
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION OFFICE OF
HEARINGS AND MEDIATION SERVICES

In the Matter of the State Pollutant Discharge Elimination
System Application Nos. 0-9999-00096/00005 and 0-
9999-00096/00009 for the Belleayre Resort at the Catskill
Park Property, Towns of Middletown and Shandaken

**CITY OF NEW YORK'S PROPOSED ISSUES FOR
ADJUDICATION AND SUPPORTING
MEMORANDUM OF LAW**

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Richard R. Wissler,
Administrative Law Judge

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PRELIMINARY STATEMENT

The City of New York ("City") hereby supplements its petition for full party status in the proceedings concerning the above-referenced State Pollutant Discharge Elimination System ("SPDES") Applications for the Belleayre Resort at the Catskill Park Property located in the Towns of Middletown and Shandaken. The City has petitioned for full party status to demonstrate that the Applicant does not meet the standards for issuance of the Permits by the New York State Department of Environmental Conservation ("DEC") and to challenge the sufficiency of the Project's Draft Environmental Impact Statement ("DEIS").

In its original petition for party status, submitted on April 23, 2004, the City raised nine issues regarding the Applicant's plan to construct two golf resorts in the mountainous, forested watersheds of the Ashokan and Pepacton reservoirs (the "Project"). A few of these issues were resolved during the course of the Issues Conference. A number of the serious issues raised remain, however, or else have emerged over the past eight months. As set forth below, these issues merit the scrutiny provided by an adjudicatory hearing. The purpose of

this supplemental submission is to explain these remaining issues in light of the extensive exhibits and oral presentations provided by all parties at the Issues Conference.

The remaining issues proposed by the City for adjudication are as follows:

- Issue One: The Applicant's hydrological analysis of pre-development conditions is inaccurate and does not represent the actual pre-development site conditions.
- Issue Two: The Applicant's analysis of pre-existing pollutant loading for Total Suspended Solids (TSS) and Total Phosphorus (TP) fails to consider the impacts on the actual receiving waters and seriously underestimates the pollutant loads emanating from the project site in its pre-existing condition. Consequently, the Applicant has not acknowledged the significance of, or proposed mitigation measures for, the water quality impacts that will occur once the project is complete.
- Issue Three: The Applicant's proposal to expose more than five acres of soil at one time within the watershed of the Esopus Creek, a stream already impaired by excessive sediment, creates a potentially catastrophic risk to water quality and is inconsistent with DEC's obligation under the Clean Water Act to restore the Esopus to its best usage.
- Issue Four: Key aspects of the Applicant's operation phase Storm Water Pollution Prevention Plan ("SWPPP") for Big Indian are infeasible and/or are based on flawed assumptions about site conditions.
- Issue Five: The DEIS fails to assess the impacts of reasonable alternatives and the no action alternative.
- Issue Six: The DEIS does not adequately analyze the potential adverse impacts associated with induced growth on watercourses critical to the New York City Water Supply.

The City's foremost concern in these proceedings remains water quality. Many high quality tributary streams protected under federal, State, and City law are on or near the site of the proposed Belleayre Resort. These tributaries ultimately feed the Ashokan and Pepacton Reservoirs, which together supply half of the City's drinking water.

As discussed in the context of Issues One, Two and Four, the Applicant continues to grossly overestimate the pre-development stormwater flows coming off the project sites,

thereby leading to an underestimate of the water quality impacts that the project will have in its post-development phase. These potentially serious impacts include erosion impacts from increased stormwater flows conveyed down and along valley slopes and within sensitive stream beds, as well as increased loadings of TSS and phosphorus. In addition, as discussed in Issue Three, the Applicant's proposal to expose well over 5 acres of soil at a time in the watershed of the Esopus Creek, which is already impaired from excessive sediment, has potentially severe consequences. Until these issues are fully adjudicated, the record created by the Applicant on water quality impacts remains an inadequate basis for the SPDES permits as drafted.

Moreover, the Applicant's environmental review is seriously flawed because it does not include an analysis of smaller scale project alternatives. The Applicant has attempted to circumvent the legally required discussion of alternatives by contending that smaller scale alternatives are not economically feasible. Such a blatant attempt to avoid the requirements of SEQRA is especially egregious given that the Applicant's proposed project is the largest scale Catskills development in the past 50 years. Therefore, the failure of the DEIS to analyze reasonable alternatives to the project in its entirety merits adjudication on this issue. Similarly, the Applicant's failure to analyze the potential impacts associated with the secondary growth likely to occur as a consequence of the project is a deficiency in the DEIS requiring adjudication.

LEGAL STANDARD

To be granted full party status, a party must raise issues that are both substantive and significant.¹ See 6 NYCRR § 624.4(c)(1)(iii). An issue is substantive "if there is sufficient doubt about the applicant's ability to meet statutory or regulatory criteria applicable to the project." Id. at § 624.5(c)(2). An issue is significant if "it has the potential to result in the denial

¹ The City's statement of environmental interest, which the Applicant is not contesting, is set forth in its original petition and in the presentation of Mike Principe.

of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit.” Id. at 624.4(c)(3). Furthermore, each issue raised must be supported by an appropriate offer of proof either “in the form of proposed testimony, usually that of an expert, or the identification of some defect or omission in the application.” In the Matter of the Application of Seven Springs, 2002 N.Y. Env. Lexis 42, at 14-15.

A. Standard for Issuance of SPDES Permits

A petitioner can articulate an issue that is both substantive and significant “by identifying a material defect or omission in the permit application or *its supporting documentation* that may adversely affect permit issuance.” Seven Springs at 46 (emphasis added); see also In the Matter of Broome County Department of Public Works, Decision of the Commissioner, June 11, 1984; In the Matter of Halfmoon Water Improvement Area, Decision of Commissioner, April 2, 1982. Indeed, DEC can only issue a SPDES permit after it has made “a determination . . . on the basis of a submitted application, plans, or other available information, that compliance with the specified permit provisions will reasonably protect classified water use and assure compliance with applicable water quality standards.” 6 NYCRR § 750-2.1(b). This provision requires DEC to engage in a deliberative process before issuing a SPDES permit. See Seven Springs, at 40. If the information or data provided by the Applicant is inaccurate, contrived, or incomplete, DEC cannot make the requisite rational determination that the SPDES permit provisions will protect water quality.

Here, the issues and corresponding offers of proof set forth below demonstrate that the documentation supplied by the Applicant in support of its SWPPPs does not contribute an adequate basis for concluding that the project as proposed will “reasonably protect classified

water use and assure compliance with applicable water quality standards.” 6 NYCRR § 750-2.1(b). Thus, there is not an adequate basis for the issuance of final SPDES Permits. In broad terms, the Applicant has supplied DEC with grossly inaccurate depictions of the stormwater impacts associated with its project, including impacts from erosion and pollutant loading both during and after construction. Similarly, the Applicant has overstated its ability to control or mitigate those impacts post-construction. As a result of its poor analysis of stormwater impacts, the Applicant has submitted stormwater management and erosion control plans that will not protect the quality of surrounding surface waters. Therefore, DEC cannot issue SPDES Permits for the Project based on the stormwater plans as proposed.

B. Standard for Compliance with SEQRA

When DEC, as lead agency under SEQRA, requires a DEIS be prepared, the sufficiency of that DEIS is an appropriate issue for adjudication. 6 NYCRR § 624.4(c)(i)(b). Here, the City has demonstrated through its offers of proof and throughout the course of the Issues Conference that the DEIS is insufficient, and that the adequacy of the DEIS is both a substantive and significant issue. First, each of the deficiencies in the Applicant’s stormwater analysis and stormwater management plans reflects a failure to recognize and mitigate the impacts associated with stormwater runoff from the Project. Fundamentally, the DEIS does not address the serious environmental consequences of replacing hundreds of acres of mountainous forest, which currently attenuate and ameliorate storm flows in the headwaters of two of the City’s reservoirs, with vast golf courses and associated developments. Second, the DEIS fails to analyze a reasonable range of alternatives to the Project, such as building only one of the two proposed resort complexes, in violation of 6 NYCRR § 617.9(b)(5)(v). This glaring omission undermines the very purposes of environmental review, signifying the failure of the DEIS to

provide a comparative framework in which to assess environmental impacts. Finally, the DEIS fails to provide an adequate analysis of the potential for significant adverse environmental impacts resulting from induced growth associated with the Project, particularly on watercourses critical to the New York City drinking water supply. An appropriate analysis could result in permit conditions requiring mitigation for these impacts. Each of these issues is substantive and significant under 6 NYCRR § 624.4(c).

ISSUE ONE: THE APPLICANT'S HYDROLOGICAL ANALYSIS OF PRE-DEVELOPMENT CONDITIONS IS INACCURATE AND DOES NOT REPRESENT ACTUAL PRE-DEVELOPMENT SITE CONDITIONS. THEREFORE, THE STORMWATER PROVISIONS IN THE DRAFT SPDES PERMITS, WHICH DERIVE FROM THIS FLAWED ANALYSIS, ARE NEITHER SCIENTIFICALLY SOUND NOR ADEQUATELY PROTECTIVE OF WATER QUALITY.

A. The Applicant's hydrological analysis does not represent existing onsite conditions

A hydrological analysis enables a design professional to understand both the overall proportions of rainfall that ultimately leave a site as stormwater runoff, and also the rate at which that runoff occurs over time, in relation to a storm event. That is, a site's hydrology determines (1) how much rainfall in a given event will be absorbed into the ground and detained by surface cover conditions, or will evaporate, as opposed to leaving the site as surface flow, and (2) when the peak surface flows will occur during and/or after an event, and how those flows will vary over time. See Transcript, Volume 7, at 1579-1588 (DEP stormwater expert Joseph Damrath explaining the basic parameters and functions of a hydrological analysis). A hydrological analysis produces a hydrograph for each point of concentrated runoff leaving the site, charting volume of runoff over time for a particular storm event. See Tr., Vol. 7, at 1580-1582 and City Ex. 10 (explaining the fundamental principles of developing a hydrograph). The area under the curve shown on a hydrograph is the entire volume of stormwater runoff produced

by that storm. See Tr., Vol. 7, at 1581). Developing a hydrograph that accurately represents the pre-development stormwater runoff is a fundamental part of developing a stormwater plan capable of mitigating post-development stormwater impacts. Id.

Indeed, as stated at the Issues Conference by experts from New York City Department of Environmental Conservation (“DEP”), the New York State Department of Environmental Conservation (“DEC”), and the Catskills Preservation Coalition (“CPC”), a thorough assessment of a site’s pre-development hydrology is absolutely essential to developing an SWPPP that will prevent severe water quality impacts from occurring in the post-development phase. At the Issues Conference, DEC’s stormwater expert, Patrick Ferracane, explained that

if the modeling for the predevelopment [stormwater] runoff is inaccurate, it throws off everything, and it affects the sizing of the basins. If that degree of accuracy is off significantly, it could affect the rate of discharges from the basins if they have been undersized . . . and the erosive flows from those basins or the velocity of the flows from those basins may increase erosion potential.

See Tr., Vol. 10, at 2391-2392. See also Tr., Vol. 7, at 1605 (Damrath explaining that if the analysis of pre-existing hydrology is performed incorrectly, “the rest of [the model] is built on inaccuracies and imprecise information”) and 1690 (CPC expert Dr. Paul Mankiewicz explaining that understanding a site’s pre-existing water budget is essential “to be able to really address the question of how much water and sediment is coming down.”).

Throughout the course of this Issues Conference, DEP has offered extensive proof that the Applicant’s assessments of the pre-development hydrological conditions, at Wildacres and particularly at Big Indian, are riddled with errors in several key areas, including an overestimation of pre-development peak stormwater flows, a deep misunderstanding about the

routes that stormwater travels as it leaves the sites, a miscalculation of the rate at which stormwater leaves the Big Indian site, and an ignorance of sensitive geologic and hydrological features on and adjacent to the site.

1. Overestimation of Predevelopment Flows

The Applicant's entire hydrological analysis is predicated on a gross overestimate of the volume and rate of stormwater that currently leaves the Project site, in its pre-development condition.² An accurate characterization of pre-development runoff is critical to predicting hydrological changes associated with the development and thus both to designing stormwater management plans and to assessing environmental impacts associated with the project. The Applicant's overestimation is readily apparent by comparing the pre-development outputs of the Applicant's HydroCAD model, which it used in its assessment of the sites' hydrology, with actual onsite data gathered by DEP. See City Supp. Ex. 1 at § I.a.ii.

A specific example is illustrative of the serious inaccuracies that permeate the Applicant's hydrological analysis. On September 18, 2004, Hurricane Ivan produced 5.25 inches of rain in the Giggle Hollow watershed. This event approximates the 10-year storm event, which is six inches for this region. At DEP monitoring station BELLGIG – which is where runoff from Giggle Hollow concentrates and which the Applicant has identified as Big Indian Design Point 2 DEP monitoring equipment measured a peak flow of 37.0 cubic feet per second (cfs). Id.

In stark contrast, the HydroCAD model submitted with Applicant's Exhibit 160 estimates the peak flow for a 6 inch storm event at this location to be 618.4 cfs. See App. Ex. 160, Computations, Pre-development, 10 Year Storm Event, page 8. That is, the Applicant's

² Although the Applicant used a different model, the HSPF model, to estimate the Project's impacts on pollutant loadings, the issue of the overestimation of pre-development peak flows is apparent in that model as well. See Issue Two below.

model predicts an order of magnitude more runoff than actually left the site during an actual storm under undeveloped conditions.

The Applicant disregards this vast discrepancy between HydroCAD and actual onsite conditions, claiming that such a discrepancy could be attributed to lack of wetted conditions, as well as the fact that an actual ten year storm is a full 6 inches of rain and not 5.25 inches, as was Hurricane Ivan. See App. Supp. Response 6. It seems highly unlikely, however, that an extra 0.75 inches of rain would have increased the total runoff from the storm by a factor of 16 over runoff from the first 5.25 inches. Moreover, while Carr seems to suggest that DEP's flow measurements were atypically low for a 10-year, 24-hour storm, the LA Group apparently evaluated the impacts of Hurricane Ivan differently, finding that the storm produced higher overland flow conditions on the site than they had ever seen before at the site. See App. Supp. Ex. 12, at 2. Thus, Carr's suggestion that the storm produced an unusually small volume of runoff directly contradicts the findings of the Applicant's other experts who visited the site soon after the Hurricane.

More evidence of the overestimation of pre-development flows is apparent at Big Indian Design Point 3, where HydroCAD estimates that pre-development flows from a 10 year storm event of 267.7 cfs. See App. Ex. 160, Computations, Pre-development, 10 Year Storm Event. Flows of this magnitude would result in obvious indications of erosion in the vicinity of this design point. However, DEP performed an onsite assessment of this location and discovered no evidence of conveyance structures, scour or other indicators of high flows and erosive velocities. See City Supp. Ex. 1, § I.a.ii. and the accompanying photographs, annexed thereto as Attachment A.

The vast discrepancies between actual conditions and conditions described in the Applicant's HydroCAD model strongly indicate that the Applicant has not used the model properly, and that the Applicant is not accurately representing the actual rate and volume of flows at the development sites. The Applicant has repeatedly claimed that these overestimations of the pre-development flow rates are, in fact, conservative estimates and represent a "worst case scenario" at the Project site. See App. Supp. Response 6. The Applicant further contends that this overestimation has led create an SWPPP capable of attenuating post-development peak flows from the project site to levels equal to or less than pre-development flows. See Tr., Vol. 9, 2004, at 2187 (Applicant's stormwater expert Carr explaining that, with respect to Big Indian Design Point 1, the designer of an SWPPP is "charged with attenuating flows at the design point," and "if you have 100 cfs going to a design point now and when your project's done, you have 100, the impact downstream is going to be the same.") But, because the Applicant's assumptions about pre-development runoff from the site are so grossly inaccurate, the Applicant's conclusions concerning the potential impacts from the project are unfounded, and the Applicant's design of stormwater management facilities is fundamentally flawed.

That is, while Carr claims that the SWPPP will reduce peak stormwater flows to pre-development conditions, it has been designed to reduce flows to the drastically overestimated flow conditions described in the HydroCAD model rather than to the actual flows reflected in DEP's onsite data. The Applicant has thus ignored the water quality impacts that will occur from the large increase of stormwater flows in the post-development phase.

2. *Incorrect Description of Existing Stormwater Routes and Watersheds*

In addition to misunderstanding the volume of stormwater leaving the sites in the pre-development condition, the Applicant also misunderstands the routes by which stormwater

currently leaves the sites. At the Issues Conference, DEP experts pointed to the Applicant's incorrect mapping of watersheds and choice of design points, its failure to identify of existing flow paths, and its overlooking of the significant amount of flow that passes through culverts and other conveyance structures along the railroad bed.

The most blatant examples of such flaws are seen in relation to Big Indian Design Point 1. The Applicant maintains that significant amounts of flow currently travels for a distance of 6,600 feet along the railroad bed in a 10 foot wide by 3 foot deep swale before the flow eventually leaves the site at Design Point 1. See App. Ex. 160, Computations, Pre-Development, page 3 and App. Supp. Response 6 (arguing that “[t]his existing swale within the pre-development model was described as ‘ten feet wide’ because this was the existing condition found in the field.”) As is evident from the onsite examination of the railroad bed during the Issues Conference, this enormous swale is the fictional creation of a computer model that needed to invent a hypothetical channel of this size and length to convey the pre-development flows that were theoretically moving to Design Point 1. See City Supp. 1 § I.a.i.

Moreover, flow – even at the current levels – does not travel to Design Point 1 but instead leaves the project site leaves the railroad bed via a series of existing culverts located adjacent to DEP monitoring location at BELLE2. See City Ex. 11 and Tr., Vol. 7, 1614-1622. The Applicant admits that it did not include these culverts in its hydrological model because of what its expert describes as limitations in the HydroCAD model – its inability to “carry over” the excess flow at these culverts. See Tr., Vol. 9, at 2156-2157. The Applicant's omission of these culverts in the HydroCAD model, however, is contrary to the actual existing conditions and renders the Applicant's evaluation of the hydrology in the watershed of Design Point 1 meaningless. See City Supp. 1, at I.a.i.

While Design Point 1 is the most egregious example of incorrectly routed flows, there are other design points and watersheds which the Applicant has delineated incorrectly and which have not been corrected in any of the Applicant's revisions. See, e.g., City Supp. 1, § I.a.iii and Tr., Vol. 7, at 1614 (explaining, with respect to Wildacres, that the Applicant's watershed delineations show areas draining to Design Points 1 and 2 that actually flow to a channel that travels in the direction of Fleishmanns spring house and which is tributary to Emory Brook).

Until the Applicant completely revises the design points, based upon actual onsite hydrological conditions and not on conditions manufactured by the HydroCAD model, the potential water quality impact of post-development stormwater flows cannot be identified. For example, at Big Indian, because the Applicant has not recognized the existing stormwater flows through culverts under the railroad bed, identified on City Exhibit 11, the Applicant has failed to consider the potential impacts associated with such re-routing these flows down the railroad bed in the post-development phase. See City Supp. 1, at § III(d). If the Applicant pursues its plan to re-route that water – and the significantly larger post-construction volumes that have not been correctly analyzed – down an improved swale to Design Point 1, the impacts on sensitive wetlands, erosive soils, and thus on the receiving waters, could be severe.³ Id. These severe impacts will result from the Applicant conveying stormwater at rates of up to 500 cfs through an area that does not currently receive flows even approaching these levels. Id.

Again, the Applicant's conclusions about impacts from stormwater in the DEIS, which form the basis for the stormwater provisions in the draft SPDES permits, rely on a misconception of the pre-existing conditions and thus should be rejected.

³ Design Point 1 in the post-development phase is discussed in Issue Four below.

3. *The Applicant has Incorrectly Analyzed Time of Concentration at Big Indian*

Another important pre-existing hydrological feature misapplied by the Applicant is the Time of Concentration (T_C) at the Big Indian site. As explained by DEP at the Issues Conference, T_C is the amount of time that it takes for one drop of water to travel from the most distant point in a watershed to the corresponding design point. T_C is calculated by analyzing three types of flow separately: laminar or sheet flow; shallow concentrated flow; and channel flow. See Tr., Vol. 7, at 1648. Sheet flow occurs at the uppermost section of the watershed, farthest from the design point and is the slowest component in the T_C . Next is shallow concentrated flow, which occurs when sheet flow begins to break into rivulets. Finally there is channel flow, which is the fastest component in the time of concentration and occurs closest to the design point. See Tr., Vol. 7, at 1648-1649. As indicated above, time of concentration is critical to an accurate hydrological analysis, because it determines the shape of the hydrograph. See Tr. Vol. 7, at 1585-1586.

At the Issues Conference, DEP expert Joe Damrath explained that the Applicant omitted sheet flow from its T_C analysis, thereby artificially increasing the rate of travel time currently on the site. See Tr. Vol. 7, at 1648-1649. Damrath specifically pointed out that Big Indian Plateau is a “unique” topographical feature with significant natural depressions in the topography and covered by a thick humic lawyer. Id. at 1653 (Damrath describing the humic layer and topographical depressions as observed on the site visit). These features “hold a lot of runoff or hold a lot of rainfall before it’s transferred to runoff.” Id. at 1654. Instead of analyzing the effect that this unique topographical feature may have on its hydrological analysis of Big Indian, the Applicant omitted sheet flow entirely from its analysis.⁴

⁴ As noted below, in a supplemental submission, the Applicant revised the hydrological analysis for a portion of the Wildacres site, incorporating sheet flow. Based on that limited re-calculation, the Applicant asserts that the

The Applicant repeatedly claimed that sheet flow is unnecessary in the hydrological analysis for Big Indian because sheet flow is for “urban type segments,” and should not be used in wooded conditions present at that site. See Tr., Vol. 18, at 4539. This statement is not true and directly contradicts statements made by the Applicant’s own expert during the Issues Conference. Specifically, Applicant’s stormwater expert David Carr explained that that sheet flow could occur in “wooded areas” depending on the “grade and actual condition of the site.” See Tr., Vol. 18, 2004, at 4541; City Supp. 1, § I.b.i.

The Applicant has also argued that the steep slopes present on Big Indian site would not produce sheet flow. See Tr., Vol. 18, at 4530. The topography of the plateau and its existing thick, humic cover type, both evident from the site visits, clearly creates conditions that produce sheet flow. The presence of this unique topography is supported by Damrath’s presentation at the Issues Conference and by the actual onsite conditions observed during the site visits. See City Supp. 1, at § I(b)(i). Therefore, the Applicant should have incorporated included sheet flow in the HydroCAD model for the Big Indian parcel, and without a consideration of sheet flow, the Applicant’s conclusions about the hydrology of the Big Indian site are unfounded.

Moreover, the topographical conditions on Big Indian are so unusual that, although sheet flow generally exists only for limited distances, at Big Indian sheet flow may occur over distances longer than 150 feet. See City Supp. 1, at § I(b)(i). The Applicant rejects this possibility, relying on a statement in the “*New York Guidelines for Urban Erosion and Sediment Control*” for its claim that sheet flow can never exist more than 150 feet. See Response to City Ex. 1, at 4. The Applicant’s mechanical reliance on this guidance highlights a lack of understanding of the actual site conditions and of the importance of actual conditions as

inclusion of sheet flow does not significantly affect the time of concentration. As discussed below, this conclusion is incorrect.

input for computer models. The Applicant's failure to verify the presence of unusual lengths of sheet flow due to the site's unique hydrology is akin to its failure to verify the flow data produced by HydroCAD with actual flow data gathered onsite. These failures have produced an inaccurate depiction of the site's actual hydrology. See Tr., Vol. 10, at 2385 (DEC noting that if the Applicant "artificially rais[ed] peak rate of runoff from the project, they artificially lowered their need to attenuate that.")

The Applicant's expert David Carr responded to DEP's concerns regarding the omission of sheet flow by re-running HydroCAD, using sheet flow, in order to prove that the inclusion of this parameter in the pre-development phase is unimportant. The Applicant's re-run of HydroCAD, however, is simply irrelevant to this issue because the Applicant re-evaluated only one watershed, at Wildacres. See App. Ex. 161. The majority of DEP comments regarding sheet flow concerned the unusual conditions at the Big Indian site. It is at Big Indian where the inclusion of sheet flow in the pre-development phase will reveal how slowly stormwater currently leaves the site, which is essential in understanding the changes to T_C that will occur if the Applicant drastically alters the topography and the cover type to build a golf course. See City Supp. 1, at § I (b)(i).

To construct the golf course on Big Indian, the Applicant will strip the thick humic layer from the plateau. See App. Supp. Response 6 (Carr stating that the golf holes will obviously be finely graded); see also City Supp. 1, at I (b). The existing micro-topography will be evenly graded. Drainage for the entire area will be channelized, as shown on sheets SG-8 and SG-9, in order to drain the golf course and building areas quickly. See Applicant's Plan Sheets SG-8 and 9, part of OHMS Ex. 3. This is a drastic change from the existing conditions. The Applicant, however, has not considered the effect of these changes on stormwater T_C because it

has not based its stormwater analysis on actual existing conditions. This distortion of the pre-development condition allows the Applicant to claim, incorrectly, that it is not significant altering the travel time of stormwater from the Project site. See City Supp. 1, § I(b)(i). Because, as explained above, T_C is critical to an understanding of hydrology, these errors fundamentally call into questions both the design of the Applicant's SWPPPs – particularly the plans for the Big Indian site – and also the conclusions in the DEIS concerning impacts from stormwater.

We note that the Applicant has also omitted channel flow, another key element of T_C analysis, from many watersheds at both project sites. See City Ex. 1, § I(b)(ii). As with sheet flow, channel flow is essential to evaluating hydrology. Id. In order to accurately understand the impacts of construction of the project, all elements of the existing site conditions, including sheet flow and channel flow which are essential components of T_C , must be used in the HydroCAD model, and must be characterized in accordance with the actual existing conditions.

4. *Omission of Sensitive Hydrological and Geological Features*

In its hydrological analysis, the Applicant has omitted or provided a flawed analysis of pre-existing hydrological features on and off the Project sites. These flaws and omissions are most significant in relation to wetlands and existing channels that will be affected by the Project, groundwater seeps, sensitive streambed features in Birch Creek, and existing soil lobes present along the railroad bed. Until these pre-existing features are analyzed, the impacts from the increased stormwater in the post-development phase cannot properly be evaluated. Again, this affects both the design of the proposed SWPPPs and the Applicant's conclusions in the DEIS.

With respect to wetlands and existing streams, at the Issues Conference, Damrath identified pre-existing flow paths that the Applicant omitted in its hydrological analysis. See

City Ex. 11 and 12; Tr., Vol. 7, at 1606-1616. DEP further explained that these existing flow paths are connected with wetlands on the site that will be impacted by the Project. Id. These flow paths were also observed during the Issues Conference site visits. See Tr., Vol. 7, at 1609-1610 (Damrath explaining hydrological features observed on Big Indian site visit) and 1611 (explaining hydrological feature observed on Wildacres site visit). The Applicant denied the DEP's claims, arguing that these hydrological features did not exist. It sought to disprove the existence of the flow path Damrath identified at Big Indian by showing that the flow path was not included on a USGS map for the project site. See Tr. Vol 9., at 1606. After the Applicant's presentation, however, DEC explained that it did not base its classification of hydrological features on USGS maps. See Tr., Vol. 10, at 2425. Furthermore, as indicated in Applicant's Supplemental Ex. 13, the Army Corps of Engineers revisited both Project sites and made a preliminary determination that these sites were in fact connected to the valley streams, confirming DEP's assessment of these features. The Applicant's failure to accurately assess the existence and importance of significant hydrological features indicates that the Applicant has not adequately evaluated existing flow paths and wetlands on the Project site.

Similarly, the Applicant has failed to acknowledge the exposed clay lenses within Birch Creek. See City Supp. 1, at § III (a). Understanding the existing sensitivity of these areas is essential to assessing the impacts that will result from the Applicant's plan to increase flows in Birch Creek in the post-development phase. The increased stormwater flows that the Applicant intends to discharge to these streams could exacerbate these existing conditions and cause excessive turbidity in a watershed already listed as impaired because of excessive sediment. Id.

Furthermore, there are many areas of sensitive soils off-site, in the area of Birch Creek, which will likely be affected by the proposed development. DEP has found instability in

Birch Creek and on the slopes in this area caused by a combination of anthropogenic impacts within the Birch Creek stream channel and development within the floodplain and on the lower mountainside slopes. See Tr. Vol. 8, at 1830-1831 (Damrath explaining sensitive offsite soil features on Big Indian); City Supp. 1, § III(a); City Ex. 23 and 24; and City Supp. Ex. 6 (describing soils along railroad bed which are subject to mass movement). The situation is exacerbated by the poor stability of the soil in this area and the underlying glacial-lacustrine clay deposits. Id. This combination of factors has created a very sensitive reach of stream at the base of Belleayre Mountain. Since the DEIS does not recognize the existence of these soils, their vulnerability to changes in hydrology, or the spatial and temporal changes in hydrology of the site, it does not correctly evaluate the project's potential impacts. See City Supp. 1, at § III (a).

The Applicant has attempted to contest the existence of these sensitive soils conditions by providing an analysis of a single clay lobe used as an example by Damrath at the Issues Conference. Compare Tr., Vol 8, 1830-1832 (Damrath describing soil lobe to explain “one of the ways you can identify mass movement of soil”) with App. Supp. Ex. 4 (describing Roger Case’ examination of one “area identified on City [Exhibit] 24.”). First of all, it is important to note that the Applicant’s expert did observe a “slight bulge” but simply interpreted the significance of this area differently than Damrath did. Thus, this is a classic disagreement between experts which should be resolved through adjudication. Moreover, as pointed out by Damrath in his response to Case’s assessment, the soil lobe discussed at the Issues Conference was intended as an example and, in addition to this particular feature, there are “several the active stream bank and bed erosion of these soils and their underlying clays is evident at several locations in the valley.” See City Supp. 6. Finally, the Applicant’s contention that soils in this area will no longer be affected by the project is simply erroneous, as its current operation phase

SWPPP conveys huge volumes of stormwater down the railroad bed, which is immediately adjacent to these sensitive soils.

All of these hydrological and geological features need to be identified and analyzed in order to assess the actual impacts that stormwater emanating from the Project may have on receiving water quality. Unless and until that occurs, the conclusions in the DEIS are unreliable and the SPDES permits should not be issued.

B. The Applicant's failure to perform an accurate assessment of pre-development conditions is a substantive and significant issue

The adequacy of the background hydrological data underlying the SPDES permit is substantive because it raises significant doubts about the Applicant's ability to achieve the effluent limitations and conditions set forth in the permits. Indeed, DEC agreed at the Issues Conference that if this pre-development hydrological analysis was not performed correctly, "it throws off everything." See Tr., Vol. 10, at 2391-2392. DEC went further and stated that it had concerns that the HydroCAD model is "inaccurate." Id. Because of these inaccuracies, the current SPDES permits will not protect receiving waters from degradation. This is of particular concern at the Big Indian side, because the Esopus Creek is already a 303(d) listed water impaired for its best usage due to excessive sediment. DEC expressed concerns that runoff from the project could impair Birch Creek with excessive sediment, as well. See Tr., Vol. 10, at 2389-2390. As the Applicant has not yet correctly analyzed the effects that the increase of stormwater from its project will have on these surface waters, or correctly identified the locations and rates at which stormwater leaves the site, neither DEC nor anyone else can determine the severity of these impacts. However, in light of the sensitivity of these waters and of the soils above them, DEP has consistently contended that these impacts could be significant. These concerns

expressed by DEC, DEP, and CPC cast doubt on the Applicant's ability to meet current regulatory standards regarding water quality.

This issue is also substantive in relation to SEQRA, which requires project sponsors to not only accurately assess impacts associated with their project but to analyze those impacts against the context of the existing "environmental setting." See Environmental Conservation Law §8-0109(2)(a) and the SEQR Handbook, at B-32 (stating that "each relevant environmental characteristic . . . should be discussed to a degree of detail to provide an understanding of existing environmental conditions."). By presenting a flawed, less conservative picture of the site's current conditions, the Applicant's analysis for stormwater impacts does not fully acknowledge the changes that will result after the site is developed.

This issue is significant because the permits cannot be issued unless they are supported by proper and scientifically sound scientific data regarding the site's pre-existing conditions. Moreover, the Applicant must redesign its hydrological model around an accurate depiction of the site's environmental setting.

Therefore, the Applicant's analysis of the sites' pre-existing hydrological conditions merits the intense scrutiny that adjudication provides.

ISSUE TWO: THE APPLICANT'S ANALYSIS OF PRE-EXISTING POLLUTANT LOADING FOR TSS AND PHOSPHORUS FAILS TO CONSIDER THE IMPACTS ON THE ACTUAL RECEIVING WATERS AND SERIOUSLY UNDERESTIMATES THE POLLUTANT LOADS EMANATING FROM THE PROJECT SITE IN ITS PRE-EXISTING CONDITION. CONSEQUENTLY, THE APPLICANT HAS NOT ACKNOWLEDGED THE SIGNIFICANCE OF, OR PROPOSED MITIGATION MEASURES FOR, THE WATER QUALITY IMPACTS THAT WILL OCCUR ONCE THE PROJECT IS COMPLETE

A. The Applicant's pollutant loading analysis fails to accurately account for impacts to receiving waters

The function of a pollutant loading analysis is to compare the amount of pollutants leaving the site in its pre-developed conditions with the amount of pollutants leaving the site after the land use changes have been made and anthropogenic stormwater controls have been put into place. Therefore, as with the hydrological analysis, the pollutant loading analysis requires the modeler to develop a representative assessment of the pre-development conditions in order to accurately account for the impacts that will occur pre to post-development. See Tr., Vol. 7, at 1595 (DEP expert Timothy Negley explaining basic functions of pollutant loading model. Factors critical to this analysis include (1) an assessment of the peak flows currently leaving the site; (2) the amount and type of pollutants currently leaving the site; and (3) the land use changes (cover type) that will take place in association with the development. Id. at 1590-1596 (describing basic elements of pollutant loading model).

As indicated by DEP and others, an accurate assessment of the pollutant loading impacts is very important because this analysis will likely underlie key conditions set forth in the permit, such as effluent limitation, monitoring requirements, and revisions of the Total Maximum Daily Load. See Tr. Vol. 10, at 2424 (DEC stating that “the limitations in the SPDES permits and the proposed revision to the TMDL are based on the outcome” of the Applicant's

pollutant loading model). The applicant's undertaking of this extremely important analysis is inaccurate in several important respects.

1. *The Applicant has analyzed impacts from increased pollutant loadings on too large a scale, thereby overlooking impacts that occur in sensitive upstream tributaries*

Both Draft SPDES permits contain outfalls for direct discharges of stormwater to local streams. The Wildacres SPDES permit provides for twelve direct stormwater discharges to several unnamed tributaries of Emory Brook. See Draft Wildacres SPDES Permit, at 3. The Big Indian SPDES permit provides for four direct stormwater discharges, one each to Woodchuck Hollow and Lost Clove Brook, and two to Birch Creek. See Big Indian Draft SPDES Permit, at 3. However, despite the direct discharges to these surface waters, and despite the high quality of the water currently draining from the site into these tributaries, the Applicant completely overlooks the potential for significant impacts in these waters, instead focusing its pollutant loading impact analysis on large watersheds where local impacts appear negligible.

The Applicant's HSPF model assesses potential pollutant loading impacts on a scale of 27,000 acres for the Big Indian site and approximately 21,000 acres for the Wildacres site. See Tr., Col. 18, at 4608. By using these enormous study areas, the Applicant concludes that, while there will be some pollutant loading impacts on local stream bodies, these impacts will be diluted in the context of the larger watersheds. As explained by the Applicant's expert Scott Lowe, the results of the HSPF model showed that "[w]hen you go up to the upper reaches where you are at the real small watershed, then you see a change . . . But then as you go down, the change is very hard to detect [as it is] getting lost in the volume of material coming from elsewhere." Tr., Vol. 18, 4633-4634. Lowe went on to state that the impacts to these waters will result from increased loads of TSS in the post-development. See Tr., Vol. 18, at 4626 (Lowe stating that the HSPF model projects "more TSS loadings. . . in the upper reaches of the

watershed where the effect is going to be most felt.”) In its full report on the HSPF model, Lowe again acknowledged that there will be water quality impacts to the local receiving waters, but vaguely dismissed such impacts because “in most cases the differences are not large.” See App. Supp. Ex. 1.

The Applicant’s macro-watershed approach to analyzing impacts to water quality fails to account for or take seriously the importance of analyzing impacts of pollutant loads to local upper stream water bodies. Because impacts from land use changes are cumulative, “local impacts must be evaluated carefully in order to properly review their overall environmental impacts.” See City Supp. Ex. 3. For the Applicant to conclude that water quality impacts from its Project could only be considered significant if the change would result in perceptible pollutant loadings in the ultimate receiving water bodies would lead to the manifestly incorrect conclusion that most land use changes do not significantly affect water quality at all. Id. The Applicant’s analysis is even more inappropriate considering its plans to directly discharge stormwater to these upstream waters. Indeed, the Applicant even acknowledges that these discharges will cause water quality impacts, which in some cases may be large. See App. Supp. Ex. 1 (Lowe stating that there will be impacts to upstream receiving waters, but in “most cases the difference will not be large”) (emphasis added).

The Applicant has openly refuted DEP’s assertion that it must analyze the localized impacts, stating that “DEP’s focus on water quality should be on the ultimate receiving waters, that is, the reservoirs that they operate as their water supply system, as well as upstream impacts where they are significant.” See App. Supp. Response 9. However, the Applicant’s current pollutant loading model makes it impossible for DEP or any other regulatory agency to analyze the impacts to upstream waters as the Applicant has focused its impact analysis on

enormous watersheds and ignored or summarily dismissed the impacts to the smaller upstream water bodies. See City Supp. Ex. 3. It is the Applicant's responsibility in this process to provide such an assessment of receiving waters, not DEP's, and until it does so, its pollutant loading analysis does not provide an adequate basis for the Draft SPDES permits.

The macro-watershed approach taken by the HSPF model is also unacceptable from a regulatory perspective. The SPDES permit regulations require applicants for individual stormwater SPDES permits to provide DEC with a "description of the outfall configuration for each outfall [with] sufficient information so that the Department can analyze the effect of the discharge on the receiving waters." 6 NYCRR § 750-1.7. Thus far, however, the Applicant has not presented a sufficient analysis of the pollutant loading impacts that will occur at the location of the outfalls in the Draft SPDES permit. The Applicant has provided no indication of where and at what level these significant pollutant impacts will occur, thus it has provided no information that can be used to develop numerical effluent limitations for the proposed stormwater outfalls that can be assured to protect the quality of the receiving waters. Perhaps as a result of this lack of information, there are no effluent limitations for the outfalls in the Big Indian SPDES permit. See e.g., Big Indian Draft SPDES Permit (containing no effluent limitations for TSS despite being located in the watershed of water bodies impaired for sediment). Again, instead of providing such useful information, the Applicant simply contends that these local impacts do not matter.

The Applicant's failure to provide this information is especially alarming given the high quality of the stormwater currently draining into these receiving streams. DEP expert Charles Cutietta-Olson has provided a thorough and fact-based accounting with respect to the existing quality of the water draining into the small water bodies that will be impacted by the

Project. See City Supp. 2 and 3. DEP flow data indicates that existing TSS and TP loads in these receiving waters are incredibly low. See City Supp. 2, Tbls. 5 and 6. In addition, DEP's analysis of water collected at its monitoring stations indicated that "sample turbidities were among the lowest they had ever analyzed, even lower than turbidities from the microfiltered wastewater treatment effluents at the City-owned wastewater treatment plants in the area." See City Supp. 3. The high quality of this water is particularly evident at the Big Indian Project site and is perhaps a result of that sites unique plateau topography and thick humic layer. See, e.g., City Supp. 2, Tbl. 6 (indicating existing TSS concentrations from the Project site are currently between 0.28 and 13.35 milligram per liter).

In response to DEP's assessment of the high quality of water currently draining from the Project sites, particularly at Big Indian, the Applicant's makes unsupported and unspecific allegations that the quality of these waters is not actually as high as DEP maintains. See App. Supp. Response 9. For example, without any supporting citation or data, the Applicant blankly contends that DEP data indicates "rapid responses" in water quality and that there have been spikes of turbidity in the waters on the Wildacres portion of the project site. As DEP made clear, however, the pollutant loadings in both base flow and storm flows leaving the project site are unusually low for the area. See City Supp. 2 and 3. The Applicant also engages in unsupported hypothesis when it discounts DEP's discussion of interflow on the Big Indian site, however the Applicant again provides no proof of its theory other than a one sentence assertion. The weakness of this response is an indication that the Applicant has not made an actual assessment on the impacts that will occur to the receiving waters.

Furthermore, in addition to ignoring the high quality of the water coming off the Project site, the Applicant's HSPF model also makes no mention of the sensitivity or water

quality standards in the receiving waters themselves. See City Supp. 1, at § III(a). For instance, the Applicant does not provide any analysis of how increased loads of TSS to Birch Creek could exacerbate the turbidity problems which are currently a result of sensitive stream bed features in that water body. This is a serious consideration which must be analyzed, especially because it takes place within the watershed of a stream impaired for sediment. See Tr., Vol. 2311, at 2390 (DEC stating that, “Introducing artificial or man-induced erosion potentials into those watersheds for [the Ashokan and Esopus] [which are impaired because of stream bank erosion] significantly could affect our ability to now restore it to what it should be or to maintain what it already is.”).

Until the Applicant revises its analysis to provide an indication of what impacts will occur in these receiving streams, it should not be permitted to discharge its stormwater into them. Moreover, as discussed further below, it is very likely that the increase of TSS and phosphorus loads to these waters will be far greater than the Applicant has calculated using its HSPF model.

2. *The Applicant has overestimated pre-development TSS loadings emanating from the Project sites*

The accurate assessment of TSS impacts is of special concern at the Big Indian side, as the Esopus Creek is listed as a water body that is impaired for its best usage due to excessive sediment on New York State’s 303(d) list. In addition, there are highly erodible soils and sensitive stream bank features in or above Birch Creek which are vulnerable to increases in peak flows that will result in additional sediment export and further impairment of the Esopus. See City Supp. 1, at § III(a).

If a water body is included on a state’s 303(d) list, the state is required to develop a Total Maximum Daily Load (TMDL) for the pollutant of concern. See 33 U.S.C. § 1313(d),

Clean Water Act § 303(d).⁵ If a TSS TMDL were already in place for the Esopus Creek, it would necessarily include a mechanism for appropriately analyzing and regulating the sediment contributions from the Project in the context of the overall water quality issues in the basin. In the absence of a TMDL, however, the Applicant and DEC bear the burden of carefully evaluating the potential erosion and sedimentation impacts from the Project, during and after construction. See Tr., Vol. 10, at 2389-2390 (discussing the absence of TMDL for sediment).

However, although an accurate assessment of TSS loads are essential to ensure the protection of surface waters from the pre to post-development phase, the Applicant significantly overestimates the volumes of pre-development stormwater flows and, correspondingly, TSS loads in the pre-development phase.⁶ By overestimating these loads in the pre-development phase, the Applicant has been able to deny that significant impacts to surface

⁵ In particular, Section 303(d) of the Clean Water Act requires each state “to identify those waters in its boundaries for which . . . effluent limitations . . . are not stringent enough to implement any water quality standard applicable to those waters.” See 33 U.S.C. § 1313(d)(1). After a waterway is identified under Section 303(d), the state must then determine a Total Maximum Daily Load of the pollutants that can be discharged in order to achieve “the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.” Thus, when a water body is classified as impaired under State 303(d), a state must adopt a TMDL that not only ensures that the water body will not degrade further, but a TMDL that is strict enough to restore the water to its classified use. See id. § 1313(d)(1)(A) (stating that state must establish TMDL “at a level to implement the applicable water quality standards”); see also Tr., Vol. 10, at 2390 (DEC stating “it is our mandate to not only maintain the best use of a water body but restore it.”). This mandate applies whether DEC is issuing an individual SPDES permit or authorizing a discharge under the SPDES General Permit for stormwater from construction activities. See GP-02-01, Part 1.A (stating that no discharge will be authorized under the general permit if it violates water quality standards, including the standard that “[t]here shall be no increase in suspended, colloidal and settleable solids that will cause deposition of impair the waters for their best usage.”)

The Ashokan Reservoir, classified by DEC as a AA(T) water body, and its tributary the Esopus Creek, classified as an A(T) water body, are both identified on the State’s 2004 303(d) list of impaired waters for silt and sediment. The current source of this pollutant is stream bank erosion. Birch Creek, the stream directly adjacent to the Big Indian Project site and a major tributary of the Esopus, is currently classified as a B stream and is not listed on the 303(d), although DEP has observed numerous erosive features in Birch Creek’s stream bed. The Big Indian project site is within the drainage areas for these three water bodies and will directly affect their water quality, especially with respect to Birch Creek and the Esopus. For instance, the Applicant’s current Draft SPDES permit for Big Indian contains direct outfalls of stormwater into Birch Creek and one of these outfalls, pond 100, is in the vicinity of the location where Birch Creek flows into the Esopus.

⁶ This peak flow issue, while similar to the one raised regarding HydroCAD, relates here to pollutant loading and not to the impacts caused by high volumes of flows, as was discussed in Issue 1 above.

waters will occur when the site is developed.⁷ In the section entitled “Verification,” the Applicant’s expert compares what is supposed to be a calibrated version of the HSPS model against actual onsite data gathered by DEP. See App. Supp. Ex. 1. The verification results displayed in the graphs, however, reveal that the HSPF model consistently overestimates the flow and TSS concentrations at both the DEP monitoring stations (see e.g., graphs for BELLELOST), and at Birch Creek, which is a USGS monitoring station. The Applicant then used the overestimated results to compare the pre to post development pollutant loads. Had the Applicant used the onsite pollutant loading for this comparison, the impacts between pre and post development impacts would have been much greater. Because the Applicant has used unrepresentative pre-development pollutant loads, the actual impacts to the Project have not yet been identified in this model.

3. *The Applicant has overestimated pre-development phosphorus loadings emanating from the Project sites*

Similarly, the Applicant’s calculations of phosphorus loadings from the Project site are incorrect and must be revised. Although neither the Ashokan nor the Pepacton is currently impaired by phosphorus, the Applicant’s analysis of phosphorus is critical for setting not only the effluent limitations in the SPDES permits, but also the proposed revisions of the TMDLs for both reservoirs. See Tr. Vol. 10, at 2424. The Applicant concludes that current, pre-development annual phosphorus loads from the pre-development project site are in excess of 500 kilograms per year for the Delaware side and over 1100 kilograms per year from the Big Indian side. In contrast, had this load been calculated using DEP’s flow data rather than flow data derived from its model, the annual phosphorus load from both sites would have been more than

⁷ This issue is analogous to Issue 1, as both issues involve the Applicant’s mischaracterization of existing stormwater conditions at the site, resulting in an underestimate of the water quality impacts of the Project.

approximately an order of magnitude less the figure derived by the Applicant. See City Supp. 2, at Table 5. Thus, as with TSS, the Applicant overestimation of phosphorus in the pre-development phase conceals the impacts that will actually result from the increase of phosphorus in the post-development phase.

4. *The Applicant has not used all available DEP data in calibrating and verifying the HSPF model*

The issue of model calibration was widely discussed this summer in relation to the Applicant's modeling of pollutant loads. While the Applicant is now using a different pollutant loading model, this issue remains relevant, as the Applicant has not used all available DEP onsite data to calibrate its HSPF model to represent actual site conditions.

The Applicant denies this, stating that the HSPF model "used all sampling data collected . . . that were provided by DEP through the LA Group." See App. Supp. Response 9, at 1 ("DEP used all sampling data collected during the model calibration period (April 2001 – March 2002) that were provided by DEP through the LA Group."). The Applicant has only, however, used sampling data collected from April 2001 to March 2002. DEP provided the Applicant with sampling data extending through 2003. Therefore, the Applicant should have used this onsite information to calibrate and verify the results of its HSPF model.

B. The Applicant's failure to accurately assess pre-development pollutant loads from the project site is a substantive and significant issue⁸

The Applicant's failure to accurately analyze the potential pollutant loading impacts emanating from the Project site is a substantive and significant issue.

First, the Applicant's reliance on a model that does not fully and accurately assess impacts to the receiving waters is contrary to the requirements of both SEQRA and 6 NYCRR

⁸ Although phosphorus and TSS are presented as a single issue for briefing purposes, the issues are not dependent on each other. Thus, the court may find an adjudicable issue for one pollutant and not the other.

§ 750-2.1(b) as the Applicant has failed to assess the water quality impacts that the Project will have at the location of the permitted outfalls. Both SEQRA and the SPDES permit regulations require the Applicant to assess the discharge's water quality impacts in the receiving water into which there will be an outfall. As stated in subpart A above, the SPDES permit regulations require applicants for individual stormwater SPDES permits to provide DEC with a "description of the outfall configuration for each outfall [with] sufficient information so that the Department can analyze the effect of the discharge on the receiving waters." 6 NYCRR § 750-1.7.

Similarly, SEQRA requires a description of the "environmental setting" of the project "sufficient to understand the effects of the proposed action." 6 NYCRR § 617.9(b)(5)(ii). In other words, SEQRA requires project sponsors to develop appropriate study areas when analyzing their project's impacts. Some key consideration in establishing an appropriate environmental setting for analyzing the impacts caused by a point source discharge are "the baseline concentrations of those [pollutants] in the water [and] the assimilative capacity of the receiving waters." *See Gerard, Ruzow, and Weinburg, Environmental Impact Review in New York*, § 5.07[2].

The Applicant's HSPF model falls far short of either regulatory requirement because it analyzes the water quality impacts on enormous scales, thereby ignoring the impacts that will be felt in the upstream water bodies. The Applicant must redirect the focus of its analysis on these smaller, impacted streams.

The issue of inaccurately assessed pollutant loads is also substantive because it directly relates to the Applicant's ability to comply with existing water quality standards. The Applicant's proposal to discharge stormwater from point sources at Big Indian will, by its own admission increase TSS loads in waters entering the Esopus. Some of these points sources, such

as Big Indian pond 100, will discharge directly to the surface waters—however the Applicant has not yet provided a detailed assessment of impacts to these surface waters. In addition, the Applicant’s incorrect assessment of phosphorus is substantive because it affects the Phase II TMDL for the New York City Watershed. The Applicant’s overestimation of the pre-development loads leads to an underestimation in the additional load allocated for the Project. While the Applicant will undoubtedly contend that such impacts do not matter, DEC, the agency responsible for revising the TMDL, made clear at the Issues Conference that model accuracy is essential to the revision of the TMDL and to the effluent limitations in the Draft SPDES permit. See Tr. Vol. 10, at 2424 (DEC stating that it is not acceptable to base effluent limitations and TMDL revisions on flawed or inaccurate models). The revised TMDL is still based upon a pollutant loading model that overestimates pre-development phosphorus loadings which in turn conceals the actual increase in phosphorus that will occur from pre to post development.

These issues are significant because they would require modifications of the Draft SPDES Permit and of the TMDL Revisions. They also require the Applicant to re-perform its analysis of pollutant loadings.

ISSUE THREE: THE APPLICANT’S PROPOSAL TO EXPOSE MORE THAN FIVE ACRES OF SOIL AT ONE TIME WITHIN THE WATERSHED OF THE ESOPUS CREEK, A STREAM ALREADY IMPAIRED BY EXCESSIVE SEDIMENT, CREATES A POTENTIALLY CATASTROPHIC RISK TO WATER QUALITY AND IS INCONSISTENT WITH DEC’S OBLIGATION UNDER THE CLEAN WATER ACT TO RESTORE THE ESOPUS TO ITS BEST USAGE

A. Overview of the Regulatory Framework

DEC’s “SPDES General Permit For Stormwater Discharges from Construction Activity,” or GP-02-01, which is incorporated by reference into both the Wildacres and Big Indian Draft Individual SPDES Permits, provides that “there shall not be more than five (5) acres

of disturbed soil at any one time without prior written approval by the Department.” GP-02-01 Part III.D.2(4). Despite this limitation, both the Draft Big Indian SPDES Permit and the Draft Wildacres SPDES Permit contain Special Conditions for Construction Phasing which would allow the Applicant to expose far more than 5 acres at one time during construction. These Special Conditions incorporate by reference construction phasing plans set forth in specified drawings submitted by the Applicant, which in turn designate areas substantially larger than 5 acres to be exposed at any given time during the construction process. See e.g., Big Indian Draft SPDES Permit, at 17-18 and Wildacres Draft SPDES Permits 22-23.

The phasing would allow the Applicant to expose between at least 12 and 16.4 acres of soil at one time on Big Indian, although the Applicant’s expert admitted that there is a distinct possibility that 25 acres of soil will be exposed during Phase 3 at the Big Indian side and during the construction of Wildacres. See Tr., Vol. 9, at 2094-2100 and 1215 (regarding the amount of exposed soils, Applicant’s expert Kevin Franke stating, “It’s not to say it couldn’t possible be higher [than 16.4 acres] for either Phase 3 or one of the phases in Wildacres.”)

Notably, in its presentation at the Issues Conference, DEC explained that, despite the inclusion of these Special Conditions in the Draft SPDES Permits, it had not yet made a determination as to the environmental feasibility of exposing more than 5 acres on this Project site. DEC expressly stated that “[w]e still have to agree that environmentally it’s feasible that they can do this.” See Tr., Vol. 10, at 2357. Instead of environmental considerations, DEC based its inclusion of the Special Conditions for Construction Phasing on the Applicant’s concerns about of the “technical and economic feasibility of constructing the Project[.]” Id. DEC indicated that it would make its determination regarding the environmental feasibility of the Applicant’s proposal after the Applicant had submitted more detailed design plans,

presumably 60 days before construction is to begin in accordance with the general permit. See Tr., Vol 10, at 2378 (DEC expert Patrick Ferracane stating DEC’s intention to make its environmental determination regarding the phasing plans as soon as 60 days before the start of construction). Thus, it appears from DEC’s statements that it does not intend the Special Conditions for Construction Phasing to constitute as the formal written waiver which would allow the Applicant to expose more than 5-acres at one time.

While it is unclear when DEC intends to make its final determination about whether the construction phasing proposed by the Applicant is environmentally feasible, the water quality impacts that could result from such a waiver are appropriately part of this Issues Conference and any subsequent adjudicatory proceedings because the Special Conditions for Construction Phasing are included in the Draft SPDES Permits. See Tr., Vol. 10, at 2354 (stating, in reference to the 5-acre standard, “there are a number of [design standards] incorporated into the individual permit.”). Moreover, DEC cannot issue a SPDES permit containing the Special Conditions for Construction Phasing until it makes a determination regarding the environmental feasibility of the Applicant’s proposal to expose more than 5-acres at one time in the watershed.⁹

B. The issue of the waiver from the 5-Acre standard in the construction of Big Indian is substantive because construction as proposed could contribute to further violations of water quality standards in Birch Creek, Esopus Creek, and the Ashokan Reservoir

The Applicant’s proposal to expose over 5 acres of soil on the Big Indian site is “substantive” because such extensive exposures threaten to further impair a water body listed on New York State’s 303(d) as impaired because of silt and sediment caused by erosion.

⁹ At a minimum, DEC must revised the SPDES permits to make clear that they do not, in advance of specific authorizations based on detailed construction drawings, constitute waivers of the 5-acre limitation.

As discussed in connection with Issue 2 above, although DEC has not yet established a TMDL for sediment to restore these water bodies to their best uses, DEC is obligated to ensure that these impaired surface waters do not suffer further degradation from sediment and must take measures necessary to restore these waters to their water quality classification. At a minimum, given that the Big Indian Site drains into the Esopus Creek, and that it is characterized by steep slopes and highly erosive soils, DEC should not issue a SPDES permit authorizing substantial land disturbance without first making a carefully considered and well-supported determination that the project as proposed will not further impair the Esopus. See Tr., Vol. 10, at 2362 (DEC stating that its main concern on the Project site are the “severity of the slopes” and the “clay soils.”)

The Applicant’s proposal to far exceed the 5-acre standard within the drainage areas of these impaired waters clearly creates a distinct risk that these waters will suffer additional significant sediment loads during the Big Indian construction phase. The erosivity of the soils affected by the project and the steep topography of the project site create a situation where severe erosion impacts could occur if such large areas of soil are exposed. Furthermore, the feasibility of installing effective erosion controls over such a wide swath of land and on such difficult terrain is questionable. See Tr., Vol. 8, at 1860 (explaining inherent difficulties of installing advanced erosion controls on steep 25 acres terrain). In addition, the Applicant’s failure to address the sensitivity of offsite soil features and streambed features, and how they might be affected during the construction phase, leaves many critical erosion impacts of the project unaddressed. See City Supp. Ex. 1, § III(a); and Tr., Vol. 8, at 1822-1831 (explaining the Applicant’s failure to identify soil lobes and highly erosive soil types which will be affected by the project).

Concerns about the Applicant's proposal to deviate from the 5-acre standard have been raised by a number of parties. Indeed, DEC, the agency obligated by the Clean Water Act to identify and protect 303(d) listed waters, stated that "this amount of disturbance certainly increases the potential for water quality impacts and increases the risk . . . particularly in this area because of the environmental [sic] sensitive issues." See Tr., Vol. 10, at 2388. In addition, DEC stated that potential impacts that could result from the exceeding the 5-acre standard included impacts to the New York City water supply and impacts to the trout spawning streams, each part of the best uses set forth in the AA(T) and A(T) water quality standards. Id.

DEC also expressed significant concerns that the Applicant's proposal to exceed the 5-acre standard could interfere DEC's regulatory obligations under section 303(d) when its expert stated, "Introducing artificial or man-induced erosion potentials into those watersheds for those [Birch Creek and Esopus Creek] could affect our ability to now restore it to what it should be or to maintain what it already is." See Tr., Vol. 10, at 2390. Identical concerns regarding the Applicant's proposal to exceed the 5-acre standard have been raised in DEP's offer of proof, as well as in both EPA and the Watershed Inspector General's comments on the DEIS and Draft SPDES Permits. See Tr., Vol. 10, at 1859-1864; see also OHMS Ex. 5 (EPA Comments on Draft Environmental Impact Statement) and CPC Ex. 56.

Thus, as the regulators and other concerned parties have noted, the Applicant's proposal to disturb large areas of soil in a naturally fragile and already impaired watershed threatens to further degrade water quality in Birch Creek at a minimum, if not also Esopus Creek and the Ashokan Reservoir. Furthermore, the specific doubts expressed by DEC, the agency responsible for administering the 303(d) program, would clearly suggest the need to take a close

look at the efficacy of the Applicant's plans in relation to the sensitivity of the 303(d) listed waters affected by the Project.

C. The issue of the waiver from the 5-Acre standard in the construction of Big Indian is significant because it may require a substantial modification of the Applicant's construction phasing plans

The issue of the 5-acre standard is "significant." As discussed above, DEP and other concerned parties have demonstrated that the waiver of the 5-acre rule poses significant environmental risks, particularly at the Big Indian site, and thus that the waiver included in the draft permits should be removed. This would constitute a significant additional condition. Indeed, the Applicant represented at the Issues Conference that it would be unable to proceed with the project as planned if it were required to comply with the 5-acre standard because construction of the golf courses would be too expensive and too technically difficult in such small increments. See Tr., Vo. 9, at 2075 (Applicant's attorney Terresa Bakner stating that "the amount of soils we are disturbing at any one time are the absolute minimum that anyone should disturb and still build a golf course"). Accordingly, the resolution of this issue could result either in substantial additional permit conditions or in a substantial modification of the project as proposed. The issue is therefore significant. 6 NYCRR § 624.4(3).

ISSUE FOUR: KEY ASPECTS OF THE APPLICANT'S OPERATION PHASE SWPPP ARE INFEASIBLE AND/OR ARE BASED ON FLAWED ASSUMPTIONS ABOUT SITE CONDITIONS¹⁰

A. Certain critical aspects of the Applicant's operation phase SWPPP are infeasible, inaccurate, and could lead to water quality degradations in 303(d) listed waters, additional outfalls, and/or changes to the Draft SPDES Permits

A key aspect of the Applicant's stormwater plan for Big Indian is its conveyance of large quantities of stormwater down the railroad bed to large pond located in the vicinity of Design Point 1. There are three fundamental problems related to this conveyance that could result in adverse impacts to water quality which the Applicant failed to address in the DEIS or its Application for a SPDES Permit.

The first problem is the Applicant's inability to safely convey stormwater down this conveyance in the 100 year storm event without creating significant adverse erosion impacts to sensitive receiving waters. The Applicant is required to prove safe conveyance under GP-02-01, which is incorporated by reference into the Big Indian Draft SPDES permit. Applicant Ex. 160 lists HydroCAD model output predictions for the 100 year, 24 hour storm event along the railroad bed as 419.4, 574.3 and 555 cubic feet per second through reaches 97, 98 and 99, respectively. See App. 160, Computations, Post-Development, Big Indian Resort and Country Club, page 82 and City Supp. 1, at § III(b). This huge volume of flow then discharges to pond 100, located at Design Point 1, which is shown to discharge at 700.4 cfs. Such large and fast moving conveyances of stormwater in an area with sensitive soils and geological features, which

¹⁰ As a result of the presentations made by DEP and DEC at the Issues Conference, the Applicant substantially revised its operation phase SWPPP for the Big Indian Project. In particular, the Applicant revised its original plans showing discharges from several stormwater ponds as overland flow to acknowledge and provide design details for several point source outfalls. These improvements, however, fail to resolve certain inherent flaws in the operation phase SWPPP, discussed below.

the Applicant has yet to acknowledge in its environmental review, could certainly cause large loads of sediment to be deposited in Birch Creek, and then into the 303(d) listed Esopus. See City Supp. 1, at § III(b).

Despite this sensitive area and this large volume of stormwater, the Applicant has admittedly not provided any details or plans for this swale. In response to questioning by the ALJ about the railroad conveyance, the Applicant's expert stated, "the design along the railroad track needs to be completed." Such vagueness about this extremely difficult conveyance reflects a failure to recognize the potential for, let alone mitigate, significant adverse impacts to water quality. This is not merely a question of timing. The Applicant has indicated on a number of occasions that it will prepare detailed plans in the future. See e.g., App. Supp. Response 6 (Carr stating "Again, the Applicant plans to repair the washouts and improve the existing swale, pursuant to detailed design drawings, which would be approved by DEC, and by pass the existing culverts, many of which are undersized to carry the existing flows.") As the City and others have explained, however, while detailed construction drawings are not required at this stage for all aspects of the Project, where a proposed structure, such as this conveyance, poses an inherent threat to water quality, the Applicant has an obligation to take a hard look at its feasibility. See Tr. Vol. 8, at 1809-1812; City Supp. 1, at § III(b).

The second problem related to this conveyance is Pond 100 itself. This 5000 foot² terminal pond for the railroad swale, which would convey up to 700 cfs of stormwater into Birch Creek and which has not yet been designed by the Applicant, is listed as an outfall on the revised Big Indian SPDES Permit. When specifically asked at the Issues Conference where the stormwater goes after it leaves pond 100, the Applicant's expert David Carr gave vague answers such as "it does go somewhere" and "[I]t moves as it does today. We're not changing any of

that.” See Tr., Vol 9, at 2187-2188. As with the conveyance itself, the Applicant has an obligation to undertake a detailed study of such an inherently problematic structure in connection with the environmental review of the project, not merely at the construction stage. Moreover, as discussed in Issue 1 above, the stormwater does not flow to Design Point 1 in the existing conditions, but leaves the site via culverts along the railroad bed. See City Supp. Ex. 1. Thus, as a result of these significant changes, the Applicant should be required to provide details of not only the swale, but of this terminal pond. See City Supp. 1, at § III.b.

The third problem related to this swale is that the Applicant proposes to use it only for treated stormwater from the upstream micro-detention ponds and not for the untreated, sediment-laden stormwater which will be coming from the mountainside. The DEIS suggests that any small ephemeral streams, intermittent drainage ditches, or washouts of the railroad ditch will be intercepted and bypassed in order to maintain separation of stormwater runoff and any existing streams. See DEIS, App. 9A, at 61 and Tr. Vol. 8, at 1810-1812. Given the huge volume and velocity of this discharge, this separation of clean flow from sediment-laden flow is infeasible. In addition, due to the sensitivity and erodability of the soils above the railroad track, there is a distinct possibility that large movements of soil will block the railroad bed conveyance, causing the conveyance to fail entirely. See Tr., Vol 8, at 1810-1812. Again, the impacts from sediment to the sensitive receiving waters could be extreme.

Before an outfall is permitted for this swale and pond, the Applicant must provide detailed schematics to prove the feasibility of its plan in light of the sensitivity of the surrounding area. Until that occurs, an outfall in the vicinity of pond 100 is inappropriate.

B. The issue of the railroad bed conveyance is substantive and significant

The impacts from large volumes of stormwater traveling at erosive velocities through a sensitive area in a swale that has not yet been designed are substantive because such discharges could contribute to violations of water quality standards in the receiving waters. This questionable conveyance could result in discharges of large amounts of sediment to these waters. Moreover, pond 100, which is proposed to receive stormwater from the swale and discharge it at erosive velocities into Birch Creek, is listed as an outfall in the revised SPDES Permit. These discharges must be evaluated before the SPDES permit is issued. This conveyance is questionable due to the extreme difficulty of constructing a swale that would separate clean water from stormwater. See *Seven Springs*, at 58 (ruling that likelihood of stormwater control to fail is a substantive and significant issue). Therefore as this issue relates to the Project's impacts on existing water quality standards is substantive. This issue is also significant because it may require the Applicant to re-design a substantial part of its design plan, i.e. the railroad bed conveyance. If the Applicant performs this analysis and determines this conveyance is not feasible, it will have to find an alternative method of safely conveying these large amounts of stormwater from the Project site.

Therefore, the environmental impacts and feasibility of this railroad bed conveyance are appropriate for adjudication.

ISSUE FIVE: THE DEIS FAILS TO ASSESS THE IMPACTS OF
REASONABLE ALTERNATIVES AND THE NO ACTION ALTERNATIVE

Pursuant to SEQRA, the Applicant must provide a “description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed.” 6

NYCRR § 617.9(b)(5)(v). The Applicant, however, has failed to provide DEC with a reasonable range of alternatives to consider in evaluating the environmental impacts of the Project. See OHMS Ex. 7 (the “City Petition”), pp. 38 – 44. Rather, the DEIS improperly relies on an Economic Evaluation Study to conclude that elimination of either of the two central components of the proposed development (Big Indian Plateau or Wildacres Resort), or any of the other major components contained therein, is unfeasible. See OHMS Ex. 3 (the “DEIS”), Section 5.3.4; Appendix 27. Therefore, the DEIS is inadequate and must be revised to include an environmental assessment of reasonable alternatives, including, but not limited to, elimination of the Big Indian component of the Project and the no action scenario. See Sun Company v. City of Syracuse Industrial Development Agency, 209 A.D.2d 34, 50, 625 N.Y.S.2d 371 (4th Dep’t 1995), *app. dismiss’d*, 86 N.Y.2d 236 (1995) (EIS failed to comply with SEQRA where there was no meaningful consideration of alternatives).¹¹

The review of alternatives has been characterized as the “heart of the SEQRA process.” Shawangunk Mountain Environmental Ass’n v. Planning Board of the Town of Gardiner, 157 A.D.2d 273, 275-276, 557 N.Y.S.2d 495 (3d Dep’t 1990) (subdivision approval failed to comply with SEQRA where there was no consideration of alternatives). The Applicant’s attempt to evade an environmental assessment of alternatives undermines the very purposes of the statute. See ECL 8-0109. As the Court of Appeals has explained,

The purpose of requiring inclusion of reasonable
alternatives to a proposed project is to aid the public

¹¹ The Final Scoping Document requires such an analysis. Section 5.3 of the Final Scoping Document requires that the DEIS “include a discussion of a different mix of resort components....” Beyond the feasibility analysis employed to dismiss the potential of eliminating either Wildacres or Big Indian, or one of the golf courses, the DEIS attempts no assessment of a mix of components. For example, the DEIS does not consider the elimination of detached lodging units at either Wildacres or Big Indian, or the elimination of Belleayre Highlands and/or Highmount Estates. Other mixtures of project components could also be assessed. In light of the Applicant’s flawed position that none of the handful of development alternatives identified in the DEIS is financially feasible, as explained below, the DEIS fails to fulfill the required scope.

and the 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.

Webster Associates v. Town of Webster, 59 N.Y.2d 220, 228, 464 N.Y.S.2d 431 (1983); see also Town of Dryden v. Tompkins County Board of Representatives, 78 N.Y.2d 331, 333-334, 574 N.Y.S.2d 930 (1991) (requirement that lead agency describe and evaluate range of reasonable alternatives to proposed action is substantive and not procedural requirement). Here, the DEIS dismisses reasonable alternatives in order to reach a predetermined outcome, in clear violation of the letter and spirit of SEQRA. See Sun Company, 209 A.D.2d at 50. On a fundamental level, the DEIS deprives the public and DEC of information that will help them assess the environmental impacts of the Project. See Shawangunk Mountain Environmental Ass'n, 157 A.D.2d at 275 (“a lead agency must act and choose among alternatives so as to minimize adverse environmental consequences, consistent with other social, economic and policy considerations”).

The Applicant has attempted to divert attention from the feasibility analysis toward other “objectives of the Project sponsor,” including improving the local economy and realizing various goals set forth in a number of draft and final planning documents. See Tr., Vol. 13, at 3133 – 3137. The Applicant’s other purported objectives, however, do not excuse the Applicant from the requirements of SEQRA. While the Applicant may represent that the Project conforms to planning goals outlined in the Route 28 Corridor Study, the Tourist Development Plan for the Central Catskill Planning Alliance and the West of Hudson Economic Development Study, see, e.g., Tr., Vol. 13 at 3138 – 3139, by foregoing an environmental assessment of reasonable alternatives the Applicant has deprived DEC and the public of the information necessary to make their own informed evaluations. The purpose to SEQRA is to ensure a public

review of environmental impacts, not to allow an applicant to define a project's objectives so as to avoid public review.

The range of alternatives that should be considered includes, among other things, the scale or magnitude of the Project. 6 NYCRR § 617.9(b)(5)(v); see also In re Dalrymple Contracting Company, Inc., DEC Comm'r Interim Decision, Sept. 24, 2002; Sutton Area Community v. Board of Estimate, No. 10147/89, at 6 (Sup. Ct. N.Y. Co. Apr. 18, 1990) (court noted that, as a direct result of the environmental review process, the approved project reflected a lower density alternative to that originally proposed), aff'd, 165 A.D.2d 456, 568 N.Y.S.2d 35 (1st Dep't), rev'd on other grounds, 78 N.Y.2d 945, 573 N.Y.S.2d 638 (1991); Grape Hollow Residents' Ass'n v. Beekman Planning Bd., No. 1986/284 (Sup. Ct. Dutchess Co. Oct. 16, 1986) (EIS failed to consider reasonable smaller-sized project where opponents of a subdivision preferred a smaller number of units). Here, the DEIS provides no environmental assessment of project alternatives of a lesser magnitude, such as the Wildacres only alternative; no environmental assessment of project alternatives of a smaller scale, such as one involving all components, but with fewer hotel rooms, fewer detached lodgings, fewer amenities, etc.; and no environmental assessment of the no action alternative.

A. The DEIS fails to analyze a project of a different scale or magnitude

The Applicant's decision to forgo an environmental assessment of alternatives of a lesser magnitude or scale is based solely on an Economic Evaluation Study that concludes that the Project as proposed is the only economically feasible development option. See DEIS, Appendix 27, HVS International Report, p. 1-6. This conclusion, in turn, is based on a comparison of the Internal Rates of Return ("IRRs") for five different scenarios: the Project as proposed, including both Big Indian and Wildacres; elimination of the golf club at Big Indian; elimination of the golf club at Wildacres; development of the Big Indian resort only; and

development of the Wildacres resort only. In each of these scenarios, however, the Applicant's expert HVS International calculated the IRR for the resort component separately from the detached housing component. The decision to so limit the IRRs fundamentally distorts the comparative feasibility of the alternatives, as shown below.

The DEIS calculates that the IRR would be 14.7% for the Project as proposed, 8.4% for Big Indian, and 10.7% for Wildacres. According to HVS International, "hotel and resort IRRs generally enter into feasible territory once they exceed approximately 14%," and therefore only the Project in its entirety meets the standard. DEIS, Appendix 27, HVS International Report, p. 1-9. Yet, the DEIS and the subsequent statements of the Applicant's own experts make clear that the success of the Project depends not only on the hotels and resorts but also, and to a far greater degree, on the profitability of the detached housing component. See, e.g., DEIS, Appendix 27, HVS International Report, p. 1-4, Tables 1-2, 1-3, 5-3, 6-18; Tr., Vol. 5, at 1065 – 1066; Tr., Vol. 13, at 3161 – 3161, 3166 – 3166, 3185 – 3186. This makes sense, since the IRRs for the detached housing components are markedly higher than the hotel and resort components: 41.6% for the detached housing at Big Indian, and 33.5% for the detached housing at Wildacres. See DEIS, Appendix 27, HVS International Report, Table 1-3. Accordingly, RKG Associates, consultants for the City, used the same methodologies and source data as HVS International to calculate a combined IRR for three potential alternatives, in each case aggregating the proposed detached housing with the hotel and resort facilities: the Project as proposed, Big Indian only, and Wildacres only. The calculation shows that the combined IRRs are comparable to each other: 23.2% for the Project as proposed, 22.2% for Big Indian, and 19% for Wildacres. See City Ex. 6, Tr., Vol. 5, at 920 – 926.¹²

¹² Although RKG Associates adopted the Applicant's assumptions for the purposes of calculating the combined IRR, the DEIS analysis remains flawed in that it relies on insufficient data and, as a result, underestimates the

The Applicant's decision not to analyze reasonable and obvious alternatives is unjustified. The Applicant has not rebutted the City's offer of proof on this issue. Rather, at the Issues Conference, Erich Baum of HVS International stated that he did not know what the threshold would be for a combined IRR, such as that calculated by RKG Associates. See Tr., Vol. 5, at 1059 – 1060. HVS International's failure to investigate this potential threshold is insufficient to justify the DEIS' failure to perform an environmental assessment of alternatives. Indeed, the DEIS does not provide a source for the 14% number it relies on as the threshold for resort IRRs; rather, by Baum's own admission this number is merely their "opinion." Tr., Vol.5, at 1044. The Applicant has not explained why HVS International did not formulate an "opinion" as to the appropriate threshold for a combined IRR, and has not shown that the alternatives are unfeasible.

Moreover, in response to direct questions from the ALJ regarding why two hotels are necessary, Steven Rushmore, president and founder of HVS International, resorted to vague, narrative descriptions of why the Project may succeed or fail. See Tr., Vol. 13, at 3204 – 3207; see also Tr., Vol. 5, at 1051 – 1052 (Baum's narrative regarding need for two golf courses). This response does not change the fact that the Applicant relied solely on the IRR calculation in reaching the determination on economic feasibility that forms the basis of the decision to forgo any analysis of alternatives.

feasibility of the proposed alternatives, most particularly by projecting unrealistically high wages for workers who will operate the Belleayre Resort. See OHMS Ex. 5, DEP SEQRA Comments, § VIII; City Petition, Appendix B.1, Table 18. According to the DEIS, workers will earn wages ranging from about 16% - 165% more than workers with comparable jobs in the Tri-County Area. City Petition, Appendix B.1, Table 18. It is unreasonable, and inconsistent with standard economic analysis, to assume that the company that eventually builds and operates the Resort will volunteer to pay wages so drastically out of proportion to what the market demands. Assuming that the Resort pays its workers something closer to market wages, the costs of each alternative would decrease and the potential yield of each would necessarily increase. Thus, each alternative – including the Project as proposed – would appear more feasible.

In addition, although Baum stated that an investor would require that the resort component generate a sufficient IRR to stand on its own, see Tr., Vol. 5, at 1048, both he and Rushmore characterized the resort component of the Project as only “marginally feasible.” Tr., Vol. 13, at 3185; Tr., Vol. 5, at 1059. Indeed, Baum stated that “[i]t’s entirely possible” that the Applicant would build both resorts, only to discover that the market does not support the detached housing. Tr., Vol. 5, at 1062. The Applicant has left no doubt that the detached housing component is integral to the success of the Project. This emphasis only underscores the need to look at alternatives, as some alternatives may have a lesser impact in the event of the resort’s failure.

Given the central importance of the detached housing to the success of the development, the Applicant must provide an environmental assessment of alternatives. As DEC Staff stated, if “the proffers regarding economic feasibility...allow lesser alternatives, then the environmental assessment of such alternatives would have to be further developed in the record.” Tr., Vol. 13, at 3213.¹³

B. The DEIS fails to analyze the environmental impacts of the No Action scenario

A DEIS must analyze the “No Action” alternative. 6 NYCRR § 617.9(b)(5)(v). While the DEIS does include a partial analysis of the No Action alternative – including interpretations of its impacts on land use, local and regional planning goals, and socioeconomic benefits – the DEIS does not address the environmental benefits that would result from it. See DEIS, Section 5.10. In particular the City has identified a number of significant environmental benefits that would result from the No Action scenario, based on the extraordinary water quality

¹³ SEQRA, of course, does not provide that only the most profitable alternative formulation of a proposed project need be considered, especially where, as here, the very scale of the proposed project creates impacts that could be mitigated by reducing the scale. Thus, the ALJ should direct the Applicant to analyze less profitable alternatives that are nonetheless feasible.

protection and improvement provided by the site in its undeveloped condition. See generally discussion at Issue Two above. It is incumbent upon the Applicant to examine just such environmental benefits in comparison with the impacts of the proposed development. “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. This change goes beyond the characterization of the site as it appears today, which may preclude opportunities for site enhancement and increased value, and requires a balancing of the future no action alternative against the project proposal.” *Gerrard, Ruzow and Weinberg, Environmental Impact Review in New York*, § 5.14 at 2-5; see also, In the Matter of the Application of Glen Lake Protective Association, Issues Ruling, 12/30/97 (where project posed potential threat to environment, petitioners raised a substantive and significant issue where it offered proof that the environmental benefits of the no action alternative had not been adequately analyzed).¹⁴

Although counsel for the Applicant has attempted to characterize the issue regarding the DEIS’s failure to provide an adequate alternatives analysis as “comments” requiring nothing more than “perhaps some additional narrative or clarifications of the considerations that have occurred without resorting to adjudication,” Tr., Vol. 5, at 1023 – 1024, the issue is both substantive and significant, and requires adjudication. Case law makes clear that the complete omission of the alternatives analysis from the DEIS would not be cured by including an adequate analysis in the final EIS. See Webster Associates, 59 N.Y.2d at 22. Therefore, the Applicant’s critical omissions cannot simply be remedied in the FEIS. Here, the City has offered un rebutted proof that reveals serious problems with the Applicant’s decision not to consider reasonable alternatives in the DEIS. As a matter of law, then, the DEIS is inadequate

¹⁴ As with the analysis of alternatives, the scope specifically directed the Applicant to balance the environmental benefits of the no action scenario against the impacts of the Project. *See City Ex. 7, Section 5.9*

and SPDES permits cannot be issued. The Applicant should be directed to provide the required environmental assessment of project alternatives.

ISSUE SIX: THE DEIS DOES NOT ADEQUATELY ANALYZE
THE POTENTIAL ADVERSE IMPACTS ASSOCIATED WITH
INDUCED GROWTH ON WATERCOURSES CRITICAL TO THE
NEW YORK CITY WATER SUPPLY

The DEIS and subsequent analyses offered by the Applicant unreasonably conclude that there is no potential for the development of the Belleayre Resort to induce secondary growth that will adversely impact New York City's drinking water supply and the local environment. See, e.g., DEIS, Section 7, p. 7-15; Tr. Vol. 12, at 2800 – 3100; App. Ex. 84. To correct this deficiency, the DEIS must analyze the potential for this Project to induce population growth and housing development in the Project's economic impact areas, and commercial development along the Route 28 corridor. These accelerations will spur increases in, among other things, impervious surfaces and stormwater flows, which have the potential to affect watercourses critical to the City's water supply, such as Birch Creek, Emory Brook, the Esopus Creek, and the East Branch of the Delaware River. See OHMS Ex. 5, DEP SEQRA Comments, Sections VI and VII; Tr. Vol. 4, at 776. These potentially significant adverse impacts must be analyzed prior to the issuance of a SPDES permit. See Segal v. Town of Thompson, 182 A.D.2d 1043, 1046, 583 N.Y.S.2d 50 (3d Dep't 1992) (annulling negative declaration in which town failed to address future residential developments that would follow newly created water and sewer districts); see also 6 NYCRR § 750-2.1(b) (DEC may not issue a SPDES permit if that permit is based on insufficient or flawed factual data).

A. The DEIS case studies are insufficient to provide a qualitative background for induced growth analysis

The DEIS' conclusion that there are no potential significant adverse impacts expected from induced growth associated with the Project rests, in part, on three case studies

which are intended to provide an indication of what kind of potential for such impacts actually exists. However, the case studies are only tangentially analogous to the Belleayre Resort, involving developments comprised of different components, offering different product types, and constructed on entirely different scales than the proposed Project. See Tr., Vol. 4, at 802 – 803; OHMS Ex. 5, SEQRA Comment Report, § III.i. Two of the case studies presented analyze secondary growth associated with ski resorts, rather than golf resorts in proximity to ski mountains. See DEIS, Appendix 26, Ch. 6. The third, Greylock Glen in Massachusetts, see id., is not even an active project, had not yet hired its first employee when the case study was undertaken, and, by the Applicant’s consultant’s own admission, sheds no light whatsoever on what kind of growth might result from the Project. See Tr., Vol. 12, at 2886.

A number of far more comparable developments could and should have been used in the Applicant’s analysis. See, e.g., City Ex. 5; Tr., Vol. 4, at 803 – 806. Two of these developments – Snowshoe in West Virginia and Mount Vernon in New Jersey – illustrate the potential for impacts from, among other things improvement of roadway access during the early stages of development; capitalization by other developers speculating on the increased tourism associated with the project; the conversion of residential property to non-residential uses; the creation of housing communities to compete with the development; rapid increases in housing and land pricing; and development in and/or near host communities with sewer service. See OHMS Ex 5, DEP SEQRA Comments § V; City Petition, Appendix A.5; see also Tr., Vol. 4, p. 807 – 808. As noted above, such impacts would include localized increases in, among other things, impervious surfaces, lawns, phosphorus loads, fertilizer and pesticide use, stormwater flows, wastewater flows and water usage.

The DEIS' reliance on its case studies is misplaced and misleading, resulting in an inadequate review of the Project's potential induced growth impacts. Indeed, the U.S. Environmental Protection Agency has expressed that it shares the City's concern that the irrelevance of the case studies gives reason to "question the basis for conclusion drawn in the DEIS (Appendix 26, page 6-23) that 'it is unlikely that the Belleayre Resort would create a particularly large secondary growth in terms of new development.'" App. Ex. 59, p 5.¹⁵

B. The RIMS II Model is inappropriate for the Project

The DEIS also based its conclusion on a model inappropriate for analysis of the Project's induced growth impacts. See, e.g., Tr., Vol. 4, at 778 – 799. The Applicant used the RIMS II economic impact methodology to analyze the "multiplier" effect of increases in employment and spending that will result from project. This methodology is static, and provides a "snapshot" in time of how expenditures or employment in one industry ripples through the economy in multiple spending cycles. However, only a generalized perspective is provided. See City Petition, Appendix B.2, pp.1-2. The REMI model utilized by RKG Associates is dynamic, and offers a more precise rendering of local and regional impacts. OHMS Ex. 5, DEP SEQRA Comments at § VI.1; Tr. Vol. 4, at 782 – 786, 798 – 799. This model more accurately predicts that the economic "shock" of the Belleayre Resort will lead to higher wages and a population increase, which will in turn create more demand for housing and services that may result in adverse environmental impacts. City Petition, Appendix B.2, pp. 8 – 12.

¹⁵ AKRF, author of the case studies, has indicated that these three comparables were required by the Scoping Document, and that they are "inherently qualitative, they provide add-on information, they aren't the basis of decision-making." Tr., Vol 12, at 2897. The Scoping Document does in fact require that Windham, Gore Mountain and Greylock be included, but it no way limits the Applicant to reviewing only those three, and in fact requires that the Applicant look beyond those three case studies for others that would shed light on the kinds of impacts that can be expected to result from this development. See City Ex. 7, Section 7.0. Moreover, although the case studies are not the basis of DEC's decision-making, they are an integral part of the analysis of induced growth, and inform the conclusions drawn by AKRF.

C. The DEIS fails to analyze impacts from new residences

As a consequence of its inappropriate case studies and econometric modeling, the DEIS fails to adequately account for impacts arising from the demand for new residential housing. Indeed, the DEIS states that, despite the new employment and recreational opportunities the proposed development would provide, there will be no new residential units constructed in the primary market area, other than those proposed by the developer. See DEIS, Section 7, pp. 7-14 – 7-15.¹⁶ The conclusion is unsupported, and flies in the face of common sense. The REMI model, on the other hand, employed by RKG Associates, predicts that residential capital stock in the primary market area will increase by approximately \$15.75 million in its first decade, resulting in 158 new residences and increasing by 50% the rate of housing growth recorded in the 1990s. See OHMS Ex. 5, DEP SEQRA Comments, § VI.3; City Petition, Appendix B.2, Table 6. An additional 155 residences will be built outside the primary market area. See OHMS Ex. 5, DEP SEQRA Comments, § III.i; City Petition, Appendix B.4, p. 2. The impacts associated with such development were not identified or analyzed in the DEIS. See OHMS Ex. 5, DEP SEQRA Comments § III.i; City Petition, Appendix C.5.

The Applicant has not rebutted this offer of proof. Rather, AKRF accepts that RKG Associates' predicted increase in residential capital stock is "reasonable." Tr., Vol. 12, at 2955. AKRF counters that RKG Associates' assumptions regarding development cost and unit size are flawed, and attempts to lower the number of estimated new residences by increasing both. See Tr., Vol 12, at 2957 – 2958; App. Ex. 84, Slides 41-45. The result is that AKRF now predicts that 58 – 78 new residences will be built in the first decade. App. Ex. 84, Slide 43.

¹⁶ John Feingold stated that AKRF drew its conclusions based not solely on the model, but also on a "hands-on experiential approach...using both on the ground experience and knowledge of the area as well as the model itself." Tr., Vol. 12, at 2941 – 2942. It is unclear what kind of experience and knowledge predicts no new residences will be constructed as a result of the largest resort development in the Catskills in over 50 years.

RKG's assumptions, however, were entirely reasonable. See Tr., Vol. 16, pp. 4009 – 4013. In any event, the Applicant has yet to analyze the potential impacts of the new residences the Applicant now concedes are likely to result from the Project.

D. The DEIS fails to analyze impacts from new commercial development

The analysis in the DEIS of new commercial development in the NYS Route 28 corridor is similarly flawed. The DEIS indicates that the Project will induce a demand for an additional 76,600 square feet of commercial space. See DEIS, Appendix 26, p. 7-6. However, the DEIS dismisses the likelihood that new commercial development would occur along NYS Route 28, and suggests instead that all, or almost all, commercial development will funnel into existing spaces in nearby villages. In contrast, the City has shown that, due to a typical business's desire for enhanced access, parking and visibility not available in villages and hamlets, there would be significant development pressure to accommodate much, if not all, of this induced demand along NYS Route 28. See, e.g., OHMS Ex. 5, DEP SEQRA Comments, § VI.4; Tr. Vol. 4, at 809. Such pressure may lead to the conversion of existing residential spaces into commercial spaces, as well as new developments.

Indeed, contrary to the findings in the DEIS and the Applicant's subsequent statements at the Issues Conference, development pressure will be most intense along the Route 28 corridor. The DEIS itself predicted that, given reasonable development constraints, approximately 3,900 acres would be available for development along the corridor. See App. Ex. 84, Slide 17.¹⁷ Consequently, developers will have a range of site selections along Route 28, which will prove among the most attractive option available to developers given their access,

¹⁷ Despite the fact that the estimate of developable acreage in the DEIS has not been challenged, the Applicant has ratcheted that number significantly down. See App. Supp. Ex. 24. As demonstrated by RKG Associates, the revised estimate is misleading and unreasonable. See City Supp. Reply #3.

visibility and parking availability. See Tr., Vol. 4, at 815. More particularly, sites closest to the Project with access to public sewers will experience the most intense pressure. See Tr., Vol. 16, at 4003. These pressures and trends are already being observed, with the proposed expansion of the Margaretville Motel, a new proposed hotel outside Pine Hill, and residential development in close proximity to Route 28. See Tr., Vol. 4, at 809; OHMS Ex. 5, DEP SEQRA Comments, § VII.6; City Petition, Appendix B.4, p. 3; App. Ex. 84 Slide 5. The villages – which variably suffer from lack of parking, as in Pine Hill and Arkville, and significant disinvestment, as in Fleischmanns, or have low vacancy, as in Margaretville and Phoenicia – are unlikely to absorb the in-fill development predicted by the DEIS. See Tr., Vol. 4, at 810 – 813.

These new developments will result in impacts on important streams in the vicinity of project, such as stream temperature alterations and contamination from stormwater runoff. See City Petition, Appendix C.4, pp. 3, 5. In particular, developments on the Big Indian side of the corridor will likely drain into Birch Creek; developments on the Wildacres side will likely drain into Emory Brook. Both are major tributaries to City reservoirs. Thus, increases in impervious surfaces and natural resources modifications resulting from new residential and commercial development have not been adequately considered in either the DEIS.

The DEIS' failure to analyze the potentially significant adverse impacts associated with secondary residential and commercial development is similar to the insufficiency found in the Negative Declaration overturned in Segal v. Town of Thompson. In that case, private companies had provided sewage service to about 600 homes. Due to financial difficulties, new sewer and water districts were created with the capacity to serve more users. Opponents to the creation of the districts produced evidence that there were approximately 1300 lots in the area, and the potential for 800 new homes to be built. The court found that the new

districts would have more than doubled the number of homes that could be served in the area, and that the environmental review failed to address the effect the new capacity would have on the rate of development of the vacant lots within the districts. See Segal v. Town of Thompson, supra; see also Schulz v. New York State Dep't of Env't'l Conservation, 200 A.D.2d 793, 606 N.Y.S.2d 459 (3rd Dep't 1994) (negative declaration failed to take "hard look" at potential adverse effects of construction of sewer system, or creation of material demand for sewer system). Similarly, here the applicant fails to adequately identify and analyze the potential for new housing and commercial development that will follow on the heels of the resort. In particular, the Project has been predicted to induce 323 housing units and the conversion of between 975 and 1,625 acres of land for residential uses, in addition to commercial development along Route 28. In addition, while the DEIS predicts that impervious areas could increase by only 12 acres as a result of total induced growth, the REMI analysis predicts that induced growth could lead to more than 55 acres of impervious surfaces. See OHMS Ex. 5, DEP SEQRA Comments, § VII.3. This induced growth could result in significant adverse impacts not identified or analyzed in the DEIS. Therefore, the SPDES permits cannot be issued, and the issue is fit for adjudication.¹⁸

¹⁸ The City notes that both the Coalition of Watershed Towns and the Applicant have, in the context of the Issues Conference sessions on secondary growth and community character, made a series of statements alleging that the City's regulation of subsurface sewage treatment systems, the City's Land Acquisition Program, and the City's ownership of sewage treatment plants have brought small-scale development to a standstill, and will prohibit secondary growth along the Route 28 corridor, leaving projects the size and scale of the Project as the only viable means of accomplishing economic development in the region. See, e.g., Tr., Vol. 4, at 823 – 862, 907 –910; Tr. Vol. 12, at 2812, 3025 – 3026; Tr. Vol. 16, 4122 – 4124, 4154 – 4155, 4159 – 4160. As the City believes it is important to focus on matters appropriately at issue in this proceeding (namely, whether the deficiencies in the DEIS and draft SPDES permits identified above are adjudicable), rather than on the irrelevancies represented by these and other false attacks (the substance of which was not included in even a qualitative manner in the DEIS), we will not respond to the allegations in any detail in this submission. The City simply notes for the record that these allegations are without basis in law or in fact. The City has always supported reasonable and responsible economic development, as witnessed by, among other things, the City's affirmative support for economic development loans and grants made by the Catskill Watershed Corporation over the past 5 years, the vast majority of which have targeted small businesses. See City Supp. Ex. 4. According to the CWC's own annual reports, these loans and grants (which are funded by City dollars) have created or retained thousands of jobs in the Catskill region. See id.

CONCLUSION

For the reasons stated above, the City respectfully requests that its petition for full party status be granted and that the issues outlined above be determined adjudicable.

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Respectfully submitted,

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In addition, the City works effectively to assist property owners and project developers in advancing projects while at the same time complying with regulatory requirements, as witnessed by the fact the vast majority of applications to DEP for regulatory approvals are, in fact, approved.