Id*.) Thus, asserts CWT: "In order to have a development outside an area that is served by an existing publicly owned wastewater plant, the size of the development needs to be on the order of the size of this project in order to overcome the cost to construct and operate a wastewater treatment system that conforms with the Watershed Regulations." (*Id*. at 10.) This being the case, CWT is concerned with the position taken by the City which CWT states is "that a project of this size is inconsistent with the community character and the project size should be reduced on that basis." (*Id*.) CWT argued, however, that during the issues conference, while experts may have disagreed as to whether or not a project of the size proposed is necessary in order to achieve economic viability, the experience of the towns in the last 30 years is that tourism alone is not enough. (*Id*.) Moreover, CWT points out that more modest hotels are not possible unless sited in a village or hamlet with access to a publicly owned wastewater treatment plant. (*Id*.) However, CWT asserts, very few sites exist within the hamlets for such development. (*Id*.)

CWT also argues that the level of scrutiny of stormwater issues in this case is unprecedented, unnecessary and, in fact, would be cost prohibitive to many other developers. The consequence, CWT asserts, is that such scrutiny might discourage other developers from taking an interest in the area. (*Id*.)

CWT takes exception to a statement by the City in its Comments on the DEIS, at page 4, which it quotes as follows:

> 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. (*Id*. at 11.)

However, with respect to development on steep slopes, CWT points out that nothing in the MOA precludes such development and such a position should be rejected as unfounded. (*Id*.)

Discussion

The New York City Watershed Memorandum of Agreement (MOA) was signed on January 21, 1997. Its signatory parties included the State of New York, the City of New York, the United States Environmental Protection Agency, the Coalition of Watershed Towns, Delaware County, Ulster County, the New York State Department of Environmental Conservation, the New York State Department of Health, the New York City Department of Environmental Protection, the Town of Middletown, the Town of Shandaken, the Village of Fleischmanns, and the Village of Margaretville.

The intention of the MOA's signatory parties is made clear in the recital paragraphs of its preamble. Paragraphs 5, 6, 7, and 9 provide:

> 5. WHEREAS, the Parties agree that the New York City water supply is an extremely valuable natural resource that must be protected in a comprehensive manner; and
>
> 6. WHEREAS, the Parties recognize that the goals of drinking water protection and economic vitality within Watershed communities are not inconsistent and it is the intention of the Parties to enter into a new era of partnership to cooperate in the development and implementation of a Watershed protection program that maintains and enhances the quality of the New York City

drinking water supply system and the economic vitality and social character of the Watershed communities; and

7. WHEREAS, after extensive negotiations the Parties now enter into legally enforceable commitments, as set forth in this Agreement, on issues related to the Watershed protection program, including the Watershed rules and regulations, the land acquisition program, and Watershed partnership initiatives; and ...

9. WHEREAS, the Parties agree that the City's land acquisition program, the City's Watershed Regulations, and the other programs and conditions contained in this Agreement, when implemented in conjunction with one another, would allow existing development to continue and future growth to occur in a manner that is consistent with the existing community character and planning goals of each of the Watershed communities; and that the City's land acquisition goals insure that the availability of developable land in the Watershed will remain sufficient to accommodate projected growth without anticipated adverse effects on water quality and without substantially changing future population patterns in the watershed communities; ....

Approved by the New York State Department of Health pursuant to Public Health Law Section 1100, and in accordance with Article 3 of the MOA, the New York City Rules and Regulations provide at Section 18-12(e):

It is the purpose of these rules and regulations to insure compliance with the Federal and State standards by providing a comprehensive watershed protection program. Furthermore, these rules and regulations articulate an anti-degradation policy for the New York City water supply system. These rules and regulations are promulgated to govern those activities in the watershed that threaten the quality of the water supply of the numerous upstate communities and the City of New York. While bound by its responsibility to protect the public health, the City has also taken the needs of the communities and businesses in the New York City watershed into consideration in drafting and promulgating these rules and regulations.

What these sections of the MOA and the Watershed Rules and Regulations make clear is that the goals of protection of water quality and fostering sustainable economic development are not mutually exclusive. Moreover, there is no language in the MOA nor the Watershed Rules and Regulations that would preclude a project, even of the scale proposed by the Applicant, from being developed. Accordingly, there is no basis to suggest that the Applicant's proposed project does not comport with the MOA's vision of economic vitality consistent with high drinking water quality. Thus, the issue is not whether the Applicant's proposal comports with the MOA, for it does, rather the issue is whether the Applicant's proposed project can be developed in an environmentally sound manner. Whether or not it can be so developed is the essence of the present SEQRA review.

RULING NUMBER TWENTY-TWO

Neither the New York City Watershed Memorandum of Agreement (MOA) nor the New York City Watershed Rules and Regulations preclude the development of the project proposed by the Applicant. Accordingly, no substantive and significant issue has been raised requiring adjudication.

ARTICLE 15 BRIDGE PERMITS AND WATER QUALITY CERTIFICATION

In view of the issues that have been raised in this proceeding, the issuance of any Use and Protection of Waters permit under Title 5 of ECL Article 15, required for proposed road crossings of regulated streams on the Applicant's property, should be held in abeyance the resolution of those issues. Moreover, any action the Applicant's request for a Water Quality Certification in accordance with Section 401 of the Clean Water Act should likewise be held in abeyance.

BIFURCATION OF SUBSEQUENT PROCEEDINGS

While many of the issues raised are common to both the Big Indian Plateau and Wildacres Resort portions of the project, the primary focus of a significant number of them is the Big Indian Plateau. Accordingly, with respect to those issues unique to the

Big Indian Plateau, I would recommend that the proceeding be bifurcated to allow their separate consideration. The specific identification of those issues, however, will be as determined by the Deputy Commissioner's interim decision in this matter.

APPEALS

As provided in 6 NYCRR 624.8(d)(2), during the course of a hearing, a ruling by the Administrative Law Judge to include or exclude any issue for adjudication, a ruling on the merits of any legal issue made as part of an issues ruling, or a ruling affecting party status may be appealed to the Commissioner on an expedited basis. While such appeals are to be filed with the Commissioner in writing within five days of the disputed ruling as required by 6 NYCRR 624.6(e)(1), this time frame may be modified by the ALJ, in accordance with 6 NYCRR 624.6(g), to avoid prejudice to any party.

Accordingly, any appeals in this matter must be received at the office of Deputy Commissioner Carl Johnson (attention: Louis A. Alexander, Assistant Commissioner for Hearings), 625 Broadway, Albany, New York 12233, no later than the close of business on Tuesday, October 4, 2005. Moreover, responses to the initial appeals will be allowed and such responses must be received as above no later than the close of business on Tuesday, October 18, 2005.

The appeals and any responses sent to the Deputy Commissioner's Office must include an original and one copy. In addition, one copy of all appeal and response papers must be sent to me, to Chief ALJ James T. McClymonds at the Office of Hearings and Mediation Services, and to all other persons on the enclosed Service List at the same time and in the same manner as to the Deputy Commissioner. Service of any appeal or response thereto by facsimile transmission (FAX) is not permitted and any such service will not be accepted.

Appeals and any responses thereto should address the ALJ's rulings directly, rather than merely restate a party's

contentions and should include appropriate citations to the record and any exhibits introduced therein.

Dated: Albany, New York
September 7, 2005

New York State Department of Environmental Conservation

/s/

Richard R. Wissler

Administrative Law Judge

To:

Daniel Ruzow, Esq.
Terresa Bakner, Esq.
Whiteman, Osterman & Hanna
One Commerce Plaza
Albany, New York 12260

Carol Krebs, Esq.
Assistant Regional Attorney
NYSDEC Region 3
21 South Putt Corners Road
New Paltz, New York 12561

Marc S. Gerstman, Esq.
Robinson Square
313 Hamilton Street
Albany, New York 12210

Hilary Meltzer, Esq.
Senior Counsel
City of New York
Law Department
100 Church Street
New York, New York 10007

Jeffrey S. Baker, Esq.
Kevin M. Young, Esq.
Young, Sommer, Ward, Ritzenberg, Baker & Moore, LLC
Executive Woods
5 Palisades Drive
Albany, New York 12205

Drayton Grant, Esq.
Grant & Lyons, LLP
145 Wurtemburg Road
Rhinebeck, New York 12572

James M. Tierney, Esq.
Watershed Inspector General
Assistant Attorney General
NYS Office of the Attorney General
Environmental Protection Bureau
The Capitol
Albany, New York 12224