MEMORANDUM

TO: **RIVERKEEPER**
Attention: Marc Yaggi, Esq., Senior Project Attorney

FROM: **CASHIN ASSOCIATES, P.C.**
John M. Ellsworth, Manager of Environmental Programs

John M Ellsworth

SUBJECT: **BELLEAYRE RESORT AT CATSKILL PARK**
Draft Environmental Impact Statement (DEIS),
dated September 2003 – Discussion of Alternatives

DATE: **APRIL 21, 2004**

This report presents the analysis, findings and conclusions of Cashin Associates, P.C. (CA) regarding the above referenced document, which has been prepared by the applicant for the proposed project and has been circulated for public review by the lead agency, the New York State Department of Environmental Conservation. The public comment period currently is scheduled to expire on April 23, 2004.

CA has undertaken a technical review of the subject DEIS on behalf of Riverkeeper. As requested by Riverkeeper, CA's effort was directed primarily at evaluating the adequacy of the *Alternatives* portion of the DEIS, which comprises Section 5 of Volume 1 of the September 2003 report. However, CA also has reviewed other relevant components of the DEIS documentation, including appendices, in order to gain a more comprehensive understanding of the proposed action and its implications.

The following are CA's comments regarding the September 2003 DEIS for Belleayre Resort at Catskill Park, which should be addressed by detailed substantive responses in the Final Environmental Impact Statement (FEIS) which is anticipated to be prepared following the close of the public comment period for the DEIS, assuming that the lead agency allows the review process to proceed to an FEIS, or in a supplemental EIS if that is determined to be the appropriate next step.

A. Overview

Ultimately, each and every agency that has discretionary decision-making authority with regard to the proposed action will be required to adopt a statement of environmental findings prior to issuing any approval for the project. The specific requirements for this so-called findings statement are set forth in 6 NYCRR § 617.11(d)(5) of the implementing regulations of the State Environmental Quality Review Act (SEQRA), which states that the involved agencies must "certify that consistent with social, economic and other essential considerations **from among the reasonable alternatives available**, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable [emphasis added]." Thus, one of the most critical considerations in the SEQRA decision for any action that has been through a full EIS process is that a range of reasonable alternatives must be described and analyzed in sufficient detail so as to allow the involved agencies to undertake a meaningful comparison between these alternatives and the proposed action. Furthermore, in order to ensure that the basis of this comparison is fair and accurate, SEQRA requires that the environmental impacts of the proposed action be adequately disclosed and addressed. In regard to the subject DEIS, CA's review reveals that neither of these conditions has been met, as discussed in detail below.

B. General Examination of the DEIS's Discussion of Alternatives

Even an initial glance at Section 5 of the DEIS, *Alternatives*, hints at critical shortcomings in the information that has been presented by the applicant. Of the 59 pages of text in this section, fully 41 pages are devoted to a discussion of alternatives for water supply, wastewater disposal, site access, golf course management practices, stormwater management practices, and construction phasing. Although it is acknowledged that these items were specifically listed in the scoping document for the DEIS, they all start with the premise that the proposed action would entail the general scale of development currently being advanced by the applicant (in terms of categories and quantities of uses). For the most part, these alternatives relate to engineering design issues, which, while important to the ultimate success of virtually any project at the subject location, should be considered as secondary to the more elemental question of defining the type and magnitude of development that is appropriate for this site.

Section 5 of the DEIS devotes only 18 pages to addressing alternative development scenarios. Most of this text (about 13 pages) comprises a summary of the findings and conclusions of an almost 700-page appendix (#27) which is directed at an effort by the applicant to show why less intense alternatives for the proposed project (called "alternative layouts" in Section 5 of the DEIS) are financially infeasible. Based on the applicant's conclusion that none of the alternative layouts are economically practicable,

the DEIS provides no analysis of the environmental implications of these alternatives. The remaining five pages of Section 5 cover three different subjects – alternative locations, alternative uses of the site, and the requisite no-action alternative – in a manner that is equally as dismissive as the DEIS's discussion of alternative layouts. None of these are discussed in a way that provides a meaningful basis to evaluate the environmental impacts of the proposed action, both because of the utter lack of detail in the respective portions of Section 5 and because of critical deficiencies in the analysis of impacts for the applicant's preferred plan (Sections 3 and 4).

In the end, Section 5 of the DEIS leaves the reader with the applicant's foregone and self-serving conclusion that no development is feasible or reasonable other than the one being proposed (Subsections 5.1 through 5.3, and 5.10), and that the various engineering issues can be resolved in a manner that allows the proposed project to be constructed in a profitable manner (Subsections 5.4 through 5.9). The entire DEIS is written in a way that funnels into a black-and-white choice between the proposed project or nothing at all, with the alleged benefits of the applicant's plan highlighted at every opportunity and the myriad of impacts associated with this action either muted or overlooked completely.

Even in the absence of specific regulatory requirements governing the evaluation of alternatives in a DEIS, the subject DEIS's shortcomings in this regard would be objectionable to any impartial reviewer. However, these deficiencies become a fatal flaw when considering the explicit provisions of the SEQRA regarding alternatives.

The following commentary: identifies a number of substantive deficiencies in the DEIS's analysis of the impacts of the proposed action, particularly as this information relates to the comparative evaluation of alternatives; discusses deficiencies in the individual subsections of the *Alternatives* portion of the DEIS; and presents the findings and conclusions of CA's analysis of the DEIS regarding the manner in which alternatives have been addressed.

C. Deficiencies in the Analysis of Impacts for the Proposed Action

CA was retained by Riverkeeper to perform a critical review of the *Alternatives* section of the DEIS (Section 5). In order to establish the proper frame of reference for evaluating the various alternatives, CA undertook review of essentially the entire DEIS at varying levels of detail, with the greatest attention paid to Sections 1 (*Introduction*), 2 (*Description of Proposed Action*), 3 (*Environmental Setting, Potential Impacts and Mitigation Measures*), and 4 (*Unavoidable Adverse Environmental Impacts*), in addition to Section 5. In many cases, CA found the DEIS to be insufficiently detailed to serve as a meaningful basis for assessing the relative impacts of the proposed action versus the alternatives, which would prevent the involved agencies from making informed decisions regarding the balancing of these environmental impacts with socio-economic benefits for the proposed project and the various alternatives.

The following are CA's comments regarding sections of the DEIS other than Section 5. This should not be interpreted as representing a comprehensive compilation of comments, since CA's assignment was limited. However, all of these comments, when considered cumulatively, demonstrate that the DEIS does not contain a sufficient level of detail to adequately and accurately disclose project-related impacts. Unless these comments are addressed in a detailed and meaningful way, CA believes that the record would be deficient to a degree that would not support positive environmental findings with respect to the proposed action.

1. It is indicated on page 3-4 (¶ 2) that 374,600 cubic yards of rock would be removed by proposed blasting, which appears to pertain only to the Wildacres parcel. The quantity of blasting that would occur on the Big Indian parcel also should be specified.

2. The discussion of impacts due to blasting in Subsection 3.1.2.A is limited to potential effects on groundwater resources. The potential for blasting to destabilize adjacent areas of steep slopes also should be analyzed.

3. The discussion of topographic impacts in Subsection 3.1.2.B is limited to summary information regarding overall cut and fill volumes. In CA's experience, a DEIS for development in areas of extensive steep slopes typically would include a quantitative analysis of the spatial extent of steep slopes that would be disturbed. Given the size of the proposed development and the extent of steep slope areas that are present on the subject property, such an analysis should be provided in this instance. The recommended slope analysis should be broken down by category (e.g., 0-15 percent, 15-25 percent, and greater than 25 percent), with impact areas quantified in tabular format and depicted on a readable map.

4. Item #2 on page 3-9 asserts that: "The proposed grading will not result in any drastic cuts and fills along any ridgelines that would alter the overall silhouette of the landform." This conclusion is not supported by any quantitative analysis in the DEIS, such as a map showing areas and depths of cut and fill.

5. It is indicated on page 3-10 (¶ 1 in Subsection 3.2.1) that the proposed action involves development of "0.2 % of the Ashokan Reservoir's watershed, 96 % of which is currently forested or water." These data appear to be directed at minimizing the apparent impacts of the proposed project. If it is assumed that development presently comprises the four percent of the reservoir's watershed which is not covered by forest or surface waters, then the proposed project (i.e., the portion on the eastern parcel on Big Indian Plateau), by itself, would entail fully a five percent increase in the area of development with the entire watershed of Ashokan Reservoir (i.e., 0.2 ÷ 4.0).

6. The discussion of surface water resources does not include sufficient information to adequately assess impacts. Although the various surface water bodies on and in the vicinity of the subject property are described, not all of the paragraphs specify the extent of development that is proposed within the respective watershed areas of these streams. Furthermore, the watershed boundaries and the extent and type of proposed development in these watersheds are not illustrated. Many of the streams in the project area are designated as supporting trout, or are even designated or proposed for trout spawning, and a fairly small deterioration in water quality conditions could imperil these designations. Therefore, more detailed information and analysis regarding the proposed project's effect on the sub-watersheds is needed in order to assess the potential for localized water quality impacts.

7. The DEIS's analysis of wetland impacts is cursory, at best. It appears that the applicant has equated the issuance of a Nationwide Permit by the U.S. Army Corps of Engineers with a conclusion that the proposed project would not cause a significant impact to on-site wetlands. However, nowhere in the SEQRA regulations is it stated that impact analysis should be limited to considering the regulatory thresholds of any given agency. Such an approach would be illogical, since it would presume that the wetlands in a municipality that has enacted a local wetland ordinance establishing more stringent standards than are provided under federal law would somehow be more significant than similar wetlands in an adjoining municipality which, for whatever reasons, lacks such legislation. In fact, the subject DEIS undertakes analysis at varying levels of detail to assess anticipated impacts relative to a number of environmental parameters for which there are no specific regulatory standards (e.g., ecological communities and visual/aesthetic resources). Furthermore, it is the role of the involved agencies, not the applicant, to determine what constitutes a "significant" impact under SEQRA.

   On the basis of the foregoing, CA respectfully submits that the EIS should provide suitable maps illustrating the locations of the wetlands on the subject property and the specific areas that are proposed for disturbance (unless this information is contained on the sheets in the rear pocket of Appendix 17, copies of which were not available to CA within the time frame of our review). Furthermore, analysis should be provided with respect to the quality of the individual wetland areas on the site and the functional value of the wetlands that are proposed for disturbance. This information is critical to determining whether alternative layout plans would minimize impacts to wetlands.

8. The DEIS analysis of wetlands virtually ignores impacts that would be posed by inadequate buffering around these sensitive features. Notwithstanding that the federal regulations do not provide for buffer protection, the importance of providing sufficient buffers around wetlands is scientifically well established.

Preserving areas around freshwater wetlands creates a physical separation between development and the resources of the wetlands, thereby minimizing the impacts that typically result from such development. Buffers also provide for the effective filtering of stormwater discharges, a function which is particularly important in cases where development is placed in close proximity to wetlands, and especially during project construction.

In at least one instance, the DEIS appears to acknowledge the importance of wetland buffers to ensure that development-related impacts are mitigated. In item #1 on page 3-94, the proposed program of "Mitigation Measures" specifies that "[a] 25-foot protective buffer zone will be established on both sides of wetland 32, that contains the stream in Giggle Hollow." However, there is no explanation as to why the applicant believes that such buffering is necessary for only this one wetland area, out of all the wetlands on the subject property.

9. The DEIS summarily discards from consideration all wetland areas which, although exhibiting the characteristics of wetlands, do not conform to the current federal definition of regulated wetlands because they lack surface connections to other wetland areas. Again, this assumes that the lack of coverage under the existing regulatory framework is equivalent to a determination of non-significance, which as discussed above is a logically flawed conclusion. Furthermore, CA is unaware of any authoritative study or document which demonstrates that isolated wetlands are insignificant to the point of not meriting identification and analysis. In fact, even isolated wetlands can have important ecological values that are similar to jurisdictional wetlands.

   Based on the foregoing, CA respectfully submits that the subject EIS should be required to identify non-jurisdictional wetland areas on the project site, delineate the extent of disturbance that is proposed for each such wetland, and discuss associated impacts in terms of lost wetland functions and values.

10. Item #2 on page 3-94 specifies that all wetland areas that are to be retained on the site would be protected by deed restrictions and/or conservation easements. It should be verified whether this measure would apply equally to the two proposed golf courses. In CA's experience, it is common practice for golf course configurations to be modified periodically over time, and restrictions preventing the disturbance of wetlands could make such changes problematic.

11. Pages 3-95 and 3-96 outline a protocol for the selective removal of wetland trees. Additional details should be provided regarding the anticipated number, sizes and types of trees that are expected to be removed. Even if the exact count is not available, a reasonable estimate should be possible at this time.

12. The DEIS's assessment of the potential impacts of the proposed development with respect to watercourses in the project area, on page 3-25, is largely based on considering the linear distances between proposed areas of disturbance and the water courses. However, there is no discussion as to whether drainage patterns in the areas leading down to the subject water courses may result in concentrated flow in defined drainage ways, which would accelerate the delivery of surface flow (and associated contaminants) to the water courses, thereby diminishing the buffering capabilities of the intervening woodlands.

13. The discussion of anticipated impacts to wildlife resources in Subsection 3.5.3.B appears to greatly overplay the alleged benefit of the proposed action with respect to "habitat diversity". This discussion is very general, and does not identify the species that the applicant believes would benefit from the project, nor is there any meaningful attempt to quantify the trade-off between the habitat that would be lost versus the new habitat to be created.

14. Item #3 on page 3-108 specifies that 4,000 new trees are proposed to be planted as part of the new project. In order to assess the mitigative value of this measure, a comparison should be provided as to the number, type and size of trees that would be removed by the proposed action versus the number, type and size of trees to be planted.

15. The second bullet on page 3-27 indicates that the temporary sediment basins proposed as part of the project's erosion and sediment control plan would be designed to accommodate flow from the ten-year storm. Given the total time frame of construction that would be required to complete this project, it appears probable that an overflow event would occur. Therefore, an analysis should be provided regarding the impacts that would be expected if a temporary sediment basin overflows. This analysis should take into account the increased potential for overflow if residual water is left in the basin between closely spaced storms, considering the amount of time that would be required to treat the retained water with flocculant and drain the treated water from the basin.

16. The DEIS's water quality impact assessment appears to be focused on the drinking water reservoirs. However, due consideration also should be given to potential water quality impacts to nearby streams. In particular, page 3-38 indicates the proposed effluent from the Big Indian wastewater treatment plant would be discharged to Birch Creek. The potential for the proposed outfall to impact this water body, which is designated as a trout spawning stream, should be addressed by quantitative analysis.

17. The description of the construction phase erosion and sediment plan, on page 3-38, indicates that the developer would hire certified professional erosion control specialists (CPECSs) with the authority to stop the work of all contractors and

subcontractors. In order to avoid a potential conflict of interest which would be inherent in the developer hiring and paying individuals who are supposed to oversee the developer's activities, consideration could be given to an alternative arrangement, whereby the developer would establish a trust account that would be used by an appropriate regulatory agency to hire and oversee the CPECSs.

18. Item #7 on page 3-45 indicates that hydro-seeding would be applied in any areas on the construction site that would not be worked on for 14 days. The amount of time that would be required for treated areas to become effectively stabilized after seeding should be specified.

19. With regard to the implementation of Integrated Pest Management techniques at the proposed golf courses, page 3-74 (¶ 3) states that "[i]t is envisioned that Town personnel, such as the Code Enforcement Officer, would perform annual or semi-annual reviews for compliance." A determination should be made as to whether Town staff has the necessary technical expertise to perform this duty.

20. The applicant is proposing that groundwater monitoring would extend for five years after starting operations on the developed project site. Appropriate analysis should be presented to confirm that this is a sufficient time span to detect any project-related impacts, given the amount of time that would be required for water infiltrating into the project site to reach well intakes. Furthermore, elaboration should be provided regarding the meaning of the term "after starting operations", since it is proposed that the project would come on-line in phases, with several years scheduled to elapse between initial startup and completion of the final phase.

21. Subsection 3.3.3.G.2.e indicates that the golf course superintendent would be responsible for preparing reports on the results of laboratory testing of groundwater samples. Verification should be provided as to this individual's technical expertise to satisfactorily undertake this responsibility.

22. The DEIS's assessment of air quality impacts of construction activities (Appendix 22A) is based strictly on an evaluation of regulatory standards for airborne particulates. The DEIS concludes that adjacent residences would not be significantly impacted, using modeling results indicating that all of these residences are situated outside the area in which compliance would be achieved with respect to airborne particulates around the proposed on-site rock crushing and concrete manufacturing equipment. However, this analysis does not show the degree to which airborne particulate concentrations during project construction would be increased on residential properties in closest proximity to the subject facilities, compared to current levels.

CA is aware of more than a few instances of analogous industrial-type facilities, including aggregate crushing operations that are very similar to what is being proposed on the subject property, that reportedly are in compliance with applicable regulatory standards, but which are a persistent source of complaints from nearby residents. These circumstances indicate that real impacts can occur even in cases when regulatory compliance is achieved, suggesting that a broader impact assessment should be undertaken for the proposed facilities to calculate the anticipated magnitude of increase in airborne particulate levels at nearby sensitive receptors.

23. The DEIS does not discuss whether the proposal to site rock crushing and concrete manufacturing facilities at this location during construction are permitted uses in the applicable zoning districts, or whether any special approvals are required to erect and operate these plants. It appears from Table 5-1 that such uses are not permitted, at least in the portion of the subject property in the Town of Shandaken.

The subject property is zoned for residential use, and the facilities in question are industrial uses (the DEIS admits as much in the heading of Subsection 3.2.3.D). Developed residential properties are located in close proximity to both of the proposed plant sites. During the 18 to 24 months of anticipated operation for these plants, people in the neighboring homes would be living next to an intense industrial operation, with continuous (i.e., 24-hour per day) activity occurring when large concrete pours are undertaken. Even the most basic tenets of planning practice would indicate that juxtaposing divergent land uses in this manner entails a high potential for conflicts (i.e., impacts) which are not sufficiently addressed in the DEIS.

24. Subsection 3.5 of the DEIS describes the ecological communities found on the subject property, as illustrated in Figures 3-17 and 3-18. However, there is very little location-specific information regarding the maturity of the woodlands in various locations on the site (including, but not limited to typical and maximum tree sizes, and specific types of trees and other vegetation present in various portions of the site). Given that statements are made in a number of locations in the DEIS to the effect that lands on the project site "have been comprehensively and repeatedly logged over the last century, including in recent years", there is reason to believe that there may be significant variability in the quality of the forest communities across the site. This information would be essential to evaluating whether the proposed plan is one that adequately avoids areas of greater ecological importance.

The data contained in Table 3-21 suggest that little consideration may have been given to avoiding areas containing higher quality ecological communities and concentrating development in areas that are less ecologically important. In

general, the proposed project would result in the disturbance of a higher percentage of the total on-site area in the most valuable habitats (e.g., BM, HS, HH, RS, and HD, with the area that would be cleared ranging from 22 percent to 51 percent of the total acreage of these communities on the site) and would disturb a lower percentage of the area in less valuable ecological communities (e.g., PP and SS, at 16 percent and 0 percent, respectively).

25. Bullet #3 on page 3-86 indicates that tree clearing would be strictly controlled outside the area currently proposed for development. A discussion should be provided regarding the mechanism that would be used to enforce this restriction.

26. The discussion of potential impacts to community character, in Subsection 3.8.2.B, states that the proposed action would "re-introduce resort development uses into an area that historically supported such development locally and on a large scale" and "consolidates recreation oriented land use in the same general location within the community." This conclusion ignores the fact that the project area has had a more rural community character for many years. Furthermore, the supporting analysis – in terms of the locations, types, sizes, and year closed for prior resort facilities in the project area – has not been provided.

27. The second paragraph in Subsection C.2.a claims that "previous blasting has been conducted on Belleayre Mountain by New York State without noise impact on the community". Although a reference is given (Crossroads, 2001), the DEIS's list of references does not contain this citation. More specific information should be provided regarding the blasting that reportedly occurred at Belleayre Mountain, in terms of volume of rock removed, distances to nearest sensitive uses, blasting methods used, and other relevant factors. This information is needed in order to verify that the prior blasting activities were analogous to what is being proposed by the present applicant.

28. The Sound Impact Study (Appendix 22) appears to understate the likely impacts that construction of the proposed development would cause at nearby sensitive uses. Section 5.4 assumes that temporary increases in noise levels of 9 dBA or less are "insignificant" and do not require mitigation. However, the table on page 4-2 characterizes a 0-to-5 dB increase in noise level as "unnoticeable to tolerable" and a 5-to-10 dB increase as "intrusive". This terminology implies that a noise increase of as little as 5 dB may be taken to constitute a significant impact. In light of this apparent inconsistency, an explanation should be provided regarding the basis of the applicant's conclusion that any increase in construction noise that is less than 9 dBA is not significant.

29. A large measure of the "mitigation" for construction noise proposed by the applicant is attributed to a 50 percent decrease in equipment usage in sensitive areas. It is not clear what this actually means, in terms of the actual number and

types of equipment that would be used under normal circumstances versus the mitigated condition, nor are any assurances provided as to how this would be enforced.

30. Subsection 3.9 of the DEIS does not appear to evaluate the burden that the proposed project would place on involved regulatory agencies in terms of increased monitoring and oversight responsibilities during and after construction.

D. Alternative Locations

1. Overall, Subsection 5.1 of the DEIS provides very little detail of the analysis that was performed in identifying and evaluating alternative sites. At the very least, a map should be provided to identify the sites that were given consideration, illustrating acreages, environmental constraints, and other relevant factors.

2. Paragraph 2 in Subsection 5.1 indicates that alternative locations had to be "within a reasonable distance" of Belleayre Mountain Ski Center. However, the distance that the investigators considered to be "reasonable" is not defined (e.g., in terms of a certain number of miles or typical driving time).

3. The discussion of the "third site" (in ¶ 6 in Subsection 5.1) indicates that one of the reasons that development of this site was eliminated from consideration is that it "would not provide the needed economic benefits to Ulster and Delaware Counties." However, this site appears to be sufficiently close to both of these counties so as potentially to present reasonable employment opportunities to residents of Ulster and Delaware Counties, which would provide certain economic benefits to these two counties (especially the former). Furthermore, this limitation appears to presume that Greene County does not require economic revitalization, which seems to be contrary to the information presented in Subsection 3.10.1 of the DEIS.

4. The last paragraph in Subsection 5.1 states that the applicant engaged in discussions with Shandaken Town officials in an effort to identify alternative sites for the proposed project. However, there is no indication as to whether a similar investigation was performed for the Town of Middletown. If no such parallel investigation was completed for Middletown, the reasons should be explained.

5. The last paragraph Subsection 5.1 indicates that certain properties identified for consideration based on information provided by the Town of Shandaken were "determined to be unsuitable for a number of reasons." Information regarding the location, acreage, and reasons for eliminating each such property should be provided.

E. Alternative Uses of the Site

1. Although titled "Alternative Uses [plural] of the Site", Subsection 5.2 of the DEIS examines only one such alternative, as-of-right residential subdivision, and even that potential development scenario is addressed merely in a superficial manner (see commentary under #E.4, below). Unfortunately, the scoping document is unhelpfully vague in describing the range of alternative uses that should have been included in the DEIS. However, it is reasonable to expect that one of the primary objectives for this component of the DEIS was to provide a meaningful analysis of possible alternative tourist/recreational uses, which would serve some or all of the same general purposes of the proposed action, including the generation of significant economic benefits to the local communities, while also moderating the magnitude of environmental impacts that are associated with the proposed development of the Crossroads assemblage.

   Alternative development plans to accommodate tourist and recreational facilities on the subject property conceivably could have been addressed under the "alternative layouts" discussion in Subsection 5.3. However, Subsection 5.3 is fixated on the types of "world-class" resort facilities that the applicant envisions for the site. Most of that discussion is limited to examining the economic viability implications of variations on the specific uses being proposed. On the basis of conclusions drawn from that analysis, the applicant has discarded as economically untenable any of the "alternative layouts" identified in the scoping document.

   The information presented in Subsection 5.3 of the DEIS regarding the feasibility of reducing the magnitude of the applicant's proposed uses can form a part of the basis used by involved agencies in reaching informed decisions on this matter, provided that this information is fully and independently validated. However, the SEQRA regulations do not support the outright exclusion of other reasonable alternatives that may not precisely conform to the project sponsor's specific objectives and capabilities, especially when at least some of the primary stated purposes for the proposed project (e.g., increased employment opportunities, expanded recreational facilities serving a cross-section of interests, economic revitalization, etc.) potentially could be served by such alternatives. The applicant's objectives and capabilities are one factor that can enter into the decision-making process, but certainly not to the exclusion of other considerations (see comment #E.3 for further discussion).

   It is absolutely necessary for the subject EIS to provide an effective analysis of one or more viable alternatives (other than the applicant's proposed development) for utilizing the subject property for tourist-related and recreational uses. The development magnitude of said alternative(s) should be significantly scaled down from the applicant's preferred plan, and discussed in specific, detailed,

quantitative terms, contrasting impacts and benefits relative to the proposed project. CA believes that the absence of such an analysis from the SEQRA record would render the entire process fatally flawed, since there would be no basis of comparison for the involved agencies to determine whether the proposed action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable "from among the reasonable alternatives available". **This additional analysis should be completed whether or not the applicant undertakes further evaluation or discussion in the EIS with regard to alternative layouts (see Subsection F, below).**

2. Among the alternative uses for the subject property that could (should) be examined in the EIS is a facility, scaled down significantly from the proposed plan, which focuses primarily on addressing the local shortfall of lodging identified in the DEIS. Such an alternative could be designed to provide a range of lodging options, similar to the proposed project, and also could include suitable amenities (e.g., one or more restaurants, lodging-related shops and recreational facilities, to name a few). It would be appropriate for this alternative to include a number of variants, which examine a range of options for lodging facilities and amenities.

3. Subsection 2.2.1.B of the DEIS identifies a number of existing golf courses located in the vicinity of the subject property, but provides no additional information regarding these facilities. Appendix 27, in a brief section titled "The Golf Course Market" starting on page 210, identifies a "sample of 31 golf courses", but does not indicate the location of these facilities relative to the subject property.

   A detailed inventory should be compiled describing all golf courses within a "reasonable" distance of the site (as specifically defined in terms of miles or driving time). This inventory should include the number of holes at each location, general course quality and difficulty, availability for public use, ability to accommodate additional demand (in terms of number of rounds played versus potential number of rounds), and any other relevant information. The analysis of these data should be directed at determining the degree to which existing golf facilities in the project area potentially could be used to serve the demand for golfing opportunities generated by a new lodging development on the subject property.

4. The DEIS's examination of an as-of-right residential alternative which could occur under the existing zoning is cursory, providing no meaningful analysis whatsoever. It seems odd that the applicant would go through the trouble of creating illustrations (Figures 5-1, 5-2, and 5-3) depicting a layout for a conventional 445-lot subdivision of the subject property, with hardly more than a passing reference to these maps.

In the final paragraph of Subsection 5.2, the residential development alternative is summarily dismissed because it does not conform to the "applicant's objective". Although the SEQRA regulations state that a DEIS should describe alternatives "that are feasible, considering the objectives and capabilities of the project sponsor", this is just one factor to be considered in evaluating alternatives. There are no provisions under SEQRA that allow an alternative to be discarded solely because it is not something the applicant would pursue, especially for an alternative which is specifically identified for analysis in the scoping document, as is the case here.

Based on the foregoing, is clear that the content of Subsection 5.2 requires major overhaul to conform to the requirements of SEQRA relative to the discussion of the residential development alternative. However, it would not be appropriate to devote such a discussion to examining the spurious subdivision sketch presented in the DEIS, which would entail extensive disturbance of steep slopes and probably wetlands. Instead, a more valid and meaningful analysis would take into consideration the land use tools at the disposal of the two involved Towns, particularly any provisions in the respective zoning codes allowing for clustering or other mechanisms to reduce the incursion of development into areas of sensitive environmental resources.

F. Alternative Layouts

1. Essentially the entire text of the introduction to Subsection 5.3 is taken more or less verbatim from pages 2-8 through 2-10 of the DEIS. It is not clear how this information, discussing the suitability of the subject property for golf course development, is relevant to the stated purpose of the subsection (alternative project layouts).

2. The second paragraph under the "Overview" heading in Subsection 5.3.4 of the DEIS closes by implying that a detailed analysis of the reduced-scale alternatives is not warranted because site design and construction planning for the proposed action "already minimize or avoid environmental impacts associated with full construction of the site." However, the occurrence of numerous deficiencies in the information presented in the DEIS with respect to project-related impacts (see Subsection C of this comment document) precludes a definitive conclusion as to the scope or magnitude of the environmental impacts that would result from the proposed project. Moreover, the entire foundation of this conclusion is fundamentally flawed, since the DEIS, as incomplete and biased as it is, still admits to some impacts, albeit in greatly watered down fashion. As described in Section 4 of the DEIS, the impacts of the proposed action include loss of existing vegetation and wildlife habitat, potential erosion and sediment transport during construction, generation of fugitive dust and increased noise levels during

construction, change in the visual character of the subject property, and increased traffic on local roadways. It is difficult to imagine an argument, and certainly none is attempted in Subsection 5.3 (nor any other portion of the DEIS that CA has reviewed), to support the contention that these impacts would not be decreased if the project were reduced in scale. Therefore, it is simply not true that the applicant's current plans "already minimize" environmental impacts.

3. Subsection 5.3.4.B of the DEIS contains testimonial statements by reputed experts claiming that the construction of two 18-hole golf courses on the subject property is a critical and economically necessary component of the proposed project. However, these conclusions have been based on what appears to be a highly speculative economic analysis. In fact, the authors of the DEIS's feasibility analysis do not hesitate to acknowledge these uncertainties, with statements like the following (in the section of Appendix 27 titled "A Feasibility Analysis for Crossroads", page 272): "As noted frequently in this feasibility analysis, there are no close comparables anywhere in the surrounding area. Thus, it is impossible to compare projects for sales, pace, pricing, etc. in this report against effected market forces."

4. In Table 5-3, summarizing the results of the applicant's financial feasibility analysis, the proposed project and the alternative layouts (rows #1 through #5) are expressed in terms of the internal rate of return (IRR) for the proposed hotels and golf courses. On this basis, the applicant concludes that the proposed plan "generally meets the industry threshold for a financially sound project" while none of alternatives conform to this standard. However, the proposed lodging units have been excluded from these calculations. Although statements are made to the effect that the lodging units would "add to overall viability" of the proposed project and would "not be sufficient to overcome a low calculated IRR" for the various alternatives, the DEIS does not appear to provide the supporting data and analysis.

   The summary data provided in rows #6 and #7 of Table 5-3 indicate that the proposed lodging units at both sites, by themselves, would provide an IRR that "well exceeds industry threshold". Additionally, Table 5-3 indicates that the "East Resort" alternative has a much smaller shortfall in IRR (at 3.3 percentage points, relative to the industry threshold of viability), as compared to the other alternative hotel-and-golf-course layouts (at 5.6 or 5.7 percentage points). Considering these two factors together, it would appear that the combined development plan currently proposed for the western parcel (including hotel, golf course, and lodging units) may be very close to the threshold of viability, especially when the Highmount Estates subdivision – which does not appear to be considered at all in the DEIS's analysis – is factored into these calculations. Even if there would still be a shortfall when all of these components are considered together, it may be possible to augment certain elements of the "West Resort"

scenario to a relatively small degree so as to overcome this difference in a manner that would render the overall project financially viable. In order to properly analyze this contingency, a quantitative IRR analysis for the entire "West Resort" alternative should be provided and, if it can be shown that an IRR shortfall would still occur for this alternative, suitable options (e.g., different mix of the uses being proposed, additional units, etc.) should be explored to determine whether it would be practicable to produce a profitable venture on the western parcel.

5. As noted above, the financial feasibility analysis in the DEIS does not appear to include the proposed 21-lot Highmount Estates subdivision, suggesting that, even by the applicant's own reckoning, this component is not necessary for the viability of the overall development plan being proposed by the applicant. With this in mind, CA believes that the alternative of a project without the proposed single-family homes should be analyzed in detail.

6. Various data presented throughout Appendix 27 appear to belie the applicant's contention that two 18-hole golf courses are economically essential to the success of the proposed development. Some of the most cogent examples are discussed below.

   - Table V-4 in the "Feasibility Analysis for Crossroads" section of Appendix 27 contains case study data for "Active Timeshare Projects in Mountain Areas". Of the 25 projects listed in this table, only five are identified as having any golf facilities. Although the number of holes is not specified in the table, review of the respective web sites for the five locations with golf facilities reveals that not a single one has 36 holes: three of these locations (Fairfield Pagosa, Christmas Mountain Village, and Shawnee-Ridgetop) have 27 holes, while the other two locations (Lake Condos at Big Sky and Bethel Inn & Country Club) have only 18 holes.

   - Based on CA's Internet research, it appears that the vast majority of the 14 "new-style fractional interest projects" listed in Table VI-1 in the "Feasibility Analysis for Crossroads" section of Appendix 27 also lack on-site golf facilities. Of the five locations that do appear to include golf facilities, only Snowmass Resort at Northstar is specifically identified as containing more than one golf course (two courses are indicated), while web sites for Telluride Club advertise the availability of golf but do not reveal how many holes are involved (Table VI-3 in the "Feasibility Analysis for Crossroads" indicates that these facilities actually are located off-site).

   - Section VII in the "Feasibility Analysis for Crossroads" portion of Appendix 27 examines 21 resort hotels in Ulster County. Of these facilities, it is reported that only seven have on-site golf courses, and none of these are identified as having more than one 18-hole course. The remaining 14 (67

percent) of the sample group of hotels rely on off-site courses to satisfy the demand for golf among their guests.

- Appendix 27 also contains a "National Resort Comparable Club Analysis" within a section without page numbers titled "Recommendations Concerning Amenities and Membership Programs", which examines 21 "comparable clubs". Seventeen of these facilities are in warm-weather locales, where golf can be played year-round: two in Puerto Rico, seven in Florida, four in California, two in Arizona, and two in Texas. One facility is in Virginia which, although arguably not a warm weather site, focuses its program on golf and not winter activities, according to its web site. The three remaining resorts included in the analysis are all located in Colorado. With three 18-hole courses, the Broadmoor Golf Club is the only one of these Colorado sites containing more than 18 holes of golf; however, this facility touts a mild climate on its web site and does not advertise an association with winter sports. Therefore, of the 21 "comparable clubs" used in this particular analysis, only two appear to be truly "comparable" to the proposed development in the sense of catering to both summer and winter activities (i.e., primarily golf and skiing), and neither of these sites contains more than a single 18-hole golf course.

- Also presented in the "Recommendations Concerning Amenities and Membership Programs" section of Appendix 27 is a separate "Belleayre Comparable Club Analysis". A total of 19 facilities are examined, of which eight are in warm-weather locales (two in Arizona, one in Florida, four in Georgia, and one in South Carolina). Of the remaining 11 facilities, only one (Lake of the Isles Golf Club on Wellesley Island in the St. Lawrence River) is reported to have 36 holes; two sites have 27 holes, five have 18 holes, and three contain only nine holes. The Lake of the Island facility consists of the golf courses and a clubhouse/catering facility, with no lodging accommodations, according to its web site. Therefore of the 19 "comparable clubs" analyzed in this section of the DEIS, none are truly "comparable" to the proposed development.

- Table 3-4 in the "Fiscal and Marketing Information Addendum – HCS Economic Evaluation" section of Appendix 27 lists eight "selected branded resort hotels" which were examined as part of the "forecast of hotel income" analysis. Two of these resorts have no on-site golf at all, and four have only 18 holes of golf. The remaining two locations have 36 holes of golf, but both are situated in warm-weather locales (Ritz-Carlton in California and Westin La Cantera in Texas).

7. CA has identified numerous deficiencies throughout the DEIS, including a pervasive bias that mutes the proposed project's likely environmental impacts and extols its alleged virtues, which cast a veil of doubt over the objectiveness of the entire document. In light of these circumstances, it would not be advisable to accept the contents of Appendix 27 (*Fiscal and Marketing Information*) without rigorous scrutiny. The SEQRA regulations, at 6 NYCRR § 617.9(b)(8), specify that: "The lead agency is responsible for the adequacy and accuracy of the final EIS, regardless of who prepares it." On this basis, it is respectfully suggested that the Department of Environmental Conservation, as the lead agency in this case, is responsible for undertaking a careful and critical review, using its own staff and/or qualified outside consultants if necessary, in order to test and verify the accuracy of the information presented in Appendix 27, including, but not limited to baseline data, assumptions, and calculations.

   Clearly, the entire concept of alternative layouts, which otherwise appears to be environmentally superior to the proposed action, has been eliminated from detailed consideration in the DEIS based solely on the applicant's dubious economic arguments. Therefore, ensuring the completeness of the record regarding these alternatives should dictate that the veracity of the applicant's conclusion regarding the economic infeasibility of these alternatives be thoroughly and independently analyzed. The urgency of such verification is amplified by the information noted above indicating that none of the numerous "comparable" facilities examined in Appendix 27 (which presumably are mostly successful from a financial perspective) have 36 on-site holes of golf. These findings appear to irrevocably contradict the applicant's assertion that the construction of a pair of championship golf courses is absolutely necessary for the financial solvency of the entire proposed project.

8. Any alternative layout for a "world-class" project that is subsequently found to be potentially viable, based on supplemental economic analysis, should be submitted to a comprehensive environmental impact analysis and comparison to the proposed project. Special attention should be paid to the "East Resort" and "West Resort" alternatives, since either of these development scenarios would substantially reduce the magnitude of land clearing and associated impacts that would be involved in disturbing both sites under the proposed plan. In examining these alternatives, the EIS should provide a thorough assessment of the relative merits and drawbacks of developing the eastern versus the western parcel, as well as a comparison to the proposed action, based on all of the relevant environmental and socio-economic variables. Table 5-2 in the DEIS could serve as a useful synopsis. However, a much greater level of detail is needed, addressing the full range of environmental impact issues, including those discussed in Subsection C of this comment document, in order to provide a proper basis for decision-making.

It appears that limiting the project to the eastern parcel may pose a somewhat greater potential for causing environmental impacts with respect to certain critical parameters, when compared to a similar magnitude of development on the western parcel. More specifically, it is noted that the project component currently proposed for the eastern parcel, by itself, would result in a significant increase in the total extent of disturbance and development in the watershed for Ashokan Reservoir (as discussed in comment #C.5). Moreover, the Ashokan Reservoir already is known to be significantly stressed, having been included on the *Section 303(d) List of Impaired Waters Requiring TMDL* (total maximum daily load) since 2002, with silt/sediment being the specific cause/pollutant identified. Ashokan Reservoir comprises approximately 87 percent of the water storage capacity in the Catskill Reservoir System, which provides approximately 40 percent of New York City's daily water demand. This reservoir has been subject to periodic "turbidity events", or episodes of elevated turbidity often caused by storms, which in the past have threatened to shut down the water supply system (according to information available on the U.S. Environmental Protection Agency web site). The five percent increase in the area of developed land in the watershed which would result from the applicant's current proposal carries the potential for significantly exacerbating this situation, especially during project construction when large areas would be cleared of protective vegetation and soils would be exposed, which could further threaten the down-State drinking water supply.

G. No-Action Alternative

1. This subsection opens by indicating that the no-action alternative would result in "a number of impacts". This is an apt prelude to the entire presentation for this alternative, which addresses only three parameters (land use, local and regional planning goals, and socio-economic benefits) and appears to have been composed for the specific purpose of highlighting the purported benefits of the proposed action and relative drawbacks of the no-action alternative. A more balanced assessment of comparative impacts and benefits is needed, which provides a detailed analysis of all relevant variables, including geologic and topographic resources, surface water resources, groundwater resources, terrestrial and aquatic ecology, soils, traffic, visual and aesthetic characteristics, noise community services, and cultural resources.

2. The first sentence in Subsection 5.10.1 states that one of the "impacts" of the no-action alternative is that the subject parcels "will continue to be logged as they have been for over the past fifty years." Although similar statements are made in other parts of the DEIS (e.g., page 3-81), there does not appear to be any more specific information regarding the occurrence of logging at this location. This information is needed to provide the basis for defining the magnitude of environmental impact associated with these activities, and should include a

description of: the historical frequency of logging on the subject property, especially over recent years; the most recent occurrence of logging here; the specific areas (location and spatial extent) that have been affected; the methods that have been used to harvest and remove timber from the site, and the specific environmental impacts they involve; and other relevant details.

3. The second paragraph in Subsection 5.10.1 states that another of the "impacts" of the no-action alternative is that the buyers of the subject parcels "may propose to develop some of these component properties". Such a contingency is not appropriate for inclusion in the no-action alternative since, as specifically acknowledged in the introduction to Subsection 5.10, the no-action alternative entails "leaving the lands in their present state". Any future development of these lands, if the proposed action should not proceed, would likely need some sort of discretionary approval (such as subdivision) and, therefore, would be required to undergo appropriate further review under SEQRA.

4. The second paragraph in Subsection 5.10.1 closes by stating that under the no-action alternative "the opportunity for comprehensively analyzing the effects of large-scale development would be lost, since each potential smaller development would undergo independent local regulatory agency reviews." This assertion appears to ignore the fact that any environmental review under SEQRA is required to examine the potential cumulative effects of such multiple projects. Furthermore, the manner in which the proposed project has been presented in the DEIS, as an all-or-nothing proposition, arguably entails its own substantial environmental perils, as compared to a scenario of gradual development of the subject property whereby impacts would accrue progressively over time and suitable mitigative actions could be implemented as the need arises.

5. The third paragraph in Subsection 5.10.1 highlights the fact that the no-action alternative does not include the development restrictions that the proposed action would place on 1,387 acres of the subject property. However, in order to gauge the true effect of these proposed development restrictions, it would be necessary to evaluate the realistic development potential of the 1,387 acres of land in question, considering the environmental constraints that are present (especially with regard to steep slopes and soil limitations).

6. Subsection 5.10.2 compares the proposed action versus the no-action alternative with respect to local and regional planning goals. However, this discussion focuses exclusively on economic development, and does not consider any relevant local and regional goals for environmental conservation (including watershed protection) and the relative degree to which the no-action alternative and the proposed action would advance such goals.

H. Discussion

The subject DEIS suffers from acute defects on a number of fronts, including questionable methodologies, inadequate disclosure of environmental impacts and, most serious of all, the virtual absence of an analysis of use alternatives for the subject property. As discussed in detail above, alternative layouts for the proposed development are dismissed completely based on dubious economic analyses. The discussion of alternative uses/facilities is limited to a cursory glance at residential subdivision, completely overlooking any of the other myriad uses that could occur on the site. The DEIS section on the no-action alternative unabashedly highlights a handful of professed benefits of the proposed development, while ignoring the much larger sweep of environmental variables for which maintaining the status quo appears to be the preferable option. Overall, the DEIS treats the discussion of alternatives as if it were a minor element of document, akin to the perfunctory sections on "Irreversible and Irretrievable Commitment of Resources" and "Effect of the Proposed Action on the Use and Conservation of Energy". In fact, the truth is exactly the opposite.

The SEQRA regulations are somewhat sketchy in defining certain requirements, but are very clear and precise on the purpose of the alternatives section of a DEIS. Specifically, 6 NYCRR § 617.9(b)(5)(v) states that: "The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed." Clearly, based on the findings of CA's review, the subject DEIS falls far short of this standard, since the necessary detail either is absent or very limited, thereby utterly thwarting the requisite comparative assessment of alternatives.

I. Conclusions

As discussed above, CA believes it is evident that the subject DEIS is grossly deficient, and is unsuitable as a basis for future decision-making. The magnitude of the omissions and faulty information in the DEIS make it difficult to see how these problems can be remedied in a standard FEIS format. In some cases, it would be necessary to essentially rewrite entire sections of the DEIS. This is especially true with respect to the discussion of alternatives, since the applicant has crafted a scheme that completely avoids addressing use alternatives in any meaningful way. Under these circumstances, the SEQRA regulations indicate that a supplemental EIS may be the most appropriate mechanism for continuing the environmental review process for the proposed action.

Pursuant to 6 NYCRR § 617.9(a)(7), two of the three conditions under which a supplemental EISs may be appropriate, at the discretion of the lead agency, is when there is "newly discovered information" or "a change in the circumstances related to the project". Given the critical absence of any substantive discussion of use alternatives in the DEIS, the preparation of these sections at this time can readily be understood as "newly discovered information", particularly given the central importance that the evaluation of reasonable alternatives has in the context of the entire EIS process.

Additionally, any further analysis that alters the key conclusions presented in the DEIS, including but not limited to the financial analysis, could be interpreted as constituting "a change in the circumstances related to the project", which also would indicate the need for a supplemental EIS.

Based on the findings of our technical review of the DEIS, CA believes that neither the public nor the involved agencies would be well served if the subject SEQRA process were allowed to proceed to the FEIS stage at this time, given the complexity and magnitude of the issues that have not been adequately resolved in the DEIS, and considering the absence of provisions under SEQRA for public review and commentary for an FEIS. Therefore, a supplemental EIS appears to be the only proper course of action.

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April 20, 2004

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561-1696

Attn: Mr. Alexander Ciesluk, Jr.

Re: Draft Environmental Impact Statement for the Belleayre Resort at Catskill Park
CEA No. 04017

Dear Mr Ciesluk:

Carpenter Environmental Associates, Inc. (CEA) on behalf of Riverkeeper, Inc. (Riverkeeper) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Belleayre Resort at Catskill Park. Please find our comments on the DEIS listed below.

1. Page 3-26 of the DEIS states that "No more than 25 acres of soil are proposed to be unstabilized at any given time within either reservoir watershed, but always with enhanced erosion control measures in place." Construction General Permit GP-02-01[1] under the section titled Minimum SWPPP Components, Section a.(4) states "there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the Department. The Applicant has not provided sufficient information to justify a waiver of the 5 acre disturbance limit. The Applicant has stated that the CP series of plans exemplify the level of planning and phasing that will be completed for all phases of the project. However, the CP series of plans do not possess sufficient detail to warrant granting of a waiver. For example, CP-15 contains a table that lists the various erosion control technologies which can be used at the site based on the slope of the specific area requiring mitigation. Based on this plan twenty different technologies could be used in an area with slopes greater than 100%. The Applicant does not show which technology has been selected for use. Prior to starting work in an area, the Applicant, the New York State Department of Environmental Conservation (NYSDEC) and the public must know exactly what

[1] The SWPPP page 3 of 44 references compliance with the GP-02-01 (SPDES General Permit for Stormwater Discharges from a Construction Activity). However, the NYSDEC has informed me that the Applicant is applying for individual stormwater discharge permits.

erosion controls will be used. The Applicant should be required to show exactly how erosion and sediment control will be addressed in an area. The Applicant is requesting that NYSDEC waive its disturbance requirement, but the Applicant has not properly demonstrated that proper erosion and sediment controls will be used to protect these large areas of soil disturbance. Without specific erosion control plans and details the Applicant's waiver request should be denied.

2. The Applicant proposes the potential use of gabions and retaining walls at the site. These are structural controls which require engineering design. The Applicant should be required to show on the plans precisely where these controls and any other controls requiring engineering design will be installed. The NYSDEC and the public must know exactly what structural controls are to be used so that their design and placement can be evaluated.
3. Page 2-37 of the DEIS states that a number of locations have been identified as being suitable for stockpiles, and that these stockpiles will be stabilized by "enhanced erosion and sediment controls". All stockpile areas along with the "enhanced erosion and sediment controls" must be shown on the soil erosion and sediment control plans. This is another example of the detail that is missing from the Applicant's plans.
4. Page 3-30 of the DEIS and Page 6 of 44 of the SWPPP (Appendix 11, under Section 6) discusses the sequence of activities for Phase 2 of the construction. This sequence of activities shows that the Applicant will install perimeter control after centerline clearing has taken place. Perimeter control/erosion control measures must be completed prior to any earth disturbing activities.
5. Page 13 of 44 of the SWPPP (Appendix 11) references Figures 3-5 and 3-6 as soils maps for the western and eastern portions of the site respectively. The correct Figure numbers are 3-6 and 3-7.
6. The Drawings PF 1-3, titled Phasing and Erosion Control Plans, are seriously lacking soil erosion device detail. There is extremely limited soil erosion device information on these plans, yet they are titled Erosion Control Plans. Furthermore, the PH series of plans are not consistent with the CP series of plans, in terms of the erosion control devices that are to be used. For example, PH-3 shows the use of silt fence only around the tip of hole 3 at Big Indian Plateau. Yet CP-6 shows the use of silt fence around the perimeter of the entire construction area for this hole. It is understood that PH series of plans cannot show the level of detail that is shown on the CP series of plans. However, these plans should show the major erosion controls that will be used and they should be consistent with the measures shown on the CP series of plans. As stated previously in Comment 1, even the CP series of plans do not provide sufficient detail of the soil erosion and sediment control practices planned for the site.
7. Appendix 9 of the DEIS (Construction Phase SW Management) (page No. 1 in the middle on the Appendix) states that La Group Plan Sheet CP-2 shows the location of the level spreaders. The level spreaders are not shown on this drawing or any other drawing. The locations and dimensions of the level spreaders should be shown on the plans so that the public and interested parties can evaluate the potential impacts that could result from the use of level

spreaders, and so the Applicant can evaluate the feasibility of using level spreaders at the chosen locations.

8. Page 33 of 44 of the SWPPP (Appendix 11) states that surface water monitoring will be completed above and below the project area. Presumably this data will be used to assess the effectiveness of the stormwater and erosion control practices during construction. However, it is unclear how the Applicant will determine when a change in the water quality is due to naturally occurring conditions, or due to the Belleayre project. The Applicant should be required to develop a plan which statistically evaluates the available water quality data and determines the natural fluctuations in the water quality that can be expected to occur. This plan should establish water quality action levels, and provide details on what actions will be taken if the water quality exceeds the action levels. Without such a plan, the collection of water quality data will most likely be useless or of limited value.
9. Page 36 of 44 of the SWPPP (Appendix 11) states that petroleum for fueling the construction vehicles will be stored onsite. Secondary containment or Convault tanks will be used to store the fuel. However, the Applicant does not provide any secondary containment for the area where the vehicles will be fueled (i.e., the fuel transfer area). The Applicant should provide a fuel transfer area with an impervious surface, and containment capable of containing the largest anticipated spill that can occur in the area. The design of the fuel transfer area should also include provisions for the storage of rainwater if it is possible for rainwater to accumulate in the transfer area. The provision for and utilization of a fuel transfer area is a standard Best Management Practice.
10. The soil erosion plan does not utilize the symbols required by the NYSDEC.
11. The detailed soil erosion plans (i.e., CP-1 to CP-18) do not have the sediment basins clearly labeled, which makes the review of the plans difficult.
12. Page 15 of 44 of the SWPPP (Appendix 11) discusses the use of temporary sediment and stormwater basins to capture and hold runoff from the entire subcatchment area draining to them. These basins are designed to store the runoff associated with the 10 year storm. The Applicant's basin design only provides sufficient storage volume to hold stormwater. The Applicant has failed to provide the required sediment storage in the stormwater/sediment basins. For example, Appendix 9 of the DEIS, page 2 of the Hydrocad calculations shows that for subcatchment 211, the runoff from a 10 year storm will generate 1.07 ac-ft of water. The runoff from subcatchment 211 is directed to basin 211. Basin 211 (see page 15 of the Hydrocad calculations) has a peak storage capacity of 1.07 ac-ft. The New York Guidelines for Urban Erosion and Sediment Control (page 5A.47) states that "the sediment storage volume of the basin, as measured from the bottom of the basin to the elevation of the crest of the principal spillway shall be at least 1,800 cubic feet per acre of disturbed area draining to the basin." Using this guidance for subcatchment 211, which has a drainage area of 3.0 acres, 0.124 ac-ft (5,400 ft^3) of sediment storage is required. This would increase the required basin volume to 1.19 ac-ft. The Applicant must increase the storage volume of the stormwater/sediment basins

to allow for the accumulation of sediments. The sediment basins should be designed in accordance with the New York Guidelines for Urban Erosion and Sediment Control.

13. The Final SWPPP must include an accurate construction schedule as required by NYSDEC. The construction schedule included in the Draft SWPPP is incomplete.
14. The SWPPP must include a discussion of the existence of any environmentally sensitive areas as required by the NYSDEC. The Draft SWPPP provided no information on the existence or the lack thereof of environmentally sensitive areas.
15. The NYSDEC has developed a Total Maximum Daily Load (TMDL) for phosphorus within the Ashokan Watershed. According to Appendix 10 of the DEIS, there is flexibility in the loading assigned to non-point sources since as of 1996, the actual phosphorus loading from non-point sources was less than the allocated loading. Data from 1996 is not sufficient to make a determination as to whether there is available loading within the Ashokan Watershed today. After over eight years, there has likely been additional development which has increased the phosphorus loading within the watershed. The cumulative impact of all projects since 1996 and any proposed projects which would be concurrent with the construction phase of the Belleayre project must be considered in determining whether the TMDL will be complied with. For example, the NYSDEC recently released the Draft SPDES permit for the Shandaken Tunnel. This permit includes the Shandaken Tunnel as an additional point source within the watershed and allocates 10,457 kg/yr to the Shandaken Tunnel. Since the discharge from the Tunnel was unaccounted for in the original TMDL allocations[2], the proposed allocation of 10,457 kg/yr exceeds the 8,026 kg/yr margin of flexibility for non-point sources, meaning that no additional inputs of phosphorus would be allowable. The Applicant must reevaluate the phosphorus loading from the site using current data, discharge permits, and planned or completed projects, so that an accurate and up to date assessment of compliance with the TMDL can be completed.
16. The check dam detail shown on plan CP-18 does not comply with the New York Guidelines for Urban Erosion and Sediment Control.
17. Page 16 of 44 of the SWPPP (Appendix 11) states that Chitosan (i.e., Storm Klear) will be used as the flocculant for the stormwater/sediment basins. There is conflicting information on the toxicity of this flocculant to rainbow trout. Toxicity to cultured rainbow trout was observed at concentrations as low as

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[2] Appendix 10 of the DEIS indicates that only 254 kg/yr was allocated to point sources. Therefore, the Shandaken Tunnel was not originally included as a point source in the TMDL. Phosphorus loadings from the Shandaken Tunnel may have been included in the non-point source allocation, although it is not clear from the TMDL documents whether this is indeed the case.

0.075 mg/l after 24 hours of exposure[3]. On the contrary, the information found in Appendix 2 of the DEIS shows that Chitosan used at the proposed dose of 1 to 2 mg/l is not toxic to rainbow trout. Since there is some question as the toxicity of this flocculant, the Applicant must be required to evaluate the potential toxicity of Storm Clear under site specific conditions. This could be accomplished by completing bioassay testing on a stormwater sample collected from the first stormwater/sediment basin installed at the project site. Without such testing, the use of Storm Klear at the site may cause an adverse impact to the trout population of the receiving waters.

Based on the information contained in the DEIS the Applicant has failed to provide sufficient information and has not completed the analyses necessary to satisfy the requirements of SEQRA. If you have any questions regarding my comments on the DEIS, please do not hesitate to contact me at (845) 781-4844.

Sincerely,

CEA ENGINEERS, P.C.

Steven R. Garabed, P.E.
Sr. Engineer

3 "Toxicity of acidified chitosan for cultured rainbow trout (Oncorhynchus mykiss)", Graham Bullock, Vicki Blazer, Scott Tsukuda, Steve Summerfelt, Aquaculture, Elsevier Science, November 7, 1999.

Riverkeeper, Inc.
Pace Environmental Litigation Clinic

April 22, 2004

VIA FEDERAL EXPRESS
Alexander Ciesluk, Jr.
Deputy Regional Permit Administrator
NYSDEC
21 South Putt Corners Road
New Paltz, NY 12561-1620

Re: The Belleayre Resort at Catskill Park, DEC Application Nos. 09-9999-00096/000901,3,5,7,9, and 10

Dear Mr. Ciesluk:

Thank you for the opportunity to submit comments on Crossroads Ventures' Draft Environmental Impact Statement and draft permits for the proposed Belleayre Resort at Catskill Park. The enclosed comments discuss a number of concerns regarding the proposed project. These concerns include, among other things:

1. The DEIS fails to provide sufficient detail to assess proposed erosion and sediment controls;

2. The DEIS fails to achieve its own stated goal to match pre-development stormwater quality during construction and operational phases, and instead proposes to increase sediment and phosphorus loadings to New York City watershed receiving waters;

SW 2
SW 6

3. The DEIS fails to properly identify all on-site wetlands, describe potential impacts in terms of impacts to functions and values, provide the same level of background material for wetlands that are jurisdictional versus non-jurisdictional, avoid wetlands impacts, and provide an adequate wetland mitigation plan.

4. The project applicant failed to apply for a Mined Land Reclamation permit;

5. The DEIS fails to accurately estimate the purported economic benefits of the project and to properly assess the potential adverse economic impacts;

6. The DEIS violates SEQRA's prohibition on segmentation by failing to analyze the combined impacts of the project with the planned expansion of the Belleayre Ski Center;

7. The DEIS fails to study the cumulative impacts of the proposed project and the planned expansion of the Belleayre Ski Center; and

8. The DEIS fails to provide adequate analysis and comparison of project alternatives.

Again, we thank you for the opportunity to comment. We look forward to continued participation in the SEQRA and permitting processes.

Sincerely,

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Comments on the Proposed Belleayre Resort at Catskill Park Submitted by Riverkeeper, Inc. & the Pace Environmental Litigation Clinic (on behalf of Riverkeeper, Inc.)

Comment Deadline: April 23, 2004

Submitted to:
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Comments on the Proposed Belleayre Resort at Catskill Park
Submitted by Riverkeeper, Inc. &
the Pace Environmental Litigation Clinic (on behalf of Riverkeeper, Inc.)

Organization Background

Riverkeeper, Inc. is a non-profit environmental organization dedicated to protecting the Hudson River, its tributaries, and the New York City watershed. Riverkeeper was a negotiator of, and is a signatory to, the 1997 New York City Watershed Memorandum of Agreement. As a result, we have a demonstrated interest in any project with the potential to adversely impact water quality and quality of life in the New York City watershed.

Project Description

The project applicant proposes to develop approximately 600 acres to the east and west of the New York State owned and operated Belleayre Mountain Ski Center in the Towns of Shandaken in Ulster County and Middletown in Delaware County.[1] On the eastern portion, the applicant proposes to construct an 18-hole golf course, a 150-room hotel with a spa and other amenities, 77 buildings housing a total of 183 detached timeshare lodging units, a golf course maintenance building complex, a satellite golf course maintenance building, and a wastewater treatment plant facility.[2] On the western portion, the applicant proposes to construct an 18-hole golf course; a 250-room hotel with a conference center, spa, and other amenities; 21 buildings containing 168 detached lodging units, a Children's Center, a clubhouse, a golf course maintenance building complex, a satellite golf course maintenance building, a wastewater treatment plant facility, and a 21-unit residential subdivision.[3]

The 1997 New York City Watershed Memorandum of Agreement

The proposed resort project is located in both the Catskill and Delaware watersheds, which are part of the New York City Drinking Water Supply Watershed (NYC Watershed). Together, the Catskill and Delaware watersheds supply up to 90% of the unfiltered drinking water supply for nearly nine million New Yorkers in New York

[1] *See* Draft Environmental Impact Statement (DEIS) for Belleayre Resort at Catskill Park at i [hereinafter DEIS].
[2] *See id.* at i-ii.
[3] *See id.* at ii.

City, and parts of Westchester, Putnam, Orange, and Ulster counties. The NYC Watershed contains 19 reservoirs and 3 controlled lakes and covers approximately 2,000 square miles in the Hudson Valley and Catskill Mountains. The Catskill and Delaware watersheds, comprised of approximately 1,600 square miles, are located west of the Hudson River. The Croton watershed is located east of the Hudson River. Although the two systems are geographically distinct, they are interrelated, as water from the Catskill and Delaware watersheds flow into reservoirs east of the Hudson River before being distributed in New York City.

In 1997, the U.S. Environmental Protection Agency issued the City a Filtration Avoidance Determination (FAD), which allows the City to avoid filtering the Catskill/Delaware water supply. The 1997 New York City Watershed Memorandum of Agreement (MOA) – negotiated by New York City, New York State, the EPA, watershed municipalities, and five environmental groups – provides a framework for protection of the NYC Watershed and allowed EPA to issue the filtration waiver. In the absence of a filtration waiver, New York City would be required to construct a filtration plant, estimated at $4–$8 billion in capital construction costs and $200-$500 million in annual operating costs.

The MOA is designed to allow the City to meet the requirements of the filtration waiver and to provide for environmentally sensitive economic growth. It is divided into three components: land acquisition, watershed rules and regulations, and partnership programs. New York City's Land Acquisition Program is a vehicle for the City's purchase of property or conservation easements within the NYC Watershed. Under this program, the New York City Department of Environmental Protection (DEP) must solicit land purchases from willing sellers, rather than relying on any powers of eminent domain. The Watershed Rules and Regulations are intended to limit activities that threaten water quality. In general, activities affected by the regulations include septic system location, wastewater treatment plant operation, and construction activities. For example, a septic system absorption field cannot be located within 100 feet of a wetland or watercourse, or 300 feet of a reservoir. In addition, the MOA establishes several Partnership Programs between the City and watershed municipalities and organizations. Through these programs, the City spends millions of dollars on projects to address such issues as septic system upgrades, infrastructure repair and extension, and non-point source pollution.[4]

A central tenet of the MOA (and a proven principle) is that environmental protection and economic growth go hand-in-hand. It is nationally recognized that one of the most successful vehicles for carrying out this tenet is to revitalize existing town

[4] The major partnership programs and New York City's funding obligations for them identified in the MOA are: Sewage Treatment Infrastructure - $75 million (M); Catskill Fund for the Future - $59.7 M; Stormwater Fund - $31.7 M; Septic Rehab & Replacement – $13.6 M; Sand/Salt Storage Facilities - $10.25 M; Sewer Extensions - $10 M; Good Neighbor Payments - $9.765 M; Stormwater Retrofits - $7.625 M; SPDES Upgrades - $5 M; Catskill Watershed Corp. - $3.5 M; Stream Corridor Protection - $3 M; Tax Consulting Fund - $3 M; Alternate Design Septics - $3 M; Public Education - $2 M; Forestry Management Program - $0.5 M; Economic Development Study - $0.5 M. *See* Catskill Center for Conservation & Development, Summary Guide to the Watershed Agreement (1997).

centers, benefit locally owned businesses, and preserve open space. Because the proposed project is not located in a town center, it is important that the project be subject to heightened scrutiny.

The New York City Watershed is a critical natural treasure. In terms of human benefits, one would be hard pressed to name a more critical natural area anywhere on the globe. In addition to important wildlife habitat, cultural and historical resources, and spectacular landscapes, the watershed provides prize-winning unfiltered drinking water to approximately 9 million people - over half the population of New York State. The catastrophic consequences of not protecting the watershed are economic and social as well as environmental. Thus, it is imperative that the New York State Department of Environmental Conservation (DEC) ensure this project will not have an adverse impact on the NYC Watershed. Anything less will not only threaten public health and lead to the construction of a multibillion dollar filtration plant, but also will jeopardize the hundreds of millions of dollars invested by New York City into the Catskills region via grants and low-interest business loans, good neighbor payments, farm and forestry programs, stream restoration programs, septic repair, and other programs.

The Draft Environmental Impact Statement (DEIS)

We appreciate DEC's willingness to extend the public comment period. The vast number of citizens attending public hearings make it abundantly clear that this proposal is of great public interest. As a number of speakers noted, the initial comment period was insufficient for members of the public to navigate the vertiginous terrain of the massive DEIS. Our comments on the DEIS follow.

Stormwater Issues

Detailed comments on erosion and sediment controls are attached as **Appendix 1** (report prepared by Carpenter Environmental Associates on behalf of Riverkeeper, Inc.) and are incorporated in full. Additional comments on erosion and sediment controls are attached as **Appendix 3** (report prepared by Cashin Associates on behalf of Riverkeeper, Inc.) and are incorporated in full. Following are further comments on stormwater issues:

Construction Phasing

When construction activities remove vegetation and expose soils, forest canopies no longer intercept stormwater and root systems no longer hold soils in place. Construction site runoff can erode exposed soils and transport sediment to receiving waters. In fact, without sound erosion controls in place, construction sites can discharge

more than 1,000 tons of sediment per acre per year.[5] In contrast, forested lands contribute on average only 1 ton of sediment, or 0.1% of the amount from construction site runoff.[6]

The applicant's phased construction plan proposes to disturb up to 25 acres of soil at one time during Phase I[7] and up to 16.4 acres during Phase II.[8] Disturbances of this magnitude could attend severe water quality impacts and are not in compliance with permit limits. The New York State General Permit for Stormwater Discharges Associated with Industrial Activities from Construction Activities, Permit No. GP-02-01, limits areas of unprotected, exposed soil to no more than 5 acres at any given time without prior written approval from DEC.[9] The proper phasing of construction activities disturbing less than 5 acres at a time reduces sediment loadings to wetlands and watercourses; however, exposure of 16-25 acres of bare soil on a mountainside will compromise the effective management of stormwater runoff and may result in catastrophic sediment loading of receiving waters during rain events.

Furthermore, the lack of detail in the applicant's discussion and design drawings of stormwater control devices renders an informed review of the proposed practices impossible. A list of potential erosion control practices for steep slope areas on the project site does not propose specific practices at specific locations for public review.[10] The DEIS therefore fails to provide the public and interested parties with the level of information required for review under SEQRA.

Even when detailed stormwater pollution prevention plans (SWPPs) are drafted and proposed erosion controls are in place, large construction sites can discharge catastrophic sediment loads to receiving waters. In 2001-2002, the New York State Department of Transportation contracted the expansion of the Taconic State Parkway in the New Croton Reservoir Basin. During construction the proposed erosion and sediment controls failed, resulting in multiple sediment discharges to Hunter Brook, which then carried the sediment to the New Croton Reservoir. In another case, the construction of a 240-acre golf course in the Amawalk and Muscoot Reservoir Basins resulted in the discharge of sediment to the Angle Fly and Plum Brooks, which carried the sediment to the reservoirs. Local residents complained that their streams and ponds looked like "cappuccino." Given the fact that erosion and sediment controls on large construction sites—including golf courses—can and do fail, resulting in water quality impairment of unfiltered drinking water supplies, the disturbance of 25 acres of clay soils on the steep slopes of the applicant's project site could attend severe water quality impacts in the Ashokan and Pepacton Reservoirs, as well as the streams and wetlands in their watersheds. Turbidity events in Esopus Creek and the Ashokan Reservoir have resulted

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[5] *See* U.S. EPA, CONSTRUCTION SITE MANAGEMENT MEASURE - III. CONSTRUCTION ACTIVITES, *available at* http://www.epa.gov/OWOW/NPS/MMGI/Chapter4/ch4-3a.html (last visited Apr. 6, 2004).
[6] *See id.*
[7] *See* DEIS at viii, 3-26; App. 11 at 5.
[8] *See* DEIS at 3-29.
[9] *See* General Permit for Construction Activity, GP-02-01, Part III.D.2.a.(4), *available at* http://www.dec.state.ny.us/website/dow/gen_constr.pdf (last visited Apr. 21, 2004).
[10] *See* DEIS, CP-15.

in at least 8 turbidity alerts since 1996, some of which lasted months.[11] Because both Esopus Creek and the Ashokan Reservoir are listed by DEC as 303(d) impaired waters for silt and sediment, these receiving waters are particularly vulnerable to additional sediment loadings that may result from failed erosion controls on vast areas of exposed soil.[12] For all of the above reasons, DEC should not waive the permit requirement that soil disturbance be limited to 5 acres at any given time.

In addition, some stormwater detention basins are undersized to capture the required volume of runoff and sediment. For example, Basin 211 provides sufficient storage capacity to capture runoff from the 10-year storm (1.07 acre-feet), but provides no storage capacity for the accumulation of sediment (0.12 acre-feet).[13] Basins such as 211 must be increased in size to conform with the the New York Guidelines for Urban Erosion and Sediment Control, which require basin sizing of at least 1,800 cubic feet per acre of disturbed area.[14]

Stormwater Management Plan

According to EPA, 40% of U.S. waterbodies do not meet water quality standards, and the leading source of water quality impairment is polluted stormwater runoff.[15] As runoff volumes and velocities increase due to increases in watershed imperviousness, water quality problems such as sedimentation, increased temperatures, habitat alteration, and impacted aquatic plant and animal populations become more pronounced.[16] Degradation of receiving waters and stream channels due to accelerated stormwater runoff also impacts the health, safety, and quality of life of people who use water resources for recreation and commerce.

The stated goal of the applicant's Stormwater Management Plan during the construction phase is to "enhance the quality of stormwater runoff to prevent water quality degradation and preserve water quality in receiving water bodies, including City water supply reservoirs."[17] The Stormwater Management Plan goal during the operational phase is "to match pre-development stormwater quality."[18]

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[11] *See* Comments of the New York City Watershed Inspector General of the Draft SPDES Permit for the Shandaken Tunnel Outlet into the Esopus Creek, Draft SPDES Permit No. NY-026 8151, DEC No. 3-5150-00420/00001 (Mar. 26, 2004).

[12] *See* New York State 2004 Section 303(d) List of Impaired Waters Requiring a TMDL, *available at* http://www.dec.state.ny.us/website/dow/part1.pdf (last visited Apr. 21, 2004).

[13] *See* DEIS, App. 9, at 2.

[14] *See* NYSDEC, NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL at 5A.47 (1997).

[15] U.S. EPA, STORM WATER PROGRAM BACKGROUND, *available at* http://yosemite.epa.gov/R10/WATER.NSF/0/fd82644588a892f588256c41007d61b6?OpenDocument (last visited Apr. 6, 2004).

[16] *See* U.S. EPA, URBANIZATION AND STREAMS: STUDIES OF HYDROLOGIC IMPACTS, *available at* http://www.epa.gov/owow/nps/urbanize/report.html#01 (last visited Apr. 6, 2004).

[17] DEIS at 3-48.

[18] *Id.* at 3-49.

As the proposed project stands, the applicant clearly will not achieve the stated goals. According to the DEIS, stormwater runoff will increase phosphorus loading of the Ashokan Reservoir by 48 kg per year.[19] Stormwater runoff will increase phosphorus loading of the Pepacton Reservoir by 22 kg per year.[20] These additional phosphorus loadings will increase the Ashokan Reservoir's available load by 1% and the Pepacton Reservoir's available load by 0.4%.[21] This increase constitutes 0.247% of the overall available phosphorus load for the Ashokan Reservoir and 0.173% of the overall available phosphorus load for the Pepacton Reservoir.[22]

However, the applicant proposes to develop 0.2% of the Ashokan watershed and 0.09% of the Pepacton watershed.[23] Development in the Ashokan watershed will consume 0.2% of the available land, but will attach 0.247% of the available P loading, a difference of 0.047%. Development in the Pepacton watershed will consume 0.09% of the available land, but will attach 0.173% of the available P loading, a difference of 0.083%. These disparities demonstrate that the proposed percentages of phosphorus additions to New York City's unfiltered drinking water supply are disproportionate to the percentages of watershed lands the applicant proposes to develop. The applicant should not be permitted to attach a greater percentage of the reservoirs' available phosphorus loading than the percentage of watersheds the applicant proposes to develop.

Roofs, roads and parking lots on the site will account for 85 acres of impervious surfaces,[24] excluding turf. The applicant draws the erroneous conclusion that "[c]onversion of forest cover on a C Group hydrological soil to turf does not significantly increase runoff volume."[25] In fact, managed turf has an impervious factor of 9%[26] and will therefore contribute nearly one-tenth of its pollutant loadings to downgrade receiving waters, whereas runoff curve numbers illustrate that up to 4 inches of rainfall on woodlands will generate zero runoff.[27] The clearing of 674 acres of forest and conversion of 626 acres to turf[28] can result in significant post-development runoff from a project the proposed size of Crossroads. Did the applicant use large turf area as source area parameter in the WinSlamm program, and does this parameter account for imperviousness of turf?

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[19] *See id.* at 3-38.
[20] *See id.*
[21] *See id.* at 3-39.
[22] *See id.*
[23] *Id.* at 3-10.
[24] *See id.*
[25] *Id.*
[26] *See* CAPIELLA AND BROWN, IMPERVIOUS COVER AND LAND USE IN THE CHESAPEAKE BAY WATERSHED, CENTER FOR WATERSHED PROTECTION (2001).
[27] *See* NYSDEC, NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL at 10.4 (1997).
[28] *See id.*, Table 1 at 6.

Stormwater Treatment – Chitosan Acetate

The applicant proposes to treat captured stormwater in detention basins with an "environmentally-friendly" flocculent called chitosan acetate before pumping the treated stormwater into forested land.[29] The applicant also claims that "chitosan has very low aquatic organism toxicity" and biodegrades completely into carbon dioxide and water in 24 hours.[30]

Structurally, chitosan acetate is an organic amine: poly n-acetylglucosamine. In order for an organic amine to biodegrade into carbon dioxide and water, specific nitrogen-fixing bacteria are required for nitrogen uptake; otherwise, at least one of chitosan's metabolites would contain nitrogen. This process of bacteriologic degradation is described in a flow chart that identifies the specific enzymes, chitosanase and glucosaminadase, in the reduction process.[31]

However, the applicant's claims about chitosan and its degradation process are lacking sufficient detail. Nowhere in the DEIS does the applicant address the introduction and management of bacteria required to perform the necessary glucosamine uptake. How will the required bacteria be introduced and maintained, and how will seasonal variations in temperature affect the biodegradation process if there is one? Furthermore, what is the proposed origin of chitosanase and glucosaminadase for the degradation process? The degradation of chitosan into carbon dioxide and water is a complex biological process requiring additional additives and specific maintenance. The DEIS fails to address these issues in the discussion of flocculation for stormwater treatment.

In addition, the applicant's Water Treatment Chemical Usage Notification Requirements for SPDES Permitees cites a study performed by an engineering company that determined the chitosan LC_{50} for rainbow trout was 112 milligrams per liter (mg/l).[32] This information is contradicted by another study performed by the Freshwater Institute and the U.S. Geological Survey, National Fish Health Research Laboratory. The latter study determined that chitosan is acutely toxic to rainbow trout at a concentration of 1.0 mg/l and causes consistent pathological changes in their gill tissue;[33] "[i]n controlled experiments to determine the extent of toxicity, we found that trout died after several hours exposure to 0.75 ppm [= mg/l] and died in 24 h[ours] after exposure to 0.075 ppm."[34]

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[29] DEIS at 3-27, STORMWATER POLLUTION PREVENTION PLAN App. 11 at 16.
[30] *Id.* at 3-32, App. 2 at 271.
[31] *See id.*
[32] *See* DEIS App. 2, at 269.
[33] *See* BULLOCK, G., BLAZER, V, TSUKUDA, AND S. SUMMERFELT, S., TOXICITY OF CHITOSAN ACETATE FOR CULTURED RAINBOW TROUT (*Oncorhynchus mykiss*), Aquaculture (2000), 276. Abstract *available at* http://www.lsc.usgs.gov/fhb/workshops/24/50.htm (last visited Mar. 8, 2004)
[34] *See id.* at 273

The disparity between the lethal concentrations reported in the two studies may be due to different testing methods.[35] The AMEC study cited in the DEIS used a batch test whereas the Freshwater Institute study used a flow-through test. In the batch tests, specific amounts of chitosan were added to a closed test chamber and then assimilated by rainbow trout over measured time intervals. In the Freshwater Institute study, chitosan was delivered to a flow-through system that maintained the concentration at specific levels throughout the measured time intervals. The latter method more closely resembles chitosan delivery under natural conditions when stormwater runoff discharges pollutants to receiving waters. Although pollutant concentrations fluctuate under natural conditions depending on storm duration and intensity, stormwater nevertheless transports pollutants to receiving waters over time, which is inconsistent with the batch test model.

Initial stormwater basin concentrations at Crossroads will be as high as 2 mg/l with outfall spreader concentrations as high as 0.2 mg/l.[36] The applicant does not dismiss the possibility of chitosan reaching any of the five streams in the identified drainages,[37] all of which are classified to support trout populations. Instead, the applicant relies on a study by an engineering company that reported the low concentration of 0.2 mg/l will not be toxic to local trout populations, when in fact the National Fish Health Research Laboratory determined that 0.2 mg/l is almost three times the lethal concentration for trout after 24 hours exposure.

In addition to contradictory information regarding the toxicity of chitosan, its efficiency as a flocculent is also in question. In a batch test study (a similar method to that cited by the applicant regarding chitosan acetate) to evaluate the effectiveness of chitosan to remove sediment particles, "[c]hitosan was ineffective for the application tested and actually resulted in increased [>100%] turbidity."[38] This information is in conflict with the applicant's proposal to treat stormwater with chitosan as a means to protect surface waters from sediment loading.

The Proposed Use of Chitosan Acetate Should Be Subject to Pilot Testing

DEC cannot issue a SPDES permit unless the permit provisions ensure compliance with applicable federal and state regulations, including those necessary to meet effluent limitations and water quality standards.[39] Subsection (b) of the applicable state regulations states that "[i]n any case in which an issued SPDES permit contains provisions applicable pursuant to subdivision (a) of this section, such permit shall state that on the basis of a submitted application, plans, or other available information, a determination has been made that compliance with the specified permit provisions will

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[35] Personal communication between Steve Summerfelt, Freshwater Institute, co-author of supra note 33 and William Wegner, Watershed Analyst, Riverkeeper, Inc. (Mar. 18, 2004).
[36] *See* DEIS App. 2, at 274.
[37] *See id.* at 275.
[38] TOBIASON, S., D. JENKINS, E. MOLASH, and S. RUSH, POLYMER USE AND TESTING FOR EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES, Erosion Control Jan/Feb (2001), 9, 10, *available at* http://www.forester.net/ec_0101_polymer.html (last visited Apr. 9, 2004).
[39] *See* 6 N.Y.C.R.R. §754.1(a).

reasonably assure compliance with applicable water quality standards."[40] In the instant case, the applicant proposes a flocculent that is shrouded in conflicting data regarding fish mortality and sediment removal efficiency and could result in contravention of New York State water quality standards.

For example, the Draft SPDES permit for the Wildacres portion of the proposed project would authorize discharges of stormwater to Emory Brook, a Class B water.[41] Class B waters' best usages are "primary and secondary contact recreation and fishing. These waters shall be suitable for fish propagation and survival."[42] With the conflicting data regarding chitosan acetate's toxicity to fish and performance as a flocculent, the applicant cannot yet provide reasonable assurances that the proposed flocculent will function as intended and without impairing the receiving water's best usage.

Given the conflicting data surrounding the use of chitosan acetate, DEC should require pilot testing before allowing its use as a flocculent. This is particularly important here based on the magnitude of the proposed project, the steep slopes on site, and the environmental sensitivity of the site. Without more information to resolve conflicting data, DEC cannot go forward with the requisite determination under 6 N.Y.C.R.R. §754.1(b).

Maintenance

The DEIS claims that "[i]n order to optimize the effectiveness of the proposed [stormwater management] system, constant maintenance, water quality testing and upgrades to the system will be performed."[43] Neither the DEIS nor its Appendices, however, discuss the specifics of the proposed "constant maintenance."

Appendix 9A, Operational Phase Stormwater Quantity Management Plan, does not address maintenance of stormwater management practices. The Stormwater Pollution Prevention Plan (SWPPP) states that maintenance of the stormwater detention ponds "will be the responsibility of the project sponsor...[and] In the event the project sponsor transfers the project, the new owner will be required to sign a maintenance agreement to clearly transfer this obligation to the new entity."[44] The SWPPP proposes sediment removal when forebays are 50% full, but offers no discussion of proposed removal methods.[45] Likewise, the discussion of the proposed flocculent refers to Figure 3-15R, Flocculent Delivery System, but neither the text nor the figure addresses maintenance procedures.[46] The proposed "constant maintenance" is inadequate for informed public

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[40] 6 N.Y.C.R.R. §754.1(b). *See also* In the Matter of the Application of Seven Springs, LLC (N.Y. Dep't of Envt'l Conservation Aug. 23, 2002), *available at* http://www.dec.state.ny.us/website/ohms/decis/sevenspringsr.htm (last visited Apr. 18, 2004).
[41] *See* SPDES PERMIT NUMBER NY 027 0661 at 2.
[42] 6 N.Y.C.R.R. §701.7.
[43] DEIS App. 10A1, Operational Phase Stormwater Quality Management Plan, at 15.
[44] DEIS App. 11, Section 6.1.6, at 29.
[45] *See id.*
[46] *See* DEIS App. 11, at 16.

review; therefore, the applicant should be required to provide a detailed discussion of sediment removal and flocculent maintenance practices.

Wastewater

Treated wastewater can be a significant source of nutrients entering receiving waters. The applicant proposes to introduce 33 kg of phosphorus per year to the Ashokan Reservoir and 42.7 kg of phosphorus per year to the Pepacton Reservoir through wastewater discharges.[47] The combined wastewater and stormwater Total Phosphorus loadings will result in the addition of 55 kg to the Ashokan Reservoir and 90.7 kg to the Pepacton Reservoir.

Clearly then, post-development phosphorus loadings do not match pre-development levels. In fact, the DEIS states that DEC will be required to adjust the Total Maximum Daily Load (TMDL) values for both reservoirs due to the additional phosphorus loadings resulting from the Crossroads project.[48] While these additions are still below the reservoirs' TMDLs for water quality impairment, the enormity of the proposed project and the applicant's own calculations indicate conclusively that pre- and post-development phosphorus levels in wastewater discharges and stormwater runoff will not match under the present wastewater and stormwater management plans. In addition, the TMDL data for the Ashokan and Pepacton Reservoirs is outdated since they were calculated in 1996.[49] For these reasons, the applicant should be required to match pre- and post-development phosphorus levels rather than relying on the increased loadings failing to "rise to the level of a significant impact."[50]

In addition, the DEIS fails to propose a wastewater management plan for the 8-year construction phase, fails to address siting factors and future expansion of the WWTP, fails to address long-term operation and maintenance costs of the WWTP, and proposes siting the subsurface absorption field for the Gatehouse at Big Indian Resort on slopes greater than 20 percent.[51] These issues must be corrected and/or addressed in the FEIS.

Wetlands Impacts

Although wetlands comprise a relatively small percentage of the project site and potential impacts are estimated by the applicant to be small, *no* wetland or wetland buffer disturbance should be permitted. Wetlands comprise only 1.1% of the Catskill watershed

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[47] *See* DEIS at 3-38.
[48] *See* DEIS App. 10A, 1.
[49] *See* DEIS, App. 10.
[50] *See* DEIS at 3-39.
[51] *See* DEIS, App. 8, Conceptual Design Report for Wastewater Treatment and Disposal, Ex. A, Drawing 24.

and only 0.8% of the Delaware watershed.[52] Even small wetlands perform important functions, which include: 1) pollution and nutrient removal and transformation, which purifies our drinking water, and protects rivers, lakes, and coastal waters from pollutants, such as sediment, nutrients, chemical contaminants, and bacteria; 2) absorption of floodwaters, which protects coasts and homes from floods; 3) recharge of groundwater aquifers; and 4) providing habitat for plant and animal species, including threatened or endangered species, particularly for breeding and foraging.[53] With so few wetlands left, it is critical that we preserve *all* remaining wetlands within our unfiltered drinking water watershed areas.

Wetlands, As Identified in the DEIS

It must immediately be noted that the applicant has not given full parity to identification, description and review of all wetlands on the project site – it appears to give substance only to review of wetlands (and consequent impacts) that the U.S. Army Corps of Engineers (ACOE) has deemed jurisdictional. However, nowhere do the SEQRA regulations limit consideration of environmental impacts to those that rise above some regulatory threshold, whether they are federal, state, or local. It is up to the involved agencies, not the applicant, to determine what impacts are "significant" under SEQRA – such a determination cannot be made unless all wetland resources and potential impacts are fully detailed. It is merely for clarity, to mirror the separation in the DEIS, that impacts to jurisdictional and reportedly non-jurisdictional ("isolated") wetlands are addressed separately below.

The DEIS identifies only approximately 17 acres of wetlands on both assemblages of the proposed project site that qualify as jurisdictional wetlands regulated by the ACOE – approximately 6 acres in the eastern portion and approximately 11 acres in the western portion.[54] The DEIS states that ACOE has refused to assert jurisdiction over additional "isolated" wetlands, seemingly to indicate that these wetlands need not be reviewed, yet it briefly identifies and quantifies impacts to isolated wetlands along with the jurisdictional wetlands – there are approximately seven additional acres of isolated wetlands on the project site, approximately two in the eastern portion, and approximately five in the western portion.[55] However, there is no discussion of the existing functions and values of any wetlands in the body of the DEIS. This information is only found in background materials supplied in Appendices 17, 17A, and 17B. Because these documents were prepared in connection with the ACOE permitting process, they do not provide the same level of detail regarding "isolated" wetlands that are not within ACOE's

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[52] *See* JAMES M. TIERNEY, OFFICE OF THE NEW YORK STATE ATTORNEY GENERAL, THE REGULATION AND PROTECTION OF WETLANDS WITHIN THE NEW YORK CITY WATERSHED: A REPORT FOR POLICY-MAKERS AND CONCERNED CITIZENS (July 23, 1999). Note that the "wetlands" here are defined and identified according to the biological definition used in the U.S. Department of Interior's National Wetlands Inventory.

[53] *See* C. SCHNEIDER & S. SPRECHER, WETLANDS MANAGEMENT HANDBOOK, U.S. Army Corps of Engineers, Engineer Research and Development Center 3 (2000).

[54] *See* DEIS at 3-89 to 3-90, and Tables 3-25, 3-26.

[55] *See* DEIS Tables 3-25 and 3-26.

jurisdiction, as they do and are for jurisdictional wetlands. As a result, the identification and quantification of "isolated" wetland impacts is less meaningful for purposes of SEQRA review. The DEIS identifies no wetlands within DEC's jurisdiction, as no on-site wetlands appear on the DEC wetland maps and all are below the 12.4 acre size threshold for State regulation.[56]

Generally, "[w]etlands on the project site are usually associated with drainageways which channel runoff and groundwater that has emerged at the surface. These appear to flow intermittently, during times of snowmelt and high runoff from precipitation."[57] Wetlands soils are predominantly poorly drained Onteora and Suny soils.[58] "In some of the wetlands, saturation lasts throughout most of the year, and the upper part of the soil has accumulated enough organic matter to be mucky."[59]

Although ACOE failed to assert jurisdiction over certain isolated wetlands because it failed to observe *surface* connections to regulated waters of the United States, it is clear that from a hydrological perspective, many of these non-jurisdictional isolated wetlands are nonetheless connected by groundwater flows.

> In walking the length of a typical mountainside stream on the project site, it is not unusual to find that a stream which has a flow of good volume dries up completely in its lower reaches. Such an occurrence appears to be due to the stream flowing into an area with a soil marked by a high percentage of boulders, cobbles, and channels. Usually, the stream will reappear at the surface downhill, within a few dozen yards of where it had disappeared. In some cases, there is a visible dry channel between the place where the stream disappears into the ground and the place where it re-emerges, suggesting that some surficial flow occurs there during part of the year.[60]

Regulated Wetlands Impacts

The DEIS identifies some impacts to wetlands on the project site. Specifically, there will be impacts to federally regulated wetlands from 0.0993 acres of fill and 2.58 acres of non-mechanized clearing of woody vegetation. Additional impacts to "isolated" wetlands from approximately 1.48 acres of fill and approximately 0.26 acres of vegetation removal are also proposed.[61] These impacts and others are discussed in more detail below.

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[56] *See* DEIS at 3-90.
[57] DEIS, App. 17 (FEDERAL WETLAND DELINEATION REPORT FOR BELLEAYRE RESORT AT THE CATSKILL PARK 2 (March 2000))[hereinafter WETLAND DELINEATION REPORT].
[58] *See* WETLAND DELINEATION REPORT, *supra* note 57 at 3.
[59] *Id.*
[60] *Id.* at 4.
[61] *See* DEIS, Table 3-26A, and App 17A (PRE-CONSTRUCTION NOTIFICATION FOR THE BELLEAYRE RESORT AT CATSKILL PARK 17, 20 (Jan. 10, 2003))[hereinafter PRE-CONSTRUCTION NOTIFICATION].

Impacts Associated with Golf Course Construction and Maintenance

In the western portion of the property, wetlands 16 and 23, totaling 4.18 acres, have been incorporated into the golf course layout.

> Some of the holes of the Highmount golf club are proposed to play over wetlands 16 and 23, and the wetlands have been incorporated into the design of the golf course to serve as hazards to be avoided by golfers, much the same as a sand bunker is designed into a golf course as a hazard to be avoided.[62]

Due to this design, impacts are anticipated from removal of vegetation and from construction of elevated "boardwalk type" golf cart paths. These and other impacts have not been adequately addressed by the applicant in the DEIS. More detailed description and analysis of the combined impacts to these wetlands must be presented, especially because wetlands 16 and 23 "act as small tributaries of permanent streams that drain the Project Site,"[63] and thus have a clear potential to carry pollutants into, and degrade water quality in, the New York City drinking water supply.

- *Removal of Vegetation*

Within wetlands 16 and 23, "[u]p to 2.31 acres of selective hand removal of some trees may be necessary to allow golfers to avoid and shoot over these hazards."[64] Reportedly, golf course design principles recommend "100 to 150 feet at the tees widening out to 180 to 300 feet for the fairways and 200 to 300 feet at the greens."[65] By way of mitigation, the DEIS includes "Selective Wetland Tree Removal Protocols" that require hand removal of selected trees that may interfere with play over areas.[66] After the selected trees are cut and removed "[t]he wetland play over areas will develop into a combination of herbaceous and shrub plant communities. . . ."[67] When the applicant alters the plant community structure of the onsite wetlands, the functions of those wetlands also may be altered. Before the applicant is permitted to convert forested wetlands to shrub wetlands, DEC should require an analysis of the proposed wetland function changes compared to their baseline function. Thus, the applicant must present more detailed information regarding the specific anticipated number, sizes and types of trees that are expected to be removed. If any existing wetland functions are lost or compromised by the alteration of plant communities, the applicant should be required to compensate for lost functions with effective mitigation measures.

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[62] DEIS at 3-92,
[63] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 6.
[64] DEIS at 3-92.
[65] *Id.*
[66] *See id.* at 3-95 to 3-96.
[67] *Id.*

- *Elevated Golf Cart Paths/Crossings*

Wetlands 16, 24, and possibly 23, will be impacted by golf cart paths. The DEIS states that in wetland 16, there will be 6 elevated crossings "totaling 220 linear feet...the longest crossing is 82 feet long and the shortest is 8 feet long. All but two crossings are 5 foot wide and the other two are 8 foot wide," and in wetland 24 there will be "82 linear feet of golf cart path, which will require up to 0.28 acre of selective clearing of vegetation."[68]

However, the discussion in the Jan. 10, 2003 Pre-Construction Notification (PCN) details additional impacts not contained in the DEIS. The PCN states that there will be 7 elevated pathways totaling 300 linear feet; "the longest crossing is 83 feet long and the shortest is 9 feet long."[69] In addition, wetland 23 "will be crossed by a 32-foot-long cart path boardwalk, occupying 160 square feet."[70] It is unclear whether the current pathway design proposal has been changed since the PCN was written, or whether this additional information was omitted from the DEIS. This issue must be clarified by the applicant.

Regarding construction of the pathways, the DEIS states that support structures for the elevated paths will be constructed in uplands "wherever possible," and that there will be "a *de-minimus* amount of wetland activity related to the pouring of concrete supports in tightly sealed forms within wetlands."[71] However, one must turn to the PCN in Appendix 17A for more specific details regarding construction of the elevated pathways. "There will be a total of 56 such concrete piers installed in these wetlands, which constitute a total area of approximately 31 square feet....Construction of each pier will involve drilling a hole up to 10 feet deep using a backhoe-mounted power auger, inserting a Sonotube™, and filling it with concrete."[72] Although PCN condition no. 5 requires heavy machinery within wetlands to be placed on equipment mats, no such discussion is included in the wetlands section of the DEIS. Impacts associated with use of heavy, power machinery within these wetlands must be identified and assessed in a proper wetlands impacts section in the EIS. As with vegetative removal, machinery should be kept out of wetlands entirely and the possibility of sinking pilings by hand should be considered.

In addition to the impacts noted in the DEIS, there are additional impacts associated with construction and operation of the golf courses that must be addressed in more detail by the applicant:

- *Maintenance Trucks and Golf Carts*

There is no discussion of potential impacts from the golf carts and maintenance trucks that will drive through wetlands 16, 23, and 24 on the elevated boardwalks. In

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[68] *Id.* at 3-93.
[69] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 18.
[70] *Id.*
[71] DEIS at 3-93.
[72] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 18.

fact, the DEIS does not even acknowledge that these boardwalks will be used by motorized vehicles. This information is briefly noted only in the PCN.[73] The potential for leakage of chemicals from the maintenance trucks and golf carts (e.g. petroleum-based, or battery acid, etc.) should be assessed in the EIS.

- *Golf Balls and Golfers*

There also will be impacts associated with designing wetlands as hazards, whereby a large number of golf balls will end up in the wetlands. Additional information should be provided to address the impacts from the golf balls themselves, from any activity conducted to remove the golf balls, and to assess and prevent the impacts from golfers entering the wetlands when shagging wayward balls.

- *Integrated Turf Management Plan*

The applicant acknowledges that "[i]f present in sufficient quantities, pesticide residues may have negative impacts on aquatic biota such as aquatic invertebrates and fish,"[74] but claims that:

> [t]he results of the Risk Assessment were used to eliminate from consideration numerous potential pesticides due to a combination of their runoff potential and toxicity to aquatic invertebrates and fish as well as their leaching potential in relation to State drinking water standards...[these results] were used to design a fertilizer program that would result in healthy golf course turf, without resulting in significant phosphorus and nitrogen transport off-site.[75]

However, the proposed Integrated Turf Management (ITM) plan does not provide enough detail to ensure that chemical applications will not be used, particularly in sensitive wetlands and wetland buffers.

The applicant's ITM plan favors chemical pesticide use, claiming that "[b]iological agents are complex, not totally effective, and not always predictable."[76] For each potential insect pest species the plan lists a series of control options: e.g., for cutworm Option 1 is biological control, Option 2 is cultural control, and Option 3 is chemical control.[77] Biological control is the first option listed for each insect pest, but nowhere does the plan indicate that these options are prioritized in numerical order, meaning there is nothing to prevent applicators from choosing chemical control over other options in every case. In fact, the plan states that chemical pesticides "would be

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[73] *See id.*
[74] *Id.* at 15.
[75] *Id.* at 25.
[76] *See* DEIS, App. 14 (INTEGRATED TURF MANAGEMENT PLAN FOR THE BIG INDIAN COUNTRY CLUB AND HIGHMOUNT GOLF CLUB AT THE BELLEAYRE RESORT AT CATSKILL PARK 26 (Nov. 2002)).
[77] *See id.* at 45.

applied to the proposed golf courses' turf only when needed," and "[t]he factors that would dictate when, where and how much pesticide would be applied are pest levels in relation to threshold levels and the environmental sensitivity of specific areas."[78] Biological controls present no risk of chemical contamination of water supplies and therefore should be prioritized as the first option to be considered for pest control wherever applicable. Additionally, one of the criteria that dictate when chemical pesticides are used should be the failure of biological controls to control the targeted species after they are attempted. The applicant should be required to provide a meaningful ITM plan that clearly establishes: 1) criteria for selection of appropriate controls, 2) quantifiable thresholds to asses when pest infestation and/or damage to vegetation warrants some form of treatment, and 3) identifies specific zones across the property where thresholds may be varied depending on the environmental sensitivity of the zone in question.

- *Wildlife Impacts*

Notably, the wetlands that are proposed as water hazards in the golf course design are among the largest and most functionally valuable wetlands on site. Wetland 16, being 3.6 acres, is the largest individual wetland on the Belleayre project site. Wetlands 23 and 24 are numbered separately in the DEIS, but hydrologically, they comprise one single wetland – the middle section of this wetland falls on private property not included in the proposed project assemblage, thus they appear as two separately numbered wetlands on Sheet 2 of 4 contained in the March 2000 Wetland Delineation Report. However, viewed in its entirety, wetland 23/24 appears to be similar in size to wetland 16, and is undoubtedly among the largest wetlands on the project site.

Disturbance of wetlands 16, 23 and 24 could have the most significant impacts not only on water quality because they "act as small tributaries of permanent streams that drain the Project Site,"[79] but also on their value as wildlife habitat. As the Office of the Attorney General noted in its recent Comments to EPA regarding the proposed redefinition of the term "waters of the United States," many species, especially amphibians, may be affected by the loss of small wetlands because they depend on a high density of these wetlands.[80] Thus, the applicant must submit additional information

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[78] *See id.* at 24.

[79] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 6.

[80] *See* PETER LEHNER, STATE OF NEW YORK OFFICE OF THE ATTORNEY GENERAL, COMMENT LETTER (April 16, 2003)(submitted to EPA Docket ID No. 02-2002-0050), fn. 9. Quoting a U.S. Fish and Wildlife Service report, it continues to state:

> Semlitsh and Bodie (1998) described the importance of small wetlands to amphibians. The abundance of small isolated wetlands supports a diverse assemblage of amphibian species, produces large numbers of juveniles (necessary to maintain populations), and serves as 'stepping stones' to aid in dispersal and recolonization of suitable habitats (Semlitsch 2000). Local populations of wetland-dependent organisms are vulnerable to extinction due to several factors including natural events (e.g., prolonged droughts and changing vegetation), disease, inbreeding, and habitat destruction. A study of wetlands in

assessing how the loss of wetland density will impact resident wildlife species, particularly amphibians, and how the surrounding golf course activity will affect ground species that must traverse the fairways in order to travel between the remaining wetlands on site.

Impacts from Fill Activity

Bridges are proposed to provide stream crossings for access to the detached Wildacres Resort lodging units north of Gunnison Road, to cross Giggle Hollow, and to cross Birch Creek near Friendship Road. Portions of wetlands 24, 32, and 36 will be filled for bridge construction, and 0.28 acres of trees and tall shrubs will be cleared; portions of wetland 29 will be impacted to construct an access road. The total area to be filled in wetlands 24, 32, and 36 will be 0.0993 acres.[81] Technically, this amount of fill falls under the 0.10 acre limit above which Water Quality Certification is required,[82] and thus no Individual Permit has been required by ACOE. Notably, a mere 0.0007 acre miscalculation when assessing proposed wetlands impacts would avoid the necessity of the applicant seeking an Individual Permit.

In fact, it appears that all on-site wetlands and proposed impacts have *not* been adequately identified. For example, ACOE noted that "it appears as though additional waters of the United States would be filled within Woodchuck Hollow [in association with the improved access road] and would likely cause the overall proposed fill to exceed 0.10 acres."[83] Table 3-25 in the DEIS indicates that Woodchuck Hollow Brook and/or its

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central Maine by Gibbs (1993) suggests that a high number of small wetlands that have lost populations due to chance extinction. The presence of a high number of small wetlands therefore increases the chance of survival of local populations over time.

Reducing the number of small wetlands in a given area increases overland migration distances and exposure of migrants (E.G., salamanders) to predators. This may place local populations at the risk of extinction. For example, Semlitsch and Bodie (1998) found that eliminating all natural wetlands less than 10 acres in size (in a South Carolina study area) would increase the nearest-wetland distance from 1,570 feet to 5,443 feet – a distance that would take most amphibian species several generations or more to travel. This type of loss would increase the probability of local population extinction for some amphibians.

Isolated wetlands with fluctuating water levels provide unique habitats for certain species, especially those that are vulnerable to fish predation. Much of the value of woodland vernal pools to amphibians is due to the absence of fish, which cannot survive periodic drawdowns. The presence of fish would eliminate or severely reduce the reproductive success of amphibians that breed in these pools.

[81] *See* DEIS at 3-93 to 3-94.

[82] *See* ACOE, PUBLIC NOTICE: REGIONAL CONDITIONS FOR NATIONWIDE PERMITS AND DESIGNATION OF CRITICAL RESOURCE WATERS (May 21, 2002), *available at* http://www.nan.usace.army.mil/business/buslinks/regulat/pnotices/nwp_pn.pdf (last visited Apr. 16, 2004).

[83] Letter from Brian A. Orzel, Project Manager, ACOE to Kevin J. Franke, The LA Group, P.C. (stamped Feb. 12, 2003).

adjacent wetland 27 has not been delineated, and Table 3-26A does not anticipate any impacts in this area. The applicant should make clear whether this is an omission of a proposed impact to jurisdictional waters of the United States, or whether there has been a design change made since this was noted by ACOE in February 2003 (an observation made *after* the January 10, 2003 PCN was completed).

Because proposed filling of only 0.0007 additional acres (approximately 30.5 sf.) would have required issuance of an Individual Permit from ACOE (an amount that may easily have been miscalculated, or that may accidentally be surpassed during construction), and because the proposed mitigation measures that have been accepted in the PCN are inadequate (discussed below), extra scrutiny should be given by DEC to all wetlands and stream impacts during the SEQR process. In addition, DEC should urge ACOE to reconsider whether an Individual Permit should be issued, as it is within the District Engineer's discretion to modify, suspend, or revoke case specific authorizations under a Nationwide Permit.[84]

- *Isolated Wetland Impacts*

As noted above, SEQRA does not provide for a lesser analysis of isolated wetlands. *Any* impacts to isolated wetlands from the proposed project are likely "significant" under SEQRA, particularly as "approximately 22% of the wetlands in the NYC Watershed are 'isolated' because a surface connection to other water bodies is not apparent."[85] As noted by the Office of the State Attorney General, Environmental Protection Bureau, "[t]hese 'isolated' wetlands play a crucial role in protecting the water quality of the surface water sources that provide drinking water for NYC."[86]

As with jurisdictional wetlands, proper attention has not been given to the proposed impacts to so-called "isolated" wetlands. Planning for this project has been ongoing for several years, and the numerous changes made reducing the number of

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[84] *See* 33 C.F.R. §330.5(d). Stated factors for consideration include:

> [1] changes in circumstances relating to the authorized activity since the NWP itself was issued or since the DE confirmed authorization under the NWP by written verification; [2] the continuing need for, or adequacy of, the specific conditions of the authorization; [3] any significant objections to the authorization not previously considered; progress inspections of individual activities occurring under an NWP; [4] cumulative adverse environmental effects resulting from activities occurring under the NWP; [5] the extent of the permittee's compliance with the terms and conditions of the NWPs; [6] revisions to applicable statutory or regulatory authorities; [6] and, the extent to which asserting discretionary authority would adversely affect plans, investments, and actions the permittee has made or taken in reliance on the permit; [7] and, other concerns for the environment, including the aquatic environment under the Section 404(b)(1) Guidelines, and other relevant factors of the public interest.

Id.

[85] PETER LEHNER, STATE OF NEW YORK OFFICE OF THE ATTORNEY GENERAL, COMMENT LETTER (submitted to EPA Docket ID No. 02-2002-0050) at 19 (Apr. 16, 2003).

[86] *Id.*

jurisdictional wetlands on the project site during this time warrant additional scrutiny. In addition to the problems caused by lack of information for proper SEQRA review, there may be additional defects in the ACOE permitting process. If any wetlands were incorrectly determined to be "isolated," or ACOE improperly failed to assert jurisdiction over these wetlands, the contemplated impacts would again surpass the size threshold to require issuance of an Individual Permit from ACOE.

The March 2000 Delineation Report originally identified 21.42 acres of wetlands on the project site following ACOE methods prescribed in the 1987 Corps of Engineers Wetlands Delineation Manual.[87] But, the August 2000 site inspection report from ACOE field staff identified 29 acres of jurisdictional wetlands.[88] And by January 10, 2003 the jurisdictional wetlands identified in the PCN prepared for ACOE where whittled down to only 16.97 acres.[89] It should be noted that these revisions were not based on new scientific observation or understanding, or any change of conditions on the project site, but rather seem to be entirely in response to the January 2001 U.S. Supreme Court Decision in *Solid Waste Agency of Northern Cooke County v. U.S. Army Corps of Engineers*.[90] And, it is clear that these revisions were made after a request from the applicant's consultants to do so,[91] which shows that the applicant sought to avoid governmental regulation rather than avoid wetland impacts.

The DEIS proposes impacts to isolated wetlands from approximately 1.48 acres of fill and approximately 0.26 acres of vegetation removal.[92] Activity in the Big Indian Plateau area will impact wetlands 26, 33, 34, and 35.[93] Wetland 34 will be "filled or excavated to construct a road and a stormwater detention basin...[and] there will be 0.01 acre of vegetation clearing in wetland 34 on the edge of a golf hole."[94] The additional impacts to wetlands 26, 33, and 25 will result from 0.04 acres of fill from road construction or golf fairway construction.[95] "Impacts to isolated wetlands 17, 18, 19, 20, 21 and 22 include 1.08 acres of fill for construction of golf fairways, roadways, and a parking garage (see Table 5 and Drawings SG-1 and SG-3). An additional 0.25 acre of vegetation clearing will be required, mainly for golf fairways, including 35 linear feet of golf cart paths on boardwalks."[96]

The U.S. Department of the Interior, Fish and Wildlife Service (F&WS) appears to share this concern, and as recently as July 2003, recommended that ACOE reconsider whether an Individual Permit was appropriate for the proposed project. Specifically, in a

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[87] *See* WETLAND DELINEATION REPORT, *supra* note 57, at 1.
[88] *See* Brian Orzel & Randy J. English, ACOE, Site Inspection Report (stamped Aug. 24, 2000).
[89] *See* PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 6.
[90] 121 S. Ct. 675 (2001) (holding that the ACOE cannot regulate "isolated" wetlands based solely on the use of such waters by migratory birds). *See also* Letter from George Nieves, Chief, ACOE, to Richard P. Futyma, LA Group, P.C. (stamped Feb. 15, 2002).
[91] *See* Brian A. Orzel, ACOE, Memorandum For Record (stamped Feb. 15, 2002).
[92] *See* DEIS, Table 3-26A; PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 17, 20.
[93] *See* DEIS at 3-94; PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 20.
[94] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 21.
[95] *See id.*
[96] *Id.* at 20.

letter dated July 11, 2003, F&WS Field Supervisor David A. Stilwell suggested several items be given more attention by ACOE and the applicant. First, the letter notes that

> [i]t is unclear if all of the streams including ephemeral and intermittent streams have been shown on the plans. We recently visited the project site and found channels with discernable bed and banks located downslope of mapped channels. For example, we observed channels south of Gunnison Road adjacent to proposed golf tee #5, which are not shown on the plans. *If the* [sic] *all of the water courses have not been documented, then not all of the impacts have been considered.*[97]

F&WS focused on *all* on-site impacts to both jurisdictional and non-regulated isolated wetlands, which total 4.34 acres, and concluded that, "[t]herefore, this project will result in more than minimal impacts to wetlands...the Corps should consider the cumulative impacts to waters of the United States, rather than considering just the discrete impacts to jurisdictional wetlands."[98] F&WS recommended that due to the potential impacts on aquatic resources a "full public interest review is warranted for this project, including evaluation of the project as an Individual Permit. Currently, the Corps may not be considering all relevant information regarding impacts to waters of the United States, pending the completion of the SEQR process and input from local residents."[99] Riverkeeper wholeheartedly agrees.

Given the nearly 2,000-acre project site that the applicant has to work with, it should be required to make every effort to avoid, minimize, and mitigate impacts to *all* wetlands. The applicant must present full information regarding the impacts to both jurisdictional and non-jurisdictional wetlands, and discuss the proposed impacts in terms of lost wetland function and value, not merely acreage. Again, Riverkeeper calls on DEC to urge ACOE to reconsider whether an Individual Permit should be issued for this project.

Mitigation Measures

Because impacts to isolated and, potentially, additional on-site wetlands have not been included in quantifying total wetlands disturbance for the purpose of the ACOE permitting process (and thus Nationwide Permits 14 and 25 are considered by ACOE adequate to cover proposed activities), the DEIS asserts that no in-kind mitigation measures are required by ACOE. Nonetheless, several "mitigation" measures are proposed. None of these measures actually mitigate the loss of wetlands – there are no proposals to enhance existing wetlands, such as with additional wetland plantings, or to create additional wetlands elsewhere. Merely avoiding further wetlands destruction is not mitigation, as claimed. The applicant must, therefore, avoid all wetland impacts; if it

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[97] Letter from David A. Stilwell, Field Supervisor, F&WS to Col. John B. O'Dowd, District Engineer, ACOE (dated July 11, 2003), at 2 (emphasis added).
[98] *Id.*
[99] *Id.* at 3.

cannot, it must submit additional information and a plan that provides true mitigative measures.

Wetland Buffers

The applicant proposes that a "25-foot-wide protective buffer zone will be established on both sides of wetland 32, that contains the stream Giggle Hollow."[100] Wetland buffers are extremely important to safeguard the health of a wetland itself, and establishing a 25-foot buffer is inadequate.

Vegetated wetland buffers provide additional transitional areas that intercept stormwater from upland habitat before it reaches wetlands or other aquatic habitat. A buffer may be described generally as a "linear band of permanent vegetation adjacent to an aquatic ecosystem intended to maintain or improve water quality by trapping and removing various nonpoint source pollutants."[101] Other water quality benefits of buffer zones include reducing thermal impacts (shade), nutrient uptake, providing infiltration, reducing erosion, and restoring and maintaining the chemical, physical and biological integrity of water resources.[102] Buffers filter sediment, pesticides, heavy metals and other pollutants from stormwater, and reduce nutrient loadings to wetlands by uptake in vegetation and denitrification,[103] thereby protecting wetlands from excessive loadings and allowing them to perform similar functions without overloading of contaminants. Buffers also function to store water and reduce peak runoff velocities during storm events and provide unique recreation, academic and aesthetic opportunities.[104] In addition, buffers provide habitat for flora and fauna and corridors for wildlife to move between larger sections of habitat.[105]

A 25-foot wetland buffer is insufficient to provide desired buffering functions. A common wetland buffer width often is 100 feet, but more environmentally proactive planners have established wider buffers.[106] One hundred feet is considered the *minimum* buffer width recommended for water quality protection,[107] but additional buffer functions of wildlife habitat, recreation and aesthetics require larger buffers.[108] Depending on a waterbody's position in the watershed, the composition and density of vegetation present,

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[100] DEIS at 3-94.
[101] FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 2 (2000).
[102] *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, MODEL ORDINANCES TO PROTECT LOCAL RESOURCES, *available at* http://www.epa.gov/owow/nps/ordinance/ (last visited May 13, 2003).
[103] *See* U.S. ARMY CORPS OF ENGINEERS, BUFFER STRIPS FOR RIPARIAN ZONE MANAGEMENT 2 (1991).
[104] *See id.*
[105] *See* FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 2 (2000).
[106] *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, MODEL ORDINANCES TO PROTECT LOCAL RESOURCES, *available at* http://www.epa.gov/owow/nps/ordinance/ (last visited May 13, 2003).
[107] *See* TOM SCHUELER, SITE PLANNING FOR URBAN STREAM PROTECTION, Metropolitan Washington Council of Governments 111 (1995).
[108] U.S. ENVIRONMENTAL PROTECTION AGENCY, DRAFT NATIONAL MANAGEMENT MEASURES TO CONTROL NONPOINT SOURCE POLLUTION FROM URBAN AREAS 4-11, 4-12 (2002).

adjacent land use and slope, some buffers require thousands of feet to provide ecological functions and benefits.[109] While recommendations and requirements vary among states and regions, *water quality benefits are significant when buffers exceed the minimum 100-foot width*. A survey of scientific literature by the Environmental Law Institute, specifically pertaining to thresholds applicable to land use decision-making, found that "land use planners should strive to establish 100-meter wide riparian buffers to enhance water quality and wildlife protection."[110] In a Maine study, a vegetated buffer strip approximately 200 feet in width removed 80% of the suspended sediment in stormwater.[111] To intercept overland runoff and promote floodplain storage, increase runoff travel time and reduce flood peaks, ACOE engineers have recommended buffers up to 150 meters (492 feet) in width.[112] In addition, providing suitable wildlife habitat requires wider buffers. Several studies indicate that certain wildlife species, avian populations, and aquatic species can require more than a 100-foot buffer.[113]

Thus, to have any environmentally protective function, particularly those related to protecting water quality, the proposed buffer size should be increased to *at least* 100 feet. And, buffers must be established around *all* on-site wetlands, not just along the wetland bordering Giggle Hollow.

Deed Restrictions and/or Conservation Easements

The DEIS proposes that "[a]fter completion of the project, all remaining wetlands, both isolated and non-isolated, will be protected from further development," and this will be done through deed restrictions and/or conservation easements.[114] While this is a good suggestion, and should be required if the proposed project ultimately goes forward, it nonetheless does not qualify as "mitigation." General Condition 19 of the Nationwide General Permits, part (c) states that "Consistent with National policy, the District Engineer will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances."[115] As noted

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[109] *See* FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 3 (2000).
[110] ENVIRONMENTAL LAW INSTITUTE, CONSERVATION THRESHOLDS FOR LAND USE PLANNERS 20 (2003), *available at* http://www.elistore.org/reports_detail.asp?ID=10839 (last visited June 13, 2003).
[111] *See* HORNER, R., AND B MAR, GUIDE FOR WATER QUALITY IMPACT ASSESSMENT OF HIGHWAY OPERATIONS AND MAINTENANCE, Washington Department of Transportation, *In* FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 5 (2000).
[112] *See* FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 8 (2000).
[113] *See* VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WETLANDS FACT SHEET (1999), *available at* www.vtwaterquality.org/wetlands/Fs18.PDF (last visited May 12, 2003); U.S. ARMY CORPS OF ENGINEERS, TECHNICAL AND SCIENTIFIC CONSIDERATIONS FOR UPLAND AND RIPARIAN BUFFER STRIPS IN THE SECTION 404 PERMIT PROCESS 4 (2002); also see FISCHER, R. AND J. FISCHENICH, DESIGN RECOMMENDATIONS FOR RIPAIRAN CORRIDORS & VEGETATED BUFFER STRIPS, U.S. Army Engineer Research and Development Center 8 (2000).
[114] DEIS at 3-94.
[115] 67 Fed. Reg. 10, 2092 (2002).

above, preservation of existing wetlands from further destruction and degradation in no way enhances the functionality or increases the size (thus insuring no-net-loss) of existing wetlands. F&WS agrees.[116] This critique applies to the proposed preservation of the Adelstein Property as "forever wild," as well.

If the proposed project *is* approved, it should be noted that project-specific Special Condition (A) related to Nationwide Permit 14 requires that the deed restriction or conservation easement be approved by ACOE, and then "executed and recorded within the Delaware and Ulster County Registrars of Deeds *within one year of the commencement of jurisdictional activities on site,*"[117] not after completion of the project as the DEIS proposes. The applicant must correct this inaccuracy in the DEIS.

Finally, the inadequacy of the "Selective Wetland Tree Removal Protocols" as a mitigation measure has been addressed above.

Design Alternatives to Avoid Wetlands Impacts

The wetlands section of the DEIS does not consider any alternative designs that could remove impacts from wetland areas, particularly from golf course impacts, which are the most extensive. "The Section 404(b)(1) guidelines set forth a rebuttable presumption that non-water-dependent projects do not need to be located near wetlands to fulfill their basic purpose, and that an upland alternative would be less impacting."[118] Operation of golf courses is not a water-dependant project – the use of wetlands as water hazards is stylistic only. Avoidance of these wetlands, and consequent impacts, will not prevent construction of golf courses. Thus, the applicant should consider alternative golf course designs that avoid all wetlands impacts related to golf courses, particularly the use of wetlands as hazards; if they cannot be avoided entirely, options should be considered that reduce the number of crossing made by elevated pathways. For example, it is not necessary for such paths to cross wetland 16 six times, and several smaller "loops" could easily be eliminated without significantly effecting movement throughout the course.

Additional comments on wetlands impacts are attached as **Appendix 3** (Cashin Associates, P.C. report prepared on behalf of Riverkeeper, Inc.) and are incorporated in full.

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[116] "While we support efforts to preserve wetlands, preservation is not, in our opinion, an acceptable means to replace lost wetlands...Consequently, there will be a new loss of wetland functions and values as a result of the project and, therefore, the project will not comply with Executive Order 11990." Letter from David A. Stilwell, Field Supervisor, F&WS to Col. John B. O'Dowd, District Engineer, ACOE (dated July 11, 2003), at 2.

[117] Letter from Richard L. Tomer, Chief, ACOE to Richard P. Futyma, The LA Group, P.C. (stamped July 18, 2003), at 2 (emphasis added).

[118] PRE-CONSTRUCTION NOTIFICATION, *supra* note 61, at 27-28.

The Project Applicant Needs A Mined Land Reclamation Permit

DEC's Notice of Complete Application does not include any reference to a Mined Land Reclamation Permit.[119] However, the New York State Environmental Conservation Law (ECL) indicates that a Mined Land Reclamation Permit would be needed for the project. The project DEIS notes that the construction of the first year of the eastern portion will involve the removal of 6,800 cubic yards of soil and the blasting of 18,200 cubic yards of rock.[120] This activity is necessary to create irrigation ponds.

The ECL requires a Mined Land Reclamation Permit for "any person who mines or proposes to mine from each mine site more than one thousand tons or seven hundred fifty cubic yards, whichever is less, of minerals from the earth within twelve successive calendar months."[121] Mining, in the ECL, is defined as "the extraction of overburden and minerals from the earth. . . ."[122] Further, the ECL defines "mineral" as "any naturally formed, usually inorganic, solid material located on or below the surface of the earth. For the purposes of this title, peat and topsoil shall be considered minerals."[123] The ECL definition of mining exempts excavation, removal, and disposition of minerals associated with construction projects, however, the exception is "exclusive of the creation of water bodies."[124] As noted above, the extraction on the proposed site is for creating detention ponds.

As a result, the project sponsor's planned activities rise to the level of need for a Mined Land Reclamation permit. As such, the applicant must file an application and DEC must comply will all relevant public notice and comment aspects.

Secondary Growth

Comments on secondary growth issues are attached as **Appendix 2** (report prepared by Jannette M. Barth, Ph.D., J.M. Barth & Associates, Inc. on behalf of Riverkeeper, Inc.) and incorporated in full.

Economic Impacts

Review of the DEIS reveals serious deficiencies in the economic impact analysis, both with regard to the purported economic benefits of the project and to the potential adverse economic impacts. Together, these failings erroneously skew the economic conclusions to support the proposed project. Detailed comments on the economic

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[119] *See* New York State Department of Environmental Conservation, Notice of Complete Application, Notice of Acceptance of Draft Environmental Impact Statement, and Notice of Legislative Public/SEQR Hearing and Issues Conference.
[120] *See* DEIS at 2-55.
[121] ECL §23-2711(1).
[122] ECL §23-2705(8).
[123] ECL §23-2705(7).
[124] ECL §23-2705(8).

impacts in the DEIS alternatives analysis are attached as **Appendix 2** (report prepared by Jannette M. Barth, Ph.D., J.M. Barth & Associates, Inc. on behalf of Riverkeeper, Inc.) and incorporated in full.

Segmentation

In December 2003, DEC issued a Notice of Acceptance of Draft Environmental Impact Statement (DEIS) for Crossroad Ventures' massive Belleayre Resort at Catskill Park. The proposed project consists of approximately 1,960 acres of private land located to the east and west of the state-run Belleayre Mountain Ski Center. DEC also is currently planning a significant expansion of the Belleayre Mountain Ski Center. The planned expansion is in keeping with the final unit management plan for the Belleayre Mountain Ski Center adopted in May 1998. At present, the ski center provides over 170 acres of skiable terrain and an additional 7.5 miles of trails within the constitutional 25-mile limit can be built.[125] The environmental impact of the expansion of the ski center together with those of the proposed resort construction is not discussed in the Belleayre Resort DEIS. The interdependence of the two projects, their joint leadership under DEC, and their geographical proximity makes them for all logical purposes one action and the environmental impacts of the combined action should be analyzed jointly under SEQRA. The failure to analyze the combined impacts of the project constitutes impermissible segmentation under SEQRA.[126]

Segmentation is defined as the division of the environmental review of an action such that various activities or stages are addressed as though they are unrelated activities, needing individual determinations of significance.[127] In formulating a DEIS and determining whether an action may have a significant effect on the environment, " the agency must ... consider reasonably related effects 'including other simultaneous or subsequent actions which are: (1) included in any long-range plan of which the action under consideration is a part; (2) likely to be undertaken as a result thereof; or (3) dependent thereon.'"[128] DEC improperly segmented the analysis of the ski center expansion and the proposed Belleayre resort because they are part of the same long-range plan and are dependent on each other. The failure to analyze the impact of the ski center expansion in the Belleayre Resort DEIS constitutes impermissible segmentation and must be remedied with a supplemental EIS that describes the shared impacts of the projects.

In the Matter of Village of Westbury v. Department of Transportation,[129] the DOT had proposed the widening of a parkway and the reconstruction of an interchange in order to solve traffic problems in the same area.[130] DOT issued a negative declaration for the projects and the Village of Westbury claimed DOT had improperly segmented the

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[125] *See* DEIS at 1-7.
[126] *See* ECL § 8-0101.
[127] *See* 6 N.Y.C.R.R. §617.2; 617.3(g)(1).
[128] In the Matter of Village of Westbury v. Department of Transp., 75 N.Y.2d 62, 68 (1989), *quoting* 6 N.Y.C.R.R. §617.7 (c)(2).
[129] In the Matter of Village of Westbury v. Department of Transp., 75 N.Y.2d 62 (1989).
[130] *Id.* at 67.

projects and requested an EIS to describe the shared impacts.[131] The court held that the widening of the parkway was the type of subsequent action contemplated by the regulations and that the environmental effects of the two projects had to be considered together.[132] The court reasoned that the design of each was dependent on the other, and thus, the regulations required consideration of their combined effects, even though they were not part of a single formalized plan.[133] The court stated,

> The two are complementary components of the remedy for the Northern State Parkway's traffic flow problems, sharing a common purpose, integrated and scheduled for consecutive construction. Thus, design of each is dependent on the other in that lane construction, which will be undertaken as a part of the interchange project, has no independent utility without the subsequent widening of the Northern State Parkway to the east. That being so, the regulations require the consideration of their combined effects even though they are not part of a single formalized plan.[134]

This case is very similar to the Belleayre Resort and Belleayre Mountain Ski Center situation because the facilities propose to be the remedy for the area's tourism deficiencies. The plans also share the common purpose of accommodating and attracting tourism. The interdependence of the two facilities is evident from the information provided in the Belleayre Resort DEIS. According to the Belleayre Resort DEIS, the ski center needs the Belleayre Resort in order to house its skiers. The DEIS states that

> the Ski Center provides over 170 acres of skiable terrain. Existing trails total 17.5 miles, thus providing an additional 7.5 miles of trails within the constitutional 25-mile limit that could be built. . . .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. The Lodging Bureau of the Ski Center estimates that there is a current shortfall of 500 hotel rooms to accommodate the present volumes and the shortfall will rise to 1,000 hotel rooms when current skier targets are achieved.[135]

The DEIS also states that the Belleayre Resort is being built in reliance on the ski center, "[a] strong public-private partnership is at the core of the project sponsor's Vision Statement: an opportunity to assist the State of New York in realizing its original dream of the Belleayre Mountain Ski Center as a major contributor to the economy of the region and the State."[136] The DEIS goes on to explain:

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[131] *Id.*
[132] *Id.* at 66.
[133] *Id.* at 71.
[134] *Id.* at 69.
[135] DEIS at 1-7.
[136] DEIS at iii.

> The proposed Belleayre Resort, is in a highly favorable position to take advantage of the overnight accommodation and seasonal housing demand that the Belleayre Mountain Ski Center generates. This will only increase as NYSDEC's long range plans for the ski center area is carried out. On at least a winter's basis, Belleayre region visitors and skiers will have significant new real estate ownership opportunities and 400 new hotel type rooms from which to select, all of which are located in close proximity to the ski area facilities.[137]

These sections from the DEIS are illustrative of the interdependence between the two projects. The ski center expansion will create the need for housing and the Belleayre Resort has anticipated this need and will provide the housing in order to accommodate the ski mountain. It is reasonable to conclude that the long-range plan of the proposed resort is dependent on the ski center expansion because according to the DEIS, the Belleayre Resort has been "designed, to a large extent, as a residential facility that aims to capture much of the regions' existing demand for seasonal residences, particularly those generated by the adjacent Belleayre Mountain Ski Center."[138] The evidence in the DEIS of interdependence and a long range plan is substantive proof of impermissible segmentation.

Consideration of the additional factors of time and location also support the finding that these projects have been improperly segmented. The expansion of the ski center and the proposed resort are similar in time because construction for both is planned consecutively for the next five to eight years. *In the Matter of City of Buffalo v. New York State Department of Environmental Conservation*,[139] the court found that projects need not be constructed at the same time; they can be built in sequence and it is only important that their environmental effects are so interlinked that the projects must be considered at the same time.[140] The proposed resort is to be constructed on both sides of the ski mountain, therefore, any ski center expansion will have a direct effect on the proposed resort construction and shared impacts.

The interdependence of the projects and DEC's ultimate control of both prompts the preparation of a supplemental EIS that addresses their shared impacts. Although DEC issued a negative declaration finding that the ski center expansion would not cause a significant environmental impact, this decision was made without the proposed combined impacts from the Belleayre Resort and these projects together will result in undeniable environmental impacts.

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[137] *Id.* at 7-10.
[138] *Id.* at 7-2.
[139] In the Matter of City of Buffalo v. New York State Department of Conservation, 707 N.Y.S.2d 606, 611 (2000).
[140] *Id.* at 611.

In *Winston v. Jorling,*[141] the State of New York Freshwater Appeals Board found that although a negative declaration had been issued for demapping wetlands and a DEIS had been prepared for the development of the wetlands, the project had been improperly segmented and therefore DEC had the responsibility to review the existing EIS, and issue a supplemental EIS in compliance with SEQRA.[142] To hold otherwise, according to the board, "would be to say that any agency could relieve itself of its SEQRA obligations by racing to be the first to issue a negative declaration."[143]

Cumulative Impacts

In addition, the Belleayre Resort DEIS failed to consider the cumulative impacts of the combined traffic of the two projects. According to SEQRA, a DEIS may be flexible but has to contain "reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts."[144] DEC has an independent obligation pursuant to ECL 3-0301(1)(b) to consider such cumulative impacts. The court in *In the Matter of Save the Pine Bush v. City of Albany*[145] explained that, "where there is really but one plan for the development of a single area of special environmental significance, the accurate ecological/social/economic balancing of costs and benefits mandated under SEQRA requires that the cumulative effects of all actions within the plan for that area be weighed."[146] The ski mountain expansion is a plan that is going to be constructed at the same time and in same area as the Belleayre resort and therefore the combination of these projects must be addressed together.

The traffic analysis in the DEIS should have included the expected Belleayre Mountain Ski Center Expansion; the failure to do so understated the expected traffic loading for the Belleayre Resort. The traffic pattern analysis for the Belleayre Resort was divided into a winter period and a fall period to analyze the conditions during the peak ski season and proposed golf season respectively. Traffic data to represent the winter conditions was collected during Martin Luther King Junior holiday weekend, on Saturday, January 15, 2000 from 8:00 AM to 10:00 AM, 11:00AM to 1:00 PM, and from 3:30 PM to 5:30 PM at most of the study area intersections.[147] This period represented the worst-case holiday weekend traffic during the winter.[148] Traffic data for the fall was collected during the Columbus Day holiday weekend on Friday, October 13, 2000 from 5:00PM to 8:00 PM and on Sunday, October 15, 2000 from 4:00 PM to 7:00 PM.[149] Due to travel in the project corridor to and from the Fall Festival and Craft Fair at the Belleayre Mountain Ski Center on this weekend, the data represented the worst-case

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[141] Winston v. Jorling, 1991 N.Y. Env Lexis 94 (1991).
[142] *Id.* at 11.
[143] *Id.* at 10.
[144] 6 N.Y.C.R.R. §617.9 (b)(5)(a).
[145] In the Matter of Save the Pine Bush v. City of Albany, 70 N.Y.2d 193, 206 (1987).
[146] *Id* at 206.
[147] *See* DEIS at 3-120.
[148] *See id.*
[149] *See id.*

weekend traffic conditions for the fall.[150] The problem with this data is that it does not take into account the planned expansion at the Belleayre Mountain Ski Center.

Belleayre Mountain Ski Center is limited to up to 25 miles of ski trails with trail widths up to 200 feet permitted by an amendment to Article XIV of the New York State Constitution. Existing trails total 17.5 miles, thus providing an additional 7.5 miles of trails within the constitutional 25-mile limit that could be built. The traffic data gathered does not take into account the effect that the remaining trail construction and subsequent operation and use will have on traffic patterns. The Belleayre Resort DEIS specifically states that "[t]he Belleayre Mountain Ski Center has a major impact on traffic volumes as evidenced by the fact that the highest peak hour volumes on NY Route 28 occur on winter weekends."[151] It also indicates that "50 percent of the peak hour trips generated by the proposed resort during the winter will be shared trips with the Belleayre Mountain Ski Center."[152]

Although the traffic volume analysis for the resort is based directly on the existing and projected traffic volumes generated by the ski mountain, the DEIS fails to address the projected construction of the remaining 7.5 miles of trails. Figure 1-7 "Belleayre Mountain Ski Attendance 1987-2002" illustrates visitation trends and annual skier visits fall within the range of 75,000 to 142,000 skiers per season.[153] However, the DEIS indicates, "[m]anagement of the Ski Center aims over the next few seasons to attract 200,000 to 225,000 skier visits."[154] One can only assume this dramatic predicted increase in visitation is due to the cumulative impacts of the expected construction of 7.5 miles of trails and the proposed Belleayre Resort. This drastic increase for estimated visitors caused by the cumulative impact of the expanded trails and the proposed resort is not indicated in the traffic analysis and its absence is evidence of a failure to perform the necessary cumulative impact analysis required under SEQRA.

Alternatives Analysis

SEQRA mandates that agencies shall "choose alternatives which, consistent with social, economic and other essential considerations, to the maximum extent practicable, minimize or avoid adverse environmental effects, including effects revealed in the environmental impact process."[155] The statute also requires that an EIS include a "detailed statement" setting forth "alternatives to the proposed action," to aid in making the "decision whether or not to undertake or approve ... [an] action."[156] To do this, the EIS "shall describe the proposed action and reasonable alternatives to the action."[157] It must include "a description and evaluation of the range of reasonable alternatives to the

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[150] *See id.*
[151] *Id.* at 3-131.
[152] *Id.*
[153] *See id.* at 1-7.
[154] *Id.*
[155] ECL § 8-0109(1).
[156] *Id.* § 8-0109(2).
[157] *Id.* § 8-0109(4).

action that are feasible, considering the objectives and capabilities of the project sponsor."[158]

The DEIS is unacceptable for three overarching reasons:

1) the range of alternatives discussed is inadequate;
2) the level of detail of discussion of those alternatives actually considered is insufficient; and
3) the discussion does not include a no-build, no-action alternative.

Detailed comments on the variety of deficiencies in the DEIS alternatives analysis are attached as **Appendix 3** (Cashin Associates report prepared on behalf of Riverkeeper, Inc.) and incorporated in full. What follows below are additional comments on the alternatives section.

The Range of Alternatives Considered is Inadequate

Under SEQRA, the lead agency's ultimate findings must "certify that consistent with social, economic, and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable."[159] Accordingly, "[i]t is not necessary that every possible alternative be thoroughly explored. The only requirement is that information permitting a reasoned choice be considered."[160] Also, "[t]he 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."[161]

However, the alternatives considered in the DEIS are merely permutations of the same proposed project, quickly dismissed, and is not a detailed discussion of a "reasonable range" of alternatives necessary for informed decision-making with the goal of minimizing environmental impacts. The pages dedicated to the discussion of alternatives, which is at the heart of the SEQRA mandate to mitigate adverse environmental impacts through reasoned and informed decision-making, do not satisfy SEQRA's requirements regarding alternatives. Indeed, the bulk of pages actually devoted to "alternatives" discuss alternative technologies for stormwater management, golf course maintenance and the like, as well as alternative sites for access and water supply. Relatively little space is spent on projects of alternative scale or magnitude and

[158] 6 N.Y.C.R.R. §617.9(b)(5)(v).
[159] *Id.* §617.11(d)(5).
[160] *Natural Resources Defense Council v. City of New York*, 446 N.Y.S.2d 871, 873 (Sup Ct N.Y.Co. 1982).
[161] *Webster Assocs. v. Town of Webster*, 59 N.Y.2d 220, 228 (1983).

none, in fact, on variations of scale or magnitude other than adding or subtracting elements of the full-scale proposal.[162]

The scoping document specifies that among the categories of alternatives to be considered in the DEIS are "Alternative Layouts." In particular, the scoping document states, "[d]esign alternatives considered shall include a discussion of a different mix of resort components and various layouts of the selected components including golf facilities."[163] Unfortunately, beyond quick consideration and dismissal of the one golf course / one hotel option, the DEIS largely fails to consider smaller versions of the project, but instead focuses only on moving desired pieces around under the auspices of "Alternative Layouts."

At the outset of the Alternative Layouts section, the applicant first attempts to discount the contention that the project site, particularly the Big Indian Plateau portion of the site, is unsuitable for golf course development.[164] In citing several examples of other courses around the country at high elevations, the DEIS focuses only on the ability of such elevations to support the turf quality necessary for successful golf courses, and blithely concludes on this basis that "from an alternatives standpoint, golf course development on Big Indian Plateau certainly is a viable alternative use of this portion of the project site."[165] There is no discussion here of the natural resource impacts of constructing, and then maintaining, multiple 18-hole courses on mountainsides, which was clearly the point of concern expressed earlier in the SEQRA process.

The DEIS then recounts adjustments made to the resort configuration over time, including movement of a few holes of the planned golf courses, the supposed 'greening' of the Big Indian Resort to address visual impacts, and the consolidation of three buildings at Wildacres to one large building. There is also mention of the elimination of some 100-odd lodging units since the 1999 proposal.[166] This almost superfluous recollection of a handful of past alterations includes nothing about smaller alternative layouts, and in fact contributes almost nothing to a useful discussion of alternatives in general.

Even if the analysis of the one course/one hotel options were sufficient with regard to that specific alternative – and it clearly is not, as discussed below – there remains a glaring lack of consideration of smaller alternatives, rendering the range of alternatives considered inadequate. That the scoping document specifically required consideration of a one golf course/one hotel option does not absolve the applicant from considering a full range of alternatives, including those of a smaller scale or magnitude. For example, there is no analysis of smaller sized hotels or nine-hole golf courses, although there is even discussion as an alternative of an even *larger* plan – four eighteen

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[162] SEQRA lists "scale or magnitude" as a criteria for establishing an appropriate range of alternatives. 6 N.Y.C.R.R. §619.5((v)(c).
[163] Scoping Document §5.3.
[164] *See* DEIS at 5-3.
[165] *Id.* at 5-4.
[166] *See id.* at 5-5 to 5-6.

hole golf courses – than that proposed.[167] In the subsection on "Limitations Affecting Alternatives" (which was required by the scoping document),[168] the DEIS merely asserts that the two 18-hole courses can only be built on separate sides of the site due to slope constraints.[169] There is nothing at all said – in this section or elsewhere – about the natural resource limitations rendering the desired plan unsuitable for the site, with accompanying discussion of a project on a smaller scale to more appropriately fit the site. In other words, the applicant is committed to fitting the site to the proposed project, rather than the other way around.

The Detail of Discussion of Alternatives is Insufficient

SEQRA specifies that "[t]he description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed."[170] "The degree of detail with which each alternative must be discussed will, of course, vary with the circumstances and nature of each proposal."[171] In this case, the proposed project is massive, with a litany of potentially severe impacts, as evidenced by a 7,000-page DEIS.

The scoping document specifically required that the alternative layouts to be considered include those "that consists [sic] of one golf course and one hotel complex. This discussion shall examine such an alternative in both the 'east' and 'west' areas of the project and separation of these two project elements by 'east' versus 'west' locations."[172] The discussion contained in consideration of these options in the DEIS focuses on the economic viability of the options, and ignores potential benefits.

First, the option of locating one golf course and one hotel so that each was on a separate side of the site was summarily dismissed as "not practical" and "not provid[ing] a desirable product."[173] The applicant contends such an option "is contrary to the major objective of the project," to create a four-season destination resort, and would deny guests a "sense of place."[174] Putting aside the dubiousness of this objective to begin with, merely stating here that housing and golf courses are often "combined" so that guests would be dismayed if they weren't so, hardly suffices as a detailed discussion.

With regard to the option of placing one golf course and one hotel on either the eastern or western side of the site, the applicant touts its "extensive investment" in site design and construction planning which "already minimize or avoid environmental impacts," thus supposedly obviating the need to pursue an option with far less physical

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[167] *See id.* at 5-13 to 5-14.
[168] *See* Scoping Document §5.3
[169] *See* DEIS at 5-13.
[170] 6 N.Y.C.R.R. §617.9(b)(5)(v).
[171] *Webster*, 59 N.Y.2d at 228.
[172] Scoping Document §5.3.
[173] DEIS at 5-6.
[174] *Id.*

impact.[175] Having stated this, the applicant devotes the remaining pages of discussion on this option relaying market and financial analysis showing only a fully built-out resort as a viable option.

The market analysis suggests that a successful resort in the Catskills must appeal across the socioeconomic spectrum, requiring both a 3½-star and 5-star hotel.[176] This conclusion appears to ignore a "4-star" option that could appeal to a broader segment, or perhaps a hybrid hotel wherein both luxury and family accommodations are available. Surely not every resort in the country has two separate offerings for potential guests, yet they likely attempt to attract a variety of visitors.

The market analysis cited similarly indicates that two distinct golf courses are required to attract an appropriate assortment of golfers.[177] At the outset, this analysis seems to contradict itself, by first stating the NYC metropolitan area is underserved by golf courses (necessitating two unique courses here), and then immediately stating nearby competing resorts have two or more courses.[178] The analysis also follows circular reasoning and a self-fulfilling conclusion, stating essentially that without two golf courses the lodging in two hotels cannot be filled, and that two hotels filled with guests need two courses to accommodate all the players and to allow for "shot gun starts."[179] And, as with the one hotel discussion, the argument that two golf courses are critical to attract visitors from across the socioeconomic spectrum ignores the possibility of one course that could appeal to all – as is presumably done at golf facilities across the country with just one course.[180]

Following this "analysis," the DEIS then reiterates its conclusion that "based on the extensive investment in design details and mitigation measures...the need for further consideration of the *East or West Alternative* has not been established."[181] In other words, the applicant contends that because it has spent so much on the design of its preferred plan, there is no need at all to review the natural resource benefits of an option half the size of the one envisioned.

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[175] *Id.*
[176] *See id.* at 5-7.
[177] *See id.* at 5-8 to 5-9.
[178] *See id.* at 5-8.
[179] *See id.* at 5-8 to 5-9.
[180] In fact, a cursory survey revealed several examples just in the Northeast. Villa Roma is a resort in Sullivan County, NY with one golf course and a hotel with a variety of accommodation 'levels'. *See* http://www.villaroma.com. Snowshoe Mountain, WV, a ski area similarly sized to Belleayre, has one golf course. *See* http://www.snowshoemtn.com. Killington and Okemo are both long-successful Vermont resorts with multiple hotels but just one golf course each. *See* http://www.killington.com and http://www.okemo.com.
[181] DEIS at 5-13.

The Discussion Does Not Include a No-Build, No-Action Alternative, or a Future No-Action Discussion

SEQRA specifies, "[t]he range of alternatives must include the no action alternative."[182] There are two theories of what constitutes no action; it either means no construction at all or construction only of what is authorized by zoning and prior approvals.[183] The DEIS does consider the latter type of no-action alternative.[184] However, "[f]or private actions, the law is unsettled, and a prudent project proponent may wish to describe both the no build and as-of-right alternatives."[185] The no build no-action alternative should be analyzed to form a full range of alternatives. "It is readily apparent that the no action alternative is not a reasonable objective of a private project sponsor. Yet, the effects of the no action or no-build alternative are important for assessing the severity of environmental impacts as well as for evaluating social, economic, and other essential considerations."[186]

In addition, the regulations state that "[t]he no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action."[187] This means the "EIS preparer must consider the capability of a site to environmentally improve, recover, or allow for restoration and remediation in the absence of the proposed project."[188] Indeed, the scoping document explicitly states, "[t]he no action alternative shall describe impacts of leaving the lands in their present state."[189] Nevertheless, the applicant has failed to include an analysis of the resource benefits for a no build alternative in its discussion. The DEIS instead asserts the lands would either continue to be logged, or be sold for numerous smaller piecemeal developments, and would not be protected by the development restrictions of the proposed project.[190] None of these are a true no-build, no action alternative.

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[182] 6 N.Y.C.R.R. §617.9(b)(5)(v).
[183] *See* Gerrard, Ruzow and Weinberg, *Environmental Impact Review in New York*, Matthew Bender (1995) at 5-148.4 [hereinafter *Environmental Impact Review in New York*].
[184] The DEIS addresses the 'as of right' alternative in the 'Alternative Uses' subsection, concluding that zoning would permit a 445-lot subdivision, the maximum allowable as-of-right possibility. DEIS at 5-2.
[185] *Environmental Impact Review in New York*, *supra* note 183, at 5-148.5.
[186] *Id.* (quoting Environmental Impact Assessment Committee, Environmental Law Section, N.Y. St. Bar Ass'n, *Comments of Proposed Revisions to SEQRA Regulations*, 6 NYCRR Part 617, May 17, 1985, at 64-5).
[187] 6 N.Y.C.R.R. §617.9(b)(5)(v).
[188] *Environmental Impact Review in New York*, *supra* note 183, at 5-148.7.
[189] Scoping Document §5.9
[190] *See* DEIS at 5-55.

LIST OF APPENDICES

Appendix 1 – Comments prepared by Carpenter Environmental Associates, Inc. (CEA) on behalf of Riverkeeper, Inc. (April 20, 2004).

Appendix 2 – Comments prepared by Jannette M. Barth, Ph.D., J.M. Barth & Associates, Inc. on behalf of Riverkeeper, Inc. (April 19, 2004).

Appendix 3 – Comments prepared by Cashin Associates, P.C., on behalf of Riverkeeper, Inc. (April 21, 2004).