APPENDIX 3

COMMENTS RECEIVED AFTER CLOSE OF PUBLIC COMMENT PERIOD

Chronology of Events Following the Close of the Public Comment Period

A number of meetings and exchanges of information occurred following the close of the public comment period, primarily as a result of the comments from agencies received after the close of the public comment period. The following is a chronology of those events that occurred after the close of the public comment period.

- May 19, 2012 – Applicant meets with NYCDEP to review NYCDEP comments submitted during the public comment period.
- July 26, 2012 – Applicant meets with WIG.
- August 2 & 8, 2012 – DEIS and updated stormwater analysis performed in response to NYCDEP DEIS comments provided to WIG.
- August 16, 2012 – Applicant site tour with WIG.
- September 20, 2012 – WIG provides draft technical comments to Applicant.
- October 12, 2012 – WIG letter to Windham Planning Board advising that WIG was reviewing the project.
- October 19, 2012 – Applicant and WIG conference call to discuss Applicant's initial response to WIG draft technical comments.
- November 21, 2012 – WIG submits technical comments to Windham Planning Board.
- August 30, 2013 – Applicant meets with NYSDEC Region 4 staff.
- September 5, 2013 – Applicant provides SWPPP (including revised stormwater assessment prepared in response to NYCDEP DEIS comments) and plans to NYSDEC Region 4 and Central Office staff.
- September 26, 2013 – Applicant site tour with NYSDEC Region 4 and Central Office staff.
- October 9, 2013 – project Architectural Review Board Design Guidelines provided to NYSDEC.
- December 27, 2013 – Town of Windham circulates updated SWPPP, plans and draft FEIS response to stormwater comments to NYSDEC, NYCDEP and WIG.
- January 13, 2014 – WIG letter to Town requesting responses to comments in their November 21, 2012 letter to the Town.
- January 29, 2014 – Applicant provides revised project design to WIG with copies sent to NYSDEC, NYCDEP and the Town of Windham.
- February 3, 2014 – Comment letter sent from NYSDEC Region 4 to Applicant.
- February 6, 2014 – Meeting at Windham Town Hall with Applicant, Town of Windham, NYSDEC, NYCDEP and WIG.
- February 18, 2014 – Meeting at NYSDEC Region 4 office with Applicant, NYSDEC and WIG.

- March 3, 2014 – E-mail from NYSDEC Central Office staff to Applicant regarding Missing Items/Information
- March 4, 2014 – Applicant E-mail submitting some responses to NYSDEC March 3, 2014 e-mail.
- May 6, 2014 – Applicant letter submitting some responses to NYSDEC March 3, 2014 e-mail.
- June 19, 2013 – Applicant letter submitting remaining responses to NYSDEC March 3, 2014 e-mail.

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

November 21, 2012

Ms. Maureen Anshanslin, Chairwoman
Town of Windham Planning Board
371 State Route 296
Hensonville, New York 12439

Re: Windham Mountain Sporting Club

Dear Ms. Anshanslin:

Enclosed for filing with the Planning Board are the "SEQRA Comments of the Watershed Inspector General to the Town of Windham Planning Board Concerning the Proposed Windham Mountain Sporting Club," dated November 21, 2012. We want to express our appreciation to the Board for the opportunity to submit these comments which address the DEIS for the Project and subsequent modifications to the Project recently proposed by the project sponsor.

We look forward to working with the Planning Board, its consultant, Mary Beth Bianconi at Delaware Engineering, the project's representatives, DEP, and stakeholders as environmental review of the project proceeds.

Please do not hesitate to contact me if you have any questions concerning our comments.

Respectfully yours,

Philip Bein
Watershed Inspector General
(518) 474-7178

Enclosure

cc: Hon. Stephen J. Walker, Supervisor, Town of Windham
Mary Beth Bianconi, Delaware Engineering, P.C.
Dan Ruzow, Esq., Whiteman Osterman & Hanna LLP
Linda Geary, Esq., New York City Law Department
Dave Warne, DEP
Cynthia Garcia, DEP
William Wegner, Riverkeeper

SEQRA Comments of the Watershed Inspector General to the Town of Windham Planning Board Concerning the Proposed Windham Mountain Sporting Club

Trailside Road, Town of Windham, Green County

November 21, 2012

The Office of the Watershed Inspector General ("WIG") respectfully submits these comments concerning the proposed Windham Mountain Sporting Club ("Project" or "Club"). WIG expresses its appreciation to the Town Planning Board for the opportunity to submit these comments which address the Draft Environmental Impact Statement ("DEIS") for the Project and subsequent modifications to the Project recently proposed by the project sponsor.[1]

The Club would be the largest development in the West-of-Hudson portion of the New York City Watershed since the proposed Belleayre Resort. The Project would create 278 residential units and ancillary facilities on a 464-acre, mainly forested, site that slopes down towards the Batavia Kill in the Town of Windham, Greene County. Much of the construction would occur on steep slopes exceeding 25 percent, including some construction on slopes as great as 100 percent. The Project would create over 30 acres of impervious surface.

As discussed below, WIG recommends several significant changes to the Club to avoid and mitigate potential significant adverse impacts to the New York City Watershed. Construction disturbances on steep slopes to build residential units and roads should be reduced by approximately 16 acres unless the Sponsor demonstrates that those disturbances are unavoidable and that potential adverse impacts will be minimized. The reduction in construction on steep slopes would include scaling down the Club by 52 residential units, from 278 units to 226 units. WIG also recommends that the Project be modified by reducing impervious surfaces in wetland buffer areas where possible. As discussed below, additional information and analysis should also be provided by the Sponsor to determine whether other Project modifications are needed.

We express our appreciation for the cooperation and assistance provided by the Project's sponsor, Tuck Eastside Partners, L.P., its principal investor, Thomas Wilcock, and its legal and technical representatives (collectively, "Sponsor"). The Sponsor graciously met with WIG to explain the Project in detail, provide needed documentation, answer questions, and share project

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[1] WIG's authority was established by the New York City Watershed Memorandum of Agreement and implemented through successive Executive Orders issued by four governors, most recently pursuant to 9 NYCRR § 8.2. WIG was created by Executive Order 86 in 1998 "to enhance current efforts to protect the New York City drinking water supply from activities that have the potential to adversely affect the New York City Watershed reservoirs and tributaries." *See* 9 NYCRR §§ 5.86, 6.5, 8.2. WIG submits these draft comments pursuant to his responsibility under that Executive Order to "recommend legislative, regulatory and management practice changes . . . relating to the use, operation and protection of the Watershed." *See* 9 NYCRR §§ 5.86, 6.5, 8.2.

changes proposed in July/August 2012, after the DEIS was filed. In addition, a very helpful site visit was held on August 16, 2012. WIG provided draft comments to the Sponsor on September 20, 2012, and subsequent discussions concerning those comments were held.

WIG has also had follow up and ongoing discussions with the New York City Department of Environmental Protection ("DEP") and with Delaware Engineering, P.C., as consultant to the Planning Board. We look forward to continue working with the Town Planning Board, involved State agencies, DEP, the Sponsor, and other stakeholders to ensure that the Club will not cause pollution or other harm to the New York City Watershed.

Background: The Project's Setting Within the New York City Watershed

The Project would drain to the Schoharie Reservoir, one of the City's two Catskill reservoirs, via the Batavia Kill and Schoharie Creek. The Catskill reservoirs are the source of nearly half the drinking water consumed by nine million New Yorkers each day. Pursuant to a series of filtration avoidance determinations issued and/or administered by the United States Environmental Protection Agency ("EPA") and the State Department of Health ("DOH"), Catskill water remains unfiltered. Rather than filtering the water, almost $1.5 billion dollars of public funds have been spent on pollution prevention efforts to protect the Watershed and ensure safe drinking water. This "Pollution Prevention" approach, adopted instead of filtration, represents the longstanding consensus of State and federal agencies, New York City, Watershed communities, and environmental groups, as agreed in their landmark 1997 Memorandum of Agreement.[2]

But water quality in the Catskill reservoirs remains threatened by discharges of stormwater polluted by "turbidity." Turbidity is murkiness in the water resulting from the presence of suspended or colloidal solids. EPA and DOH have concluded that elevated turbidity within the Catskill system presents the greatest risk to the City's maintaining its filtration avoidance status, and the Schoharie Reservoir, which receives the drainage from the Project site, is on the Clean Water Act Section 303(d) list of impaired waterbodies because of excessive turbidity.

Turbidity facilitates the transportation of pathogens and other pollutants that pose risks to public health. Pathogens include viruses and bacteria, such as *Giardia llamblia*, *Cryptosporidium*, and *Escherichia coli* 0157:H7, which can cause serious illness or death, especially among the elderly and immunocompromised.[3] Turbidity also can shelter pathogens

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[2] *See* "New York City Watershed Memorandum of Agreement" (January 21, 1997) (hereinafter "MOA") at www.nysefc.org?home/index.asp?page=294.

[3] In 1993, the water supply for the City of Milwaukee became contaminated with *Cryptosporidium* causing over 400,000 people to suffer stomach cramps, fever, diarrhea and dehydration, and killing over 100 people. In August 1999, the largest outbreak of waterborne *E. coli* O157:H7 illness in United States history occurred at the Washington

from exposure to attack by chlorine, a disinfectant routinely used to treat Catskill water to protect the public. Because of the health risks of pathogens and turbidity, EPA requires that each unfiltered water system meet strict requirements "ensuring that the system is not a source of a waterborne disease outbreak," and EPA prohibits raw water turbidity measurements in unfiltered drinking water at the intake to the distribution system in excess of 5 nephelometric turbidity units. 40 CFR §§ 141.71, 141.71(a)(2).

Poor design, construction, and operation of development projects can exacerbate turbidity problems in downstream waters. Discharges of stormwater from construction sites include sediment which, when suspended in water contributes to turbidity. "It is generally acknowledged that erosion rates from construction sites are much greater than from almost any other land use."[4] Sediment loads in stormwater discharges from construction sites are typically 1,000 to 2,000 times the sediment loads in discharges from undeveloped forested land.[5] And even after construction is complete, turbidity loadings in downstream waters can increase compared to pre-development conditions if post-construction stormwater controls fail to prevent sediment discharges or cause downstream impacts such as streambank erosion. Streambank erosion is of particular concern in the Batavia Kill and Schoharie Creek, as explained in stream management plans for those waterbodies, prepared by the Greene County Soil and Water Conservation District and by DEP.

WIG Review

WIG and its consultant, Donald W. Lake, Jr., P.E., reviewed the following documents to prepare these comments:

Draft Stormwater Management Report, dated November 2011 and updated August 2012;
Draft Construction Drawings, updated July/August 2012;
DEIS Comments Prepared by the DEP, dated April 30, 2012;
DEIS Comments Prepared by Delaware Engineering, P.C., dated April 30, 2012;
DEIS, dated March 1, 2012;
Site Plans dated November 23, 2011; and
Sponsor's revisions to the Project, dated July 26, 2012.

County Fair in New York, when a drinking water supply well became contaminated with that pathogen, infecting 781 people, and resulting in the hospitalization of 71 people and two deaths.

[4] "National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharges; Final Rule," 64 Fed. Reg. 68722, 68724, 68728. (Dec. 8, 1999).

[5] EPA, "Storm Water Phase II Final Rule: Small Construction Program Overview (Fact Sheet 3.0)," EPA 833-F-00-013 (Jan. 2000), available at http://www.epa.gov/npdes/pubs/fact3-0.pdf.

We participated in a site inspection on August 16, 2012. On September 20, 2012, WIG provided draft comments to the Sponsor, and in October 2012, the Sponsor responded orally to the draft comments in discussions with WIG.

Technical Comments

Based on the documents reviewed, site inspection, and other information obtained by WIG, we request that the Club be modified to avoid and mitigate potential significant adverse environmental impacts, and that the Sponsor provide additional information as specified below.

The information/revisions should be made available for public review prior to finalization of the EIS:

I. Reduction of Disturbances on Steep Slopes:

The Club proposes disturbance of approximately 141 acres of land according to the DEIS, including 35 acres of land having steep slopes of 25% or greater. But in sensitive watersheds, such as within the NYC Watershed, it is best to avoid construction on steep slopes. Slope influences the retention and movement of water, the potential for soil slippage, accelerated erosion, the ease with which machinery can be used and the engineering uses of soils. It has been our experience that construction on steep slopes can result in large stormwater erosion events during construction activity.

Because of the water quality risks posed by construction on steep slopes, the New York State Stormwater Management Design Manual recommends that no construction occur there:

> Development on slopes with a grade of 15% or greater should be avoided, if possible, to limit soil loss, erosion, excessive stormwater runoff and the degradation of surface water. Excessive grading should be avoided on all slopes, as should the flattening of hills and ridges. Steep slopes should be kept in an undisturbed natural condition to help stabilize hillsides and soils. *On slopes greater than 25%, no development, re-grading, or stripping of vegetation should be considered.*

New York State Stormwater Management Design Manual (August 2010), at p. 5-12 (emphasis added).

While this recommendation does not effect an absolute prohibition against construction on slopes exceeding 25 percent, it reflects the State's best professional judgment that such construction should normally be avoided and that strong justification for deviating from it should be provided, especially in sensitive areas such as the NYC Watershed. If allowed, the extent of such construction should be limited and mitigation requirements should be employed to minimize potential impacts and fully stabilize the site as soon as possible.

According to the DEIS documentation for the proposed development, significant disturbance will take place on steep slopes (>25%). Thirty-five acres or nearly a quarter (24%) of site disturbance would occur on those slopes. However, the DEIS does not show that such disturbances are unavoidable, justify such intensive development, or demonstrate that potential impacts from those disturbances have been minimized.

A. Roads

The DEIS states that road construction would disturb 15 acres of land on slopes exceeding 25 percent. Much of this will occur along Sheridan Drive (Sheet L-1.01) to gain access to the upper portion of the proposed development site. An 80-foot high, near vertical cut is designed at the switchback location of this road. This will create a massive amount of excavation that is anticipated to be mostly in rock on a 1 foot horizontal to 1 foot vertical slope (1:1) or 100% slope. This is basically a 45 degree angle up from the roadside.

In draft comments directed to the Sponsor on September 20, 2012, we recommended that road disturbances be significantly mitigated. We noted that because of the length of Sheridan Drive beyond Lot 32 to the junction of Cave Mountain, and the massive excavation needed to build that overly steep section, Sheridan Drive beyond Lot 32 should be deleted, and we recommended that an alternate flatter route be established to tie into the upper portion of the project.

In response to our draft comments, the Sponsor stated that a better alternative to Sheridan Drive as currently proposed was not available. Specifically, it noted that the DEIS considered a "No Waivers" alternative, but that this option would entail significantly more disturbance on steep slopes than the roads currently proposed, and that another alternative route, to access the site from Route 296, was not feasible.

However, other alternatives that would avoid and mitigate road construction disturbances on steep slopes have not proposed or considered. An alternative design of the road sections should include the use of structural retaining wall units to minimize the amount of lateral disturbance and reduce the volume of excavation from open slope designs. We estimate that this would reduce road construction disturbance on steep slopes by approximately 1.62 acres, from 15 acres to approximately 13.38 acres, and also significantly reduce the volume of excavated materials.[6]

Retaining walls typically lean into the slope with a "batter" of 1 foot horizontal to 6 feet vertical. These units should be used in all areas where the vertical cuts exceed 20 feet, beginning and ending where the design cut is 10 feet. This would result in an estimated 3,680 linear feet of

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[6] Retaining walls would also reduce blasting requirements. The DEIS anticipates 46 blasting sites and an overall excess of excavated material of 111,825 cubic yards. The majority of this material will come from road excavation.

structured wall.[7] Attached as Figure 1 is a cross-section drawing of Sheridan Drive at road Station 40+00 at the maximum cut of the proposed switchback for that road. It shows the extreme difference between height and lateral disturbance for 1:1 rock slope versus the 1:6 structural units proposed.

In addition to using retaining walls, the access to Lots 22, 23, 24, and 25 should be re-designed to use Twin Maples Lane to upper Batavia Lane instead of using the lower portion of Batavia Lane. By doing this, the lower portion of Batavia Lane can be eliminated and with it 650 feet of road on steep slopes and an estimated 0.82 acres of disturbance.

B. Residential Units

A significant number of the proposed 278 residential units are also planned to be constructed on slopes exceeding 25 percent. Of the 197 single home, duplex, and town house units proposed, 52 are to be constructed on such slopes.[8] The Project's 81 condominium apartments are to be housed in two buildings, the East Lodge (Building C3) and the Members Lodge (Building C1). A portion of C1 is to be constructed on steep slopes. In addition, areas adjacent to the Wellness Center (Building C2) are to be constructed on slopes exceeding 25 percent.

These disturbances can be avoided by eliminating the 52 units, and relocating and reconfiguring Buildings C1and C2, to allow construction of those two buildings on shallower slopes. We estimate that these modifications would reduce disturbances on slopes exceeding 25 percent by approximately 13.2 acres. This is calculated using an estimated disturbance envelope of 10,000 square feet for the single family home sites, while measuring the disturbed areas for the town houses and the resort building C1. We recommend modifying the Project in this way unless the Sponsor demonstrates that construction on steep slopes is unavoidable and that potential impacts from those disturbances have been minimized.

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[7] Table 1, attached to these comments, sets forth the specific locations of proposed retaining walls.

[8] The number of units proposed reflects changes in the project proposed by the Sponsor in July 2012 after the DEIS was prepared. A review of all lots shown on the grading plan sheets, L-4.01 to L-4.09, was completed by calculating the existing topographic slope within the building envelope on all lots that appeared to be located on slopes that exceeded 25% as shown on overall project plan sheets, L-1.01 and L-2.03. The following single family residential parcels exceed the above cited criteria: #3, #6, #8, #9, #16, #24, #25, #31, #35, #37, #38, #41, #42, #43, #44, #45, #48, #52, #54, #57, #58, #64, #75, #77, #79, #80, #81, #82, #84, #87, #88, #114, #116, #120, #121, #124, #125, #126, #129, and #135. This is a total of 40 units out of 139 proposed for the project. In addition, 2 of 24 Duplex units, D16 and D18, were also placed on slopes steeper than 25%. The following Town House Units also exceeded the slope criterion: TH 2- A, B, C, D, E, F, and G. (The letters are assigned to specific units in the group from west to east) and TH 3- N, O, P. This results in 10 of 34 Town House units located in areas that exceed the criterion.

II. Wetland Buffer Areas:

The site includes 12.67 acres of intact headwater wetlands subject to regulation by the Army Corps of Engineers. These wetlands provide important water quality protections which could be undermined by construction of impervious surfaces in the "buffer" areas adjacent to the wetlands. In its DEIS comments, DEP recommended that the Project respect 100 foot buffers around the wetlands as a result.

Wetlands filter out pollutants and retain and release water slowly to prevent downstream erosion and flooding. Destruction of headwater wetlands and/or their buffers, alters the timing and magnitude of downstream flooding, transmits greater amounts of sediment downstream, eliminates their capacity to remove excess nutrients and other pollutants, adversely affects fish feeding and spawning, disrupts aquatic insect communities, and reduces overall stream productivity.

For example, land-use changes in the vicinity of wetlands and small streams can impair the natural functions of such headwater systems. Changes in surrounding vegetation, development that paves and hardens soil surfaces, and the elimination of some braided channels reduces the amount of rainwater, runoff and snowmelt the stream network can absorb before flooding. The increased volume of water in small streams scours stream channels, changing them in a way that promotes further flooding. Such altered channels have bigger and more frequent floods. The altered channels are also less effective at recharging groundwater, trapping sediment, and recycling nutrients. As a result, downstream lakes and rivers have poorer water quality due to increased sediment, turbidity, and nutrients (resulting in algal blooms); less reliable water flows; and less diverse aquatic life.

A. Reduction of Disturbance

The Club would allow substantial development of impervious surfaces within areas adjacent to federally protected wetlands. Development would include portions of 27 residential units, the East Lodge (Building C3), the west tennis court at the Wellness Center (Building C2), the East Lodge chairlift, and approximately 4,605 linear feet of roads, all within 100 feet of such wetlands.[9] This results in 3.8 acres of impervious area within the buffer. Of the residential units, 12 would lie within 50 feet of wetlands.[10]

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[9] *See* Tables 2A and 2B, attached to these comments.

[10] While transferring the wetland numbers to the grading plans from the Army Corps' Wetland Delineation drawings in the DEIS, WD-1 through WD-10, drawings 3-12a through 3-12j, we noticed that wetlands W-6, W-16, and W-32 were never drawn on the grading plans. They need to be added to the grading plans. In addition, the boundaries of wetland W-24 should be made clear, as requested by DEP in its Comment No. 19.

We recommend reduction in impervious areas within 100 feet of wetlands to the extent feasible as an impact avoidance/mitigation measure. A detailed evaluation should be made of whether those surfaces should be relocated to less sensitive locations onsite or otherwise removed.

B. Impacts From Blasting

The blasting locations for the project are shown on drawing 2-17 of the DEIS, dated March 2, 2012. All 11 stormwater detention ponds and 2 bio-retention areas are shown to be excavated to their design grades by explosives. All of these locations, as well as specific blasting sites for road and other construction, are in very close proximity to wetlands.

The wetlands will receive shock waves transmitted through the bedrock from many blasting sites surrounding them from different directions. These energy waves could create significant disturbance to the substrata of the wetland areas, causing a radical change in the hydrology of the wetland. The DEIS should be supplemented to address impacts to wetlands from blasting.

The proximity of blasting locations (for stormwater basins and road/other construction) to the wetlands shown on grading plan sheets L-4.01 through L-4.09 was identified:

Stormwater Ponds:

Cave Mountain Road #2- W-24, inside 100' buffer
Cave Mountain Road #3- W-25, inside 100' buffer
Cave Mountain Road #4- W-25, W-26, W-27, within 25' of wetlands
Tuck Trail #1- W-2, within 100' buffer
Tuck Trail #2- W2, within 300' of wetland
Trailside Road #1- W-1, within 100' buffer
Trailside Road #2- W-1, within 150' of wetland and 2 offsite wetlands
Sunrise Terrace- W-33, within 100' buffer
Sheridan Drive #1- W-10, adjacent to wetland
Sheridan Drive #2- W-10, adjacent; W-16 within 100' buffer (not shown)

Road/Other Construction:

W-30, Sunrise Terrace cul-de-sac, within 150' of wetland
W-25, D-19 to D-24, within 150' of wetland
W-25, Cave Mountain Road, elevation 2250 to cul-de-sac, 100' from the wetland
W-24 & W-25, East Base Lodge and bio-retention area adjacent to wetland and at the edge of the 100' buffer
W-10, Sheridan Drive, elevation 2340 to 2380, within the 100' buffer
W-3, D-9 to D-12, and Tuck Trail excavation, elevation 1780 to 1820, encroaching into the wetland at one point

III. Need for Additional Information and Project Modifications

The following additional information is needed to assess the Club's potential for causing significant adverse environmental impacts to the NYC Watershed and to determine whether additional measures to avoid and/or mitigate impacts are needed. In addition, several modifications of the Project are proposed below.

1. Rock Borings: Any remaining locations of disturbance that will not be supported by retaining walls and where proposed rock excavations would occur on 1:1 slopes should be cored to their design depths. There are no earth/rock borings at these locations shown on the drawing where 1:1 rock cuts are proposed. Thus, there is no evidence that the soil/rock at any of these locations can, in fact, stand competently on a 1:1 slope. Thinly bedded rock, which is present on the project site, is often formed by severe rock weathering. Construction on this type of rock on steep slopes often requires flatter gradients for safety and stability. However, developing flatter slopes generally requires larger areas of disturbance and excavation, since the lateral area of disturbance for a flat slope, such as 2:1, is greater than that for a steeper slope, such as 1:1. The results of the coring work, including changes in areas of disturbance and excavation, should be provided.

2. Up-to-Date Hydrology Data: The entire stormwater hydrology for this site is based on outdated data, much of which goes back to the 1960s. Outdated hydrology numbers can result in undersized and/or oversized stormwater controls. Undersized stormwater treatment facilities can be overwhelmed, causing water quality violations, additional soil disturbance, and erosion. Oversized facilities can account for more soil disturbance than is necessary at the site and create associated water quality impacts. To correct for the outdated data used in the DEIS, the stormwater hydrology should be recalculated using the hydrologic data and rainfall distributions, published by the Northeast Regional Climate Center (NRCC) in January 2011 on their website www.precip.net. A spot check comparison for Design Point 4 (DP4) showed a significant difference in the peak discharges for all storm frequencies. These values can be imported into HydroCAD or Natural Resources Conservation Service (NRCS) Technical Release 20 (TR20) for use in watershed evaluations and stormwater practice design. Addressing this deficiency is particularly important as the outdated mountain values were specifically evaluated in the final calibration of the project site hydrology. The results of the revised hydrology work should be provided.

3. Revise Water Quality Evaluation: The water quality evaluation contained in Appendix 9 of the March 2012 DEIS stormwater pollution prevention plan (SWPPP) needs to be re-calculated based on the revised drainage areas for stormwater analysis noted by DEP in its April 30, 2012 DEIS comment letter. The revised evaluation of water quality should be provided.

4. Revise Curve Number Analysis: Observations during the site inspection on August 16, 2012, lead us to conclude that some runoff curve number (CN) values should be adjusted to

better reflect field conditions. For example, "woods-grass combination" CN values were used when this condition does not actually exist in the field. A more appropriate CN category is "brush-weed-grass mixture, with brush the major element." These CN values are lower than those used in the current model and should replace them. A revised analysis should be made available.

5. Revise Time of Concentration: Time of concentration (T_c) is defined as the time required for a drop of water to travel from the most hydrologically remote point in a sub-catchment to the outlet. T_c sheet flow lengths of 150' were used in the model for most sub-areas. Field observations lead us to conclude that values between 60'-90' more accurately reflect the sheet flow length, due to the densely wooded areas on steep slopes with abundant ground litter. A longer T_c results in lower peak rates of discharge flows ("Q"). Thus, discharge rates that are presented in the DEIS documentation appear to be much lower than they should be. Higher post-development runoff rates would result in more severe erosive forces, particularly on steep slopes. The T_c values should be revised and provided.

6. Need to Stabilize Existing Stream Channels: During the course of our site visit on August 16, 2012, we observed existing watercourses that were unstable. They had raw exposed banks, undercuts at culvert crossings, and were eroding laterally where bedrock formed the channel bottom. Development of the Project is likely to cause further damage to these stream channels by increasing the duration and volume of stormwater runoff. The unraveling of these mountain streams is a great concern since their impacts travel beyond the property lines and affect downstream waterways and wetlands, with the potential to increase turbidity in such waters. During our field visit, we noted several locations where streambank stabilization and stream gradient control structures could be used to stabilize existing stream segments. These mitigation measures would prevent further damage to the streams and alleviate adverse downstream impacts.

The on-site watercourses should be evaluated in the context of achieving stability for the existing condition and then preserving that stability throughout the development and post development conditions. This will require a detailed hydraulic analysis of each onsite watercourse at bankfull flow for the existing condition and similar analysis of offsite watercourses downstream. Upon completion, alternatives for stabilizing the stream segments should be evaluated, considering the impacts of post-constructed stormwater ponds, to preserve the mountain streams' stability and to minimize downstream offsite impacts.

7. Access to Stormwater Management Ponds: The stormwater management ponds at this site are often located in areas that are difficult to access for maintenance. All ponds should have their maintenance access pathways delineated on the site drawings. The revised drawings should be provided.

8. Box Riser Dimensions: Detail 6, Sheet L-8.02, a column should be added to the table to set forth the pre-cast concrete box riser dimensions. Human access for future maintenance should be considered when establishing these minimum dimensions.

9. Grading Details: The grading details for access to six building lots on Sunrise Terrace, shown on revised Sheet L-4.07, Lots 83, 84, 106, 107, 108 and 109, need to be presented. These units are upslope and two lots, 83 and 106, appear completely cut off from the road, due to the proposed location of a biofilter and rock lined drainage channel.

10. Move Outlet Pipe: The outlet pipe from Wet Extended Detention Pond P-12 (Sheet L-4.08) extends underneath a wetland that begins just 70 feet downgrade of the pond. This pipe requires excavation under the wetland to connect to the storm sewer line on the Cave Mountain Road spur. This pipe runs along the spur, then discharges at the outlet of this same wetland. Since the pond bottom elevation is 2,294' and the surface elevation of the wetland just 70 feet downstream is 2,284', this pipe should discharge directly to the wetland with appropriate energy dissipation at the outlet to prevent scour. This would eliminate excavation in the wetland and at the proposed storm sewer pipe beyond.

11. Location Tables: On Sheet L-8.01, a location table for all level spreaders proposed for installation at the project site needs to be added. Also, a stone apron inside the filter fabric drop inlet protector on Detail 11 needs to be added, or this detail can be deleted in favor of Detail 12. A location table for the water bars should also be added to Detail 14.

12. Fascines and Flocculants: On Sheet L-8.02, Detail 2, fiber roll is presented with a table for installation. However, its proposed use is not supported by documentation or a record of performance criteria. In comparison, the 2005 New York State Standards and Specifications for Erosion and Sediment Control, page 4.5, presents a similar practice employing live fascines which are bundles of twigs or branches (e.g. willow) placed in shallow trenches or on either cut or fill slopes for slope stabilization. One of the reasons for the success of this stormwater treatment practice is the close spacing between fascines. We recommend using the spacing specified in this standard for the placement of fiber rolls.

In addition, Note #3 refers to flocculants being added at the "qualified inspector's discretion." We suggest that this note be omitted, because the application of flocculants requires NYSDEC approval.

13. Detail 5, Sheet L-8.02: This Detail should be deleted since there are no longer any micro-pool extended detention ponds on the project site.

14. Creation of Steep Road Bank Slopes: There are a significant number of locations where steep road bank slopes will be created from rock blasting and excavation. A detail should be added to Sheet L-8.02 presenting a typical section of this proposed work, accompanied by a table

specifying the locations of these steep road banks using the appropriate road stationing shown on the road profile sheets.

15. Concrete Truck Washout: A significant amount of infrastructure is being proposed at the project site. However, concrete truck washout facilities and their placement at key project locations are missing from the site plans and SWPPP. A detail containing this information needs to be added to the drawings on Sheet L-8.02. In addition, the SWPPP should be revised to add this practice.

16. Construction Phasing: According to the DEIS, the overall project will be constructed in 3 phases over approximately 15 years. The first phase will include significant infrastructure and approximately 150 units. It has been noted that there are 23 sub-phases in project phase 1, each disturbing less than 5 acres at any one time. A plan view should be prepared with the grading plan that details these 23 sub-phases and demonstrates that the proposed work is indeed balanced. Erosion and sediment controls and other site management requirements should be shown on the plan for each sub-phase.

17. Snow Management: The DEIS documentation does not present a snow management plan. Deicing agents, such as rock salt, sand, and/or liquid deicer products, once sprayed onto roadways, are readily transported into water bodies by stormwater and snow melt. A Winter Operations Plan should be prepared to address snow removal, snow storage areas, and use of surface treatments. This plan should be made part of the post-construction maintenance plan required by the SWPPP.

Conclusion

The WIG Office appreciates this opportunity to provide SEQRA comments to the Town Planning Board, and looks forward to working with the Board, Watershed regulators, the Sponsor, and stakeholders as environmental review of the Project proceeds.

Philip Bein
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Don Lake Jr., P.E.

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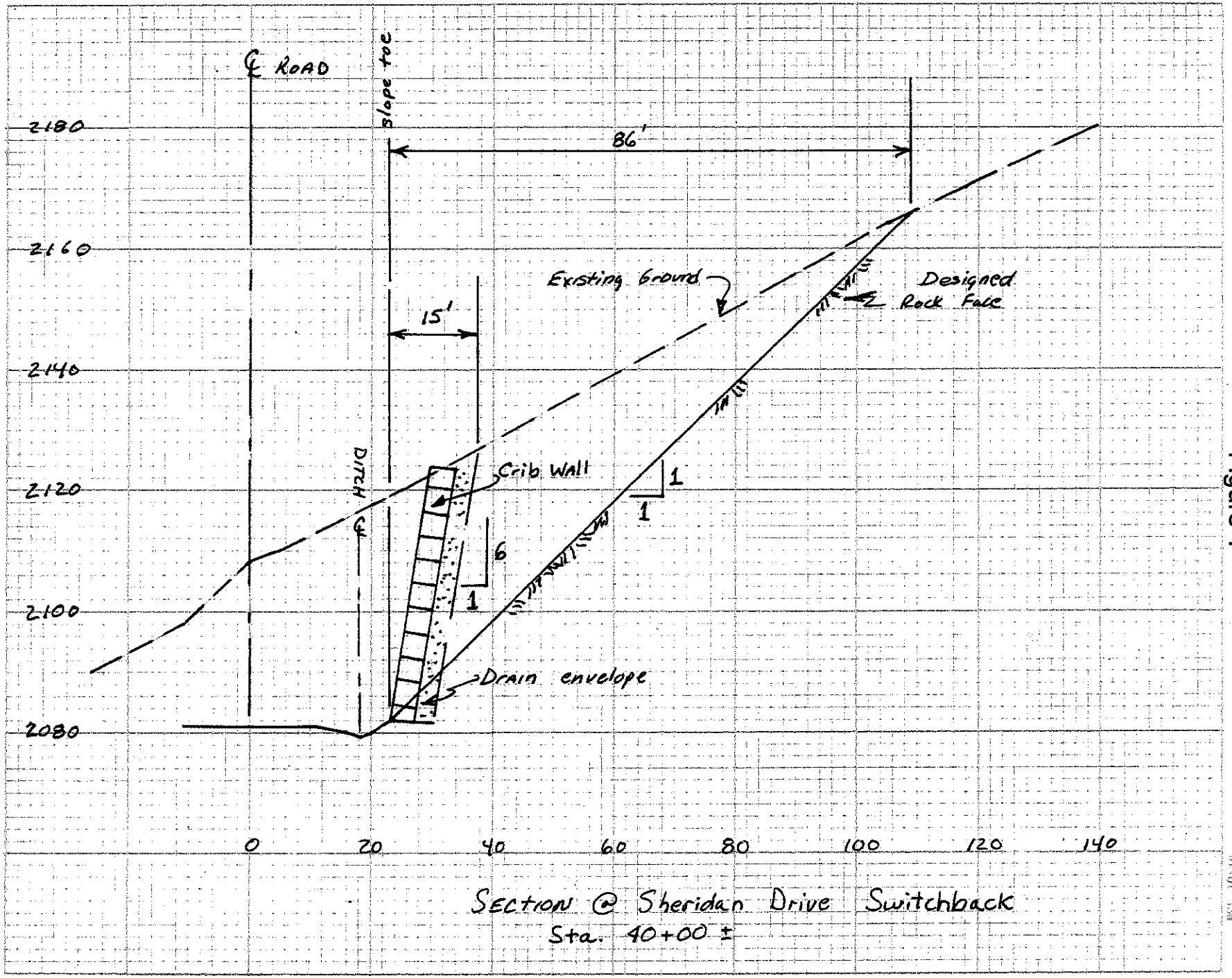
℄ ROAD
slope toe
2180
2160
2140
2120
2100
2080
86'
15'
Existing Ground
Designed
℄ Rock Face
Crib Wall
DITCH ℄
1
1
6
1
Drain envelope
0
20
40
60
80
100
120
140
SECTION @ Sheridan Drive Switchback
Sta. 40+00 ±

Figure 1

Table 1

Recommended Retaining Walls for the Preferred Plan

Location	Length (ft)
L-4.01, Lot 9 to 22, Batavia Lane	340
L-4.03, Sheridan Drive, Elevation 2010 to 2058	415
Elevation 2077 to 2101	350
Cave Mountain Road, El. 2086 to 2203	190
Sunrise Terrace, Elevation 2223 to 2231	150
L-4.04, Sheridan Drive, Elevation 2342 to 2399	575
Elevation 2424 to 2434	230
Elevation 2472 to end C1	970
L-4.07, Meadow Crossing North and Sunrise Terrace combination	460
Total Length	3,680

Table 2A
Impervious Surfaces Within Wetland Buffers: Residential Units and Other Structures

Impervious Area	Estimated % of Impervious Area within 100' Buffer	Impervious Area within 50' Buffer?
Single family residential unit # : 1	40	no
17	80	no
36	100	yes
37	100	yes
38	100	no
40	100	yes
102	100	yes
121	10	no
123	55	no
135	10	no
114	100	yes
115	99	yes
116	75	no
117	100	yes
118	45	no
119	10	no
120	10	no
29	100	yes
39	10	No
Duplex # : D6	15	no
D7	10	no
D8	100	yes
D13	40	no
D14	100	yes
D15	60	yes
Single Family 27	100	yes
C_3 East Lodge	25	yes
Single Family 112	20	no
C_2 West Tennis Court	90	yes
		no
East Lodge Chair Lift	100	yes

Table 2B
Impervious Surfaces Within Wetland Buffers: Roads

Impervious Area	Estimated Length of Road within 100' Buffer
Drawings:	
L - 4.01 -	
Trailside Road	150'
Lot 1 Driveway	130'
Batavia Lane	155'
L - 4.02 -	
Tuck Trail @ D9 - D11	180'
Private Drive - D4 - D6	170'
Sheridan Drive @ #29	220'
L - 4.04 -	
Meadow King 2273 - 2284	180'
Sheridan Dr. 2273 - 2370	1,230'
Private Drive to #39	520'
Private Drive to #143	180'
L - 4.05 -	
Private Drive to #143	130'
L - 4.06 -	
Cave Mtn. Rd. @ C-3 Parking	170'
Cave Mtn. Rd. @ C-3	280'
C-3 parking Lot	Area within buffer $\approx$ 9,800 ft^2
L - 4.08 -	
Cave Mtn. Rd. 22ut - 2225	490'
Private Dr. to # 120	360'
Private Dr. to # 123	60'
	Total: 4,605'

*Note: Drawings L - 4.03, 4.07, and 4.09 show no impervious surfaces in wetland buffers.

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 4
65561 State Highway 10, Suite 1, Stamford, New York 12167-9503
Phone: (607) 652-7741 **FAX:** (607) 652-3672
Website: www.dec.state.ny.us

Joseph Martens
Commissioner

February 3, 2014

Kevin Franke, Senior Associate
The LA Group
40 Long Alley
Saratoga Springs, NY 12866

RE: DEC #4-1946-00152/00001
Windham Mountain Sporting Club
(T) Windham, Greene County

Dear Sir:

This letter will serve as a follow-up to our recent meetings and subsequent submission of the preliminary SWPPP.

1. **State Land**

As discussed, the issue of providing access to the Cave Mountain State Forest Preserve to provide public access that would otherwise be precluded by the project is now a non-issue. Since our April 2012 DEIS comment letter, the New York City Department of Environmental Protection has purchased land adjacent to the Forest Preserve that will provide public access.

2. **Open Space**

As discussed, the Homeowners Association will not allow future development ensuring that open space is preserved. Deed restrictions needs to be addressed to ensure the benefits of maintaining open space in perpetuity. Wildlife displaced by development will have sufficient area to relocate to and will reduce the impact to the maximum extent practicable.

3. **Sewer**

The DEIS states that the Windham WWTP has sufficient capacity to handle increased flow from the proposed facility. An engineering report and sewer plans will have to be approved by DEC prior to final issuance. In that approval, the Department will need to determine the sufficiency of the sewer and conveyance system and if a SPDES modification is needed to the Town of Windham's permit. As stated in the DEIS, the formation of a Transportation Corporation is required. To allow for the formation of the Transportation Corporation, once the Department has determined in writing that conceptual approval can be given, this will allow for formation of the Transportation Corporation to proceed. Since the project lies within the NYC watershed, then NYCDEP will have to review the wastewater aspect as well.

4. **Water Supply**

The Town of Windham's water supply permit will need to be modified to allow the extension of supply or distribution mains into a new service area not specifically authorized by the existing NYSDEC permit for the system for which the extension is proposed.

5. **Road Crossings**

The DEIS addresses the preferred use of span structures over waterways. These span structures provide for natural stream bottoms and accommodate stormwater flows. Based on the U.S. Army Corps of Engineers determination of nationwide permit requirement, a Water Quality Certificate may be required from NYSDEC.

6. **Stormwater**

The DEIS addresses stormwater and contains the Stormwater Pollution Prevention Plan. It has been determined that the project, due to amount of disturbance of steep slopes, is not eligible for coverage under the General Permit and therefore an individual Stormwater SPDES permit will be required. As discussed, an individual Stormwater SPDES permit will be applied for by the owner/developer of the project. This permittee will be responsible for compliance with the permit for all soils disturbance activities including those associated with the individual lots. An acceptable SWPPP will need to be submitted to NYSDEC prior to public notice of the draft permit. Since the project lies within the City watershed, NYCDEP also has approval authority on the SWPPP.

The Division of Water has conducted a review of the submitted preliminary Stormwater SWPPP and offers the following comments:

The Department has reviewed the preliminary Stormwater Pollution Prevention Plan (SWPPP) for Windham Mountain Sporting Club dated September 3, 2013 and submitted by Mark Taber of the LA Group to Dave Gasper in the Bureau of Water Permits (NYSDEC – Central Office) on September 9, 2013. In addition, the Department has reviewed the comments provided by NYC Department of Environmental Protection (dated April 30, 2012) and the Watershed Inspector General (dated November 12, 2012) this project and is in general agreement with them. Of particular concern is the extent of disturbance and proposed density on steep slopes (both ≥15% and ≥25%) and within buffer areas of stream corridors and wetlands compounded by the inability of the proposed design to fully reduce the resulting water quality volume (presumably due to the space and site limitations associated with building on steep slopes).

The NYS Stormwater Management Design Manual (Design Manual) presents a required planning process that must be followed when addressing stormwater management in new development and redevelopment projects such that pre-construction hydrologic conditions are maintained. The 5 step process contained in the Design Manual involves both site-planning to avoid and minimize the impacts of development as well as runoff reduction measures to reduce those impacts that cannot be avoided. The first step in planning for stormwater management using green infrastructure is to avoid or minimize land disturbance by preserving natural areas. Preservation of Natural Resources by preserving undisturbed areas and buffers; reduction of clearing and grading; and, locating development in less sensitive areas is a fundamental concept that builds resiliency into designs and reduces vulnerability to changing weather patterns. It is a concept that cannot be under emphasized.

The Design Manual states, "Development on slopes with a grade of 15% or greater should be avoided, if possible, to limit soil loss, erosion, excessive stormwater runoff and the degradation of surface waters. Steep slopes should be kept in an undisturbed natural condition to help stabilize hillsides and soils. On slopes greater than 25%, no development, re-grading or stripping of vegetation should be considered." The Department recognizes that there might be limited circumstances where disturbance of these areas absolutely cannot be avoided; these should be the exception rather than the rule. Examples may include the construction of a linear project such as a power line which generally has a limited disturbance and would entail far less disturbance than routing the power line around the steep slope. While the SWPPP makes the statement that the applicant has taken great efforts to limit significant development on steep slopes, this statement appears to be unsupported given the amount of site disturbance and density of development proposed in these areas. This is a critical issue and NYSDEC shares the concerns that have been raised by the Watershed Inspector General and New York City Department of Environmental Protection that strong justification is needed to show that such disturbances are unavoidable, justify such intensive development, or demonstrate that potential impacts from those disturbances have been minimized. Demonstrating this project will meet regulatory standards for permit approval will be based upon the resolution of the Department's technical comments within this letter. Since the Department's technical comments address project design and impact issues which are also reflected in the NYCDEP and Watershed Inspector General's comments (dated 4/30/12 and 11/12/12 respectively) we would need to see those comments addressed as well. We note the recent submittal of responses to the Watershed Inspector General's letter and which is now under review. DEC technical comments are as follows:

1. Please indicate in the SWPPP or Design Report where each of the comments from the three agencies is addressed.

2. The SWPPP must clearly identify those areas where steep slopes and riparian buffers could not be avoided and why. In each area, the SWPPP must identify the type of development proposed as well as the heightened measures that will be used to fully mitigate impacts both during and after construction is complete.

3. The Design Manual (Section 4.3) states that runoff reduction shall be achieved by infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration of 100 percent of the post-development water quality volumes to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow and discharge volume as well as minimizing concentrated flow. Runoff reduction is intended to address the increased volume and duration of flow that has been shown to scour stream beds, erode stream banks and cause large quantities of sediment and other entrained pollutants to be transported downstream. In-stream erosion has been identified as a significant contributor to turbidity within the Schoharie Watershed. The lack of centralized channels on this project site and observations noted for the existing condition (both in the Stormwater Management Report as well as within comments submitted by NYCDEP) indicate that stormwater flows are spread out and evenly distributed over much of the hillside. The terraced benches where stormwater was allowed to pond and infiltrate will be paved and channelized. The natural channels that do exist are reported to be vulnerable to erosion. Given these conditions, runoff reduction is a critical component for mitigating the impacts of this development. However, the project does not appear to fully reduce runoff from the 90th percentile storm. The Stormwater

Management Plan (Section 7.2.4) indicates that since the minimum RRv has been met, the project meets the RRv requirements listed in the Design Manual (see comment 19 regarding questions with the calculations for RRv). The stated reductions are achieved primarily through the use of bioretention that will address the residential structures; however, the Department has concerns regarding the ability of the proposed bioretention units to be constructed on each lot and achieve the predicted reductions (see comments 15-17). The SWPPP does not fully discuss the limitations that prevent reduction of 100% of the runoff from the roadways. Runoff from the majority of the roadways is not reduced but will be conveyed and treated in Wet Ponds.

Traditional methods of stormwater control, such as wet ponds, do not protect downstream hydrology because of the following limitations ([1]National Research Council, 20081; [2]Shaver et all 20072):

- Poor peak control for small, frequently occurring storms;
- Negligible volume reduction; and,
- Increased duration of peak flow

Furthermore, the 1 year storm event information provided in Table 4 "Downstream Rate and Volume Summary" of the Design Report (see page 58) indicates an increase in volume of runoff at both points. It appears that the project does not meet the objective of the runoff reduction requirement. Please include information in the Design Report which demonstrates that the runoff reduction predicted will be sufficient to match pre-developed rates and volumes for the small, frequently occurring storms (90th percentile).

4. The Department finds the disturbance of steep slopes to be of significant concern to the extent that projects with greater than 1 acre of disturbance on steep slopes are not eligible for coverage under the SPDES General Permit for Stormwater Associated with Construction Activity, GP-0-10-001 (CGP). This project triggered the steep slope ineligibility provision of the CGP (Part I.D.6), therefore, an individual SPDES permit will be required. The SWPPP will need to be revised to remove reference to the CGP.

5. Due to concerns over the shallow depth to bedrock, steep slopes, soil type and project location (i.e. NYC watershed); it will be imperative that strict controls are employed that will limit the disturbed area and employ aggressive erosion and sediment controls. In order to ensure this level of control is maintained, the permit will be issued to a single entity that will be responsible for all construction associated with this project, including the construction on the single-family residential lots. Sections 1.0 and 2.3.2 of the SWPPP (see pages 1, 2, and 5) should be updated to reflect this requirement.

6. As part of the heightened permit requirements for projects that disturb steep slopes which are tributary to waters of the state classified as AA or AAS, the Department require permit coverage under the Individual SPDES permit for one year from the date that the Regional Office confirms that

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1 National Research Council. 2008. *Urban Stormwater Management in the United States*, The National Academies Press, Washington, D.C.

2 Shaver, E, R. Horner, J. Skupien, C. May, and G. Ridley. 2007. *Fundamentals of Urban Runoff Management: Technical and Institutional Issues – 2nd Edition*, North American Lake Management Society, Madison WI.

the project is complete. The SWPPP and construction drawings must be revised to reflect this requirement.

7.On December 1, 2009, the US Environmental Protection Agency (EPA) published effluent limitation guidelines (ELGs) and new source performance standards to control the discharge of pollutants from construction sites. The new regulation, Part 450.21 of Title 40 CFR (see criteria attached), became effective on February 1, 2010. As a result of the issuance of this new regulation, the Department must ensure that the criteria are adequately addressed in all individual SPDES permits issued for construction activity. Therefore, the SWPPP for this project must be updated to address the new criteria. Specifically, the SWPPP must document how the project meets the criteria in 40 CFR 450.21(A)(1-7) and (D)(1-3) below. Please include a section in the SWPPP that identifies where each of the criteria has been addressed.

8. As part of the heightened erosion and sediment control requirements for projects that disturb steep slopes which are tributary to waters of the state classified as AA or AAS, the draft individual SPDES permit will require the permittee to have a dedicated erosion and sediment control contractor that will be responsible for the installation, implementation, repair and maintenance of the erosion and sediment controls called for in the SWPPP. The dedicated erosion and sediment control contractor must be on site during all soil disturbance activities associated with the construction of this project, including those associated with construction on the single-family residential lots. The SWPPP must be updated to address this requirement.

9. The SWPPP and construction drawings must identify the heightened erosion and sediment controls that will be used to minimize the disturbance, during construction, of any steep slopes that are part of the final site plan. This shall include the development of a heightened sequencing plan which considers the following measures: establishing smaller thresholds for the amount of soil disturbed at any one time, requiring final stabilization of smaller sections of the steep slope areas before disturbing additional soil, and diversion of runoff away from steep slope areas. Please update the SWPPP and construction drawings to include the erosion and sediment controls that will be used to address this comment. Section 4.3 "Construction Phasing Plan and Sequence of Operations" of the SWPPP and the notes under "Phase 1 Construction Sequencing" on Sheet L-3.02 of the construction drawings may have to be revised to address the heightened controls (see Comment 9 below).

10. Section 4.3 "Construction Phasing Plan and Sequence of Operations" of the SWPPP (see page 16) indicates that Phase 1 is divided up into 23 different subphases each of which is less than 5 acres in size and any combination of subphases will not be disturbed at a single time that will result in more than 5 acres overall being disturbed at a single time. In addition, the notes under "Phase 1 Construction Sequencing" on Sheet L-3.02 of the construction drawings indicate that no more than 5 acres will be disturbed at any one time and that the contractor shall not proceed to the next work area until the previous area is stabilized and approved by qualified inspector. The SWPPP needs to provide additional detail that specifies the means and methods of stabilization that will be applied and what will be considered approvable to allow the contractor to proceed to the next work area. Please update the SWPPP and construction drawings accordingly.

11. Section 4.1 "Erosion and Sediment Control Practices" of the SWPPP (see page 13) indicates that the purchasers of the individual single-family home lots will be responsible for having a qualified professional prepare sediment and erosion control plans for the individual lots. The SWPPP needs to provide additional detail as to how the permittee will ensure that the erosion control plan is completed and meets the standards prior to allowing disturbance to occur on that lot.

12. Section 4.1 states that typical sediment and erosion control plans for single- family house lot are provided on Sheet 8.05 of the construction drawings. Given the large area of steep slope being proposed by this project, the SWPPP must include a steep slope typical that identifies the heightened erosion and sediment controls that will be required for the individual lots located on steep slopes.

13. Section 4.3.1 "Sediment and Erosion Control Practices to be Converted to Permanent Practices" of the SWPPP (see page 18) indicates that the temporary sediment basins will be converted to permanent post-construction stormwater management practices when the area draining to these practices is stabilized. Does this include the single-family home lots that drain to the sediment basins? If not, the SWPPP must describe how turbid runoff from construction activities on the single-family home lots will be managed In addition, the SWPPP must specify the number of lots that can be disturbed at any given time.?

14. Section 6.1 "Mechanism of Operation and Maintenance" of the SWPPP (see page 28) indicates that the Homeowners Association will be responsible for maintenance of all of the post-construction stormwater management practices onsite. However, this section also indicates that the owners of lots 33, 38, 42 – 45, 47, 49, 51, and 141 – 143 will be responsible for the maintenance of the post-construction stormwater management practices on their lot. Please clarify this discrepancy.

15. Section 7.2.4 (L) "Bioretention" of the "Confidential Draft Stormwater Management Design Report (see page 51) indicates that bioretention practices are planned for every proposed residential lot with typical lot layouts showing the bioretention practice (Sheet L-8.05 of the construction drawings (Note: only the downhill condition included a bioretention practice)). In most sub-watersheds, these units are relied upon to achieve the runoff reduction. Given the numerous bedrock outcroppings and/or shallow depth to bedrock, steep slopes, tree clearing limitations (see Architectural Review Board Project Design Guidelines), lot size, proposed house dimensions, and drive and utility locations; it does not appear that the Design Report and construction drawings adequately demonstrate that a functional bioretention practice can be constructed on each of the lots. This raises concerns with the ability of the project to achieve the predicted reductions the Design Report and construction drawings must be updated to include the necessary documentation/information to demonstrate that the bioretention units can be constructed on each lot as proposed.

16. As indicated in Comment 15 above, the typical provided on Sheet L-8.05 of the construction drawings only shows a bioretention practice for the "Downhill Condition". Since the Design Report indicates that bioretention practices are planned for every residential lot, the "Uphill Condition" typical must be updated to show the proposed bioretention practice.

17. Given the shallow depth to bedrock, it appears that many of the proposed bioretention practices on the single family residential lots will have to be constructed in fill. However, the "Bioretention Area" detail on Sheet L-8.02 of the construction drawings does not provide any construction specifications for the proposed fill systems. At a minimum, the construction drawings must be updated to show maximum allowable cross slope (Note: Chapter 7 of the Design Manual recommends maximum cross slope of 6%), required limits of the fill, required depth of fill, fill material specifications, required setbacks (vertical and horizontal), fill placement specifications (i.e. required compaction, infiltration rate, etc.), retaining wall design specifications (if applicable), liner/geomembrane specifications (if applicable) and final stabilization technique. In addition, Section 7.4.1 of the Design Report indicates that runoff from the rooftops will be directed to a splash block or stone flow spreader and then sheetflow to the practice. This raises concerns with runoff

from the rooftops short circuiting or by-passing a bioretention practice and structural stability (seeps, blow outs) of practices constructed in fill material.

18. The Design Report indicates that Wet Ponds will now be used at this site instead of Micropool Extended Detention Ponds. Therefore, Sheet L-8.02 must be updated to include the required design/construction specifications for the Wet Pond. At a minimum, this must include a sectional and plan view that addresses all the required design criteria in Section 6.1 of the Design Manual (i.e. aquatic and safety benches, inlet and outlet structures, pond geometry, buffers setbacks, etc.). In addition, the "Site Layout, Materials and Planting Plan" drawings (Sheets L-6.01- L-6.09) must be updated to reflect the use of Wet Ponds instead of the Micropool Extended Detention Ponds.

19. In general, the information related to the WQv/RRv sizing criteria (see Table 1in Section 7.2.5 of the Design Report (see page 53), the Tables in Appendix B, the HydroCad analysis and the supporting narrative in Section 7.0) is confusing and needs clarification. There are a number of missing calculations and inconsistencies that make it difficult to determine if the required sizing criteria has been met. Some examples include:

- Table 1 in Section 7.2.5 list the required Water Quality Volume/Treatment Volume information by pond number, not by drainage area/design point.
- Table 1 (Section 7.2.5) includes a summary of "Upstream Treatment" provided, however, the specific upstream practices are not identified.
- The first table in Appendix B indicates an RRv Provided for Design Point 1a of 47,567 cf, however, there are no RRv practices identified in the table.
- The second table in Appendix B (WQv and RRv Summary) includes an item labeled "Adjusted DEC WQv req'd". It is not clear why this is included in the calculations.
- The second table in Appendix B includes an item under GI Practice for Bioretention Areas (residential), however, it is not clear as to how many residential units are used in the calculations.
- The information provided for Drainage Area 9 in the second table in Appendix B indicates a Total Runoff Reduction of 6763 cf, however, in table 1 of Appendix B, the RRv Provided is 0 cf.
- It is unclear from the last two paragraphs on page 61 in Section 7.4.2 where the discharge from P 4.1 is going. This section mentions Design Points 3 and 4.
- It does not appear that RRv calculations were provided for the sizing of the dry swales.
- It is not clear how the bioretention practices and dry swales were considered in the sizing of the downstream practices. It appears that the residential lots were modeled as an aggregate impervious area.
- It appears that the bioretention practices were credited with a RRv of 40% of the available storage provided even if this volume was greater than the WQv (90% storm). However, it appears that the minimum RRv was determined using the 90% storm.
- The RRv credit in several of the sub-watersheds where there are single –family lots using bioretention practices was not identified.
- The HydroCAD analysis shows several subcatchments that discharge directly to mountain streams. Runoff from developed areas must be treated/reduced prior to entry into these streams. For Example, Reach R1.1 is listed as a mountain stream that receives runoff from Subcatchment 1.1S and 1.1L (residential lots). Compliance with the permit requirements must be demonstrated at the point of entry into the stream for these subcatchments.
- The HydroCAD analysis uses a link for the residential lots. The link appears to treat the impervious cover associated with the lots as an aggregate. Inflow and outflow rates and volumes appear to be the same. How are the bioretention practices treated in the modeling?

- Section 7.2.5 of the Design Report indicates that Table 1 presents a summary of the NYC DEP Stormwater Treatment Volume calculations (i.e. post-development runoff from 1 year storm). It is unclear if the information provided represents the required, total treatment volume or remaining treatment volume. In addition, since the information is listed by pond versus Design Point, it is not clear if the required sizing criteria have been met.

At a minimum, the Design Report must include all calculations used in the design of the post-construction stormwater management controls so we can ensure that the sizing criteria have been met. The information should be broken down by Design Point and required Sizing Criteria.

20. Section 4.0 of the SWPPP (see pages 14 and 15) indicates that a flocculent will be used in the sediment basins to reduce turbidity. Please be advised that the use of flocculants must be reviewed and authorized by the Department prior to use. At a minimum, the Department will need a completed Water Treatment Chemical form and the necessary supportive information. The form is located on the following webpage: http://www.dec.ny.gov/permits/93245.html.

21. In addition, the SWPPP must be updated to address the following;

- The SWPPP must indicate where the treated stormwater from the sediment basins will be discharged. Include the separation distance to the closest downstream surface waterbody.
- Given the potential for increased sediment load, identify the heightened maintenance requirements that will be used to ensure the required storage is maintained in the sediment basins. Also, indicate how and where the sediment will be disposed of.

As discussed, an individual Stormwater SPDES permit will be applied for by the owner/developer of the project. This permittee will be responsible for compliance with the permit by individual lot owners.

7. State Environmental Quality Review

The Town of Windham Planning Board, as Lead Agency, must complete the SEQR review process. Following acceptance of a Final EIS, each involved agency, including NYSDEC, will need to prepare a Findings Statement prior to issuance of permits or approvals.

If you have any questions or concerns, please feel free to contact me.

Sincerely,

Martha A. Bellinger

Martha A. Bellinger
Deputy Regional Permit Administrator

/mb

Cc: Tuck Eastside Partners
Town of Windham Planning Board
NYCDEP
K. O'Connor, R4DOW
D. Gaspar, Albany
A. Dzierwa/J. McCullough, R4DOW

Attachment

EPA's Final Effluent Limitations Reflecting Best Practical Technology (BPT) Currently Available

Part 450.21

Except as provided in 40 CFR 125.30 through 125.32, any point source subject to this subpart must achieve, at a minimum, the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT).

***(A) Erosion and Sediment Controls**. Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:*

(1) Control stormwater volume and velocity within the site to minimize soil erosion;

(2) Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;

(3) Minimize the amount of soil exposed during construction activity;

(4) Minimize the disturbance of steep slopes;

(5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

(6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and

(7) Minimize soil compaction and, unless infeasible, preserve topsoil.

***(B) Soil Stabilization**. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the permitting authority. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority.*

***(C) Dewatering**. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.*

***(D) Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:*

(1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water,

and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

(2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

(E) Prohibited Discharges. *The following discharges are prohibited:*

(1) Wastewater from washout of concrete, unless managed by an appropriate control;

(2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and

(4) Soaps or solvents used in vehicle and equipment washing.

(f) Surface Outlets*. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.*

cc: Hon. Stephen J. Walker, Supervisor, Town of Windham
Mary Beth Bianconi, Delaware Engineering, P.C.
Dan Ruzow, Esq., Whiteman Osterman & Hanna LLP
Linda Geary, Esq., New York City Law Department
Dave Warne, DEP
Cynthia Garcia, DEP
William Wegner, Riverkeeper

Kevin Franke

From: David Gasper <djgasper@gw.dec.state.ny.us>
Sent: Monday, March 03, 2014 1:44 PM
To: Carol Lamb-Lafay; Kenneth Kosinski; Kevin Franke; Mark Taber
Cc: Charles Silver; Joseph Damrath; MGiannetta@dep.nyc.gov; dulac19@earthlink.net; Andrea Dzierwa; Jeffrey McCullough
Subject: Windham Mountain Sporting Club
Attachments: WMSCInfo03-03-14.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Kevin/Mark,

Thank you for meeting with us on February 18th to go over the runoff reduction calculations and other technical details associated with the Windham Mountain Sporting Club. The June 2012 Alpha Geoscience report submitted by Kevin Franke as a follow up to the meeting has been distributed to the Agencies and is currently under review.

As agreed in our Thursday, February 6th meeting at the Windham Town Hall and reiterated during the February 18th meeting in the Region IV office, NYSDEC, NYCDEP and the Office of the Watershed Inspector General (Agencies) are providing the attached list of items that are needed to properly evaluate the latest proposed layout(i.e. 238 residential units/reduced steep slope disturbance). Note that the attached list is merely a summary of technical data and supporting information that were previously requested by the Agencies, but to date, have not been provided.

With regard to ongoing SEQRA review of the WMSC project, separate from the attached list, there exists a number of outstanding comments/issues raised by the Agencies that have either not been addressed or, not addressed adequately to ensure avoidance or mitigation of potential adverse environmental impacts. As such, it is the expectation of the Agencies that requisite responses will be forthcoming on behalf of the project sponsor; those responses will be subject to evaluation by the Agencies as formal review progresses in accordance with the Lead Agency's (Town of Windham Planning Board) obligations under SEQRA.

Windham Mountain Sporting Club
March 3, 2014

Missing Items/Information

1. The January 29, 2014 response to comments to the Watershed Inspector General stated that a new hydrologic analysis was performed using local precipitation data and the recommended adjustments to Tc and CN values and concluded that the modified analysis showed decreased peak rates and volumes. Please submit the HydroCAD data files that were used to develop this response including the updated copy of drainage area maps.

2. Provide the supporting documentation for each HydroCAD link used for the residential units to provide a better understanding as to how the bioretention practices are treated in the modeling.

3. Provide Figures 3-8A through 3-8C, Watercourse Maps at a scale not too exceed 1" = 100' (referenced in section 3.2 of the DEIS - 'Surface Water Resources' third paragraph under section B 'On-site Surface Waters').

4. DEC indicated in the comment letter dated February 3, 2014 that the SWPPP does not fully discuss the limitations that prevent reduction of 100% of the runoff from the roadways. Please provide an itemized list of areas that are not reduced along with the justification for not achieving 100% of the WQv for the 90th percentile storm for each area. This information may be provided using the excel spreadsheet provided by DEC as a follow-up to the February 18th meeting held in the Region IV offices.

5. Sheet L-1.01a, dated 01/29/14, provides an overlay of the project master plan with slopes greater than 25%. What is the data source for the steep slope areas shown on sheet L-1.01a?

6. DEC indicated in the comment letter dated February 3, 2014 that strong justification will be needed to show that disturbances of steep slopes are unavoidable and requested that the SWPPP clearly identify those areas where steep slopes and riparian buffers could not be avoided and the reasoning. Although the revised layout removes some development on steep slopes and from riparian buffers, the revised layout continues to show development in these sensitive areas. For example, Lots 52, 54, 77, 64, 125 and 135 would require disturbance of slopes >25% for either the building envelop or access. D8, C3-East Lodge and the East Lodge Chair lift are shown within the wetland buffer area. Please provide an itemized list identifying each area where steep slopes and riparian buffers cannot be avoided; the justification as to why these areas cannot be avoided; and the additional measures that will be used to fully mitigate the impacts both during and after construction.

7. The January 29, 2014 response to the WIG stated that building ±0.75 mile of retaining wall was cost prohibitive in the context of the project budget. Please provide the engineering estimate based on the actual design of the walls versus the cost of construction for the excavation and lay back structure to support that the MEP standard has been met for avoiding disturbance of these steep slopes.

8. The revised layout continues to show a large lateral disturbance at Sheridan Drive from elevation 2077 to 2101. A retaining wall at this location would eliminate an additional 40' vertical scar as well as approx. 1.3 acres of disturbed steep slope. Please provide the engineering estimate for

this wall versus the cost of construction for the excavation and lay back structure to support that the MEP standard has been met for avoiding disturbance of steep slopes.

9. The revised layout continues to show a large lateral disturbance Cave Mountain Road from elevation 2086 to 2203. This lateral disturbance may compromise the ability to install the bioretention units for the two home sites at the top of this proposed road slope. A retaining wall at this location would minimize the disturbance of steep slope, protect the two home sites and provide additional room for the bioretention units as proposed. Please provide the engineering estimate for this wall section versus the cost of construction for the excavation and lay back structure to support that the MEP standard has been met for avoiding disturbance of these steep slopes.

10. Concerns have been raised with regard to the proposed limits of disturbance for areas not supported by retaining walls due to the lack of earth/rock borings to show that the 1:1 rock cuts can stand competently on a 1:1 slope. The January 29, 2014 response on this issue does not provide adequate information for any reasonable judgment of competency of the rock or impacts of the blasting on existing site conditions.

11. DEC comments dated February 3, 2014 raised concerns with the ability of the project to achieve the predicted reductions and request the necessary documentation/information to demonstrate that the bioretention units can be constructed on each lot as currently proposed.

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

AUGUST 14, 2014

By Email and Mail

Ms. Maureen Anshanslin, Chairwoman
Town of Windham Planning Board
371 State Route 296
Hensonville, New York 12439

Ms. Mary Beth Bianconi
Delaware Engineering, P.C.
28 Madison Avenue Extension
Albany, NY 12203

Re: Windham Mountain Sporting Club- Draft FEIS

Dear Ms. Anshanslin, Members of the Planning Board, and Ms. Bianconi:

The Office of Watershed Inspector General (WIG or WIG Office) appreciates this opportunity to submit these comments on the draft FEIS, prepared by the LA Group in July 2014 based on revised site plans prepared in June 2014.

In summary, the developer and its consultants have been responsive to our concerns and have made substantial improvements in this project in line with prior comments by WIG/DEC/DEP. For example, WIG's November 21, 2012 comments sought a reduction of 16 acres of disturbance on steep slopes (exceeding 25%) and the LA Group's June 19, 2014 letter indicates that the revised layout would reduce those disturbances by almost 14 acres. In addition, now 26.6 acres of impervious surfaces will be created, a reduction from 33.4 acres originally.

As discussed below, however, a number of important issues affecting water quality remain to be resolved, including the need to eliminate or reconfigure 8 building lots currently located on steep slopes. Enclosed are the WIG Office's Technical Comments on the Revised Site Plan, dated August 15, 2014, prepared by our consultant, Donald Lake, which address these remaining issues of concern.

In addition, WIG expresses its agreement with the comments of the New York City Department of Environmental Protection, dated August 14, 2014, concerning the inadequacy of analyses of impacts to on and off-site watercourses and the absence of a jurisdictional determination from the Army Corps of Engineers.

We look forward to continuing to work with the Town Planning Board and other regulatory agencies and stakeholders as environmental review of this project moves forward.

Respectfully yours,

Philip Bein
Watershed Inspector General
(518) 474-7178

Encl.

cc: Dave Gaspar, DEC Central Office
Dave Warne, DEP
Cynthia Garcia, DEP
A. Dangler, Army Corps of Engineers
Dan Ruzow, Esq., Whiteman Osterman & Hanna LLP
Kevin Franke, LA Group
William Wegner, Riverkeeper

Technical Comments for the WIG Office on the Revised Site Plan
Windham Mountain Sporting Club
August 15, 2014
Prepared by Donald Lake, Jr. PE, CPESC

Introduction

I reviewed the latest material submitted from the LA Group in response to the NYS Department of Environmental Conservation, NYC Department of Environmental Protection and Office of the Watershed Inspector General missing items/information list dated March 3, 2014 for the Windham Mountain Sporting Club (WMSC) project. The documents reviewed include:

1. June 19, 2014 Letter from the LA Group to Dave Gasper, NYSDEC.
2. Drawings:
    a. L-101, Project Master Plan, 6/20/14
    b. L-101a, Project Master Plan with Constraints, 6/20/14
    c. L-10.01 to 10.09, Project Master Plan Enlargements, 6/20/14
    d. L-9.01 to 9.03, Single Family Home-Grading and Drainage Feasibility Diagrams, 6/20/14
    e. L-9.04, Erosion and Sediment Control Diagrams for Single Family Home Lots, 6/20/14
3. Document, "Windham Mountain Sporting Club, Additional Information Regarding Road Waivers", March 3, 2010

In summary, the developer has been responsive to our concerns and has made substantial improvements in this project in line with prior comments by WIG/DEC/DEP. For example, WIG's November 21, 2012 comments sought a reduction of 16 acres of disturbance on steep slopes (exceeding 25%) and Keven Franke's June 19, 2014 letter indicates that the revised layout would reduce those disturbances by almost 14 acres. In addition, now 26.6 acres of impervious surfaces will be created, a reduction from 33.4 acres originally.

As discussed below, however, a number of issues remain to be resolved, including the need to eliminate or reconfigure 8 building lots currently located on steep slopes.

Site Improvements

1. It appears that this new FEIS layout is greatly improved from previous versions. There is a significant reduction of disturbance on slopes steeper than 25% as well as a significant reduction of impervious surface. This is achieved by eliminating building lots on steep slopes and reducing roadway and driveway lengths.

Eliminating Building Lots

2. As noted in the 6/19/14 letter, the FEIS reduces disturbance on slopes greater than 25% by an additional 10.9 acres from the DEIS. Since the original proposed project in 2009, the project has been reduced by 28 single family homes, 6 duplex lots, and 4 townhouse units (the table attached to the June 19, 2014 letter does not include townhouse TH5, although it has been removed), and C2, the wellness center, has been deleted.

3. A comparison between the previous DEIS Master Plan Modifications, L-1.01b, dated January 29, 2014, and the current FEIS layout shows the removal of 7 additional single family home lots (SFH). They are Lots # 16, 33, 34, 35, 48, 54, and 80.

4. In addition, the current FEIS also eliminates town houses (TH) TH2, and TH3 (C2, the wellness center, was removed in the DEIS version).

Impervious Area

5. There is an approximate reduction of 20% in the amount of impervious area due to the reduction of road lengths and the number of buildings proposed for construction. For example, the FEIS eliminates all of Batavia Lane and approximately 1,800 feet of driveway access to SFH units 34, 35, and 39.

Retaining Wall

6. The FEIS is proposing to add an additional 1,000 feet of retaining wall to the project as recommended by the WIG; 900 feet in three locations on Sheridan Drive, and 100 feet on Cave Mountain Road.

Adding Building Lots or Reconfiguring Buildings

7. This FEIS Master plan adds back 3 SFH lots previously eliminated in the DEIS. Those are Lot # 42, 43, and 56. Lot 58 is also shown on the revised L-1.01b, but it is not included on sheet L-10.03 and it is noted as "removed" on the attached table to the 6/19/14 letter from the LA Group to DEC. Lot 58 should be removed from L-1.01b.

8. The FEIS actually adds 18 new SFH lots to the project. Many are in areas where larger buildings were proposed and some were added as part of the reconfigured layout. Lots # 144 and 145 replace the D-9 through D-12 duplexes. Lots #154 –157 are located on the TH3 site. Lots # 161 – 164 are located where D13 – D18 were sited. In addition, Lot #153 is added between 152 and 72; Lot 159 between Lot # 66 and 68; Lot# 160 between Lot #95 and 96;

and Lot# 165 between Lot# 117 and 118. This reconfiguration is summarized in the table attached to the 6/19/14 letter from the LA Group to DEC.

9. The bioretention details shown on sheets L-9.01 to 9.03 demonstrate that the retention cells can spatially fit on these lots.

Issues that Need to be Resolved

On March 3, 2014 the NYSDEC, NYCDEP and Office of the Watershed Inspector General provided a list of eleven missing items/information to Kevin Franke and Mark Taber of the LA Group. As noted above, most of the items in the March 3, 2014 have been satisfactorily addressed. However, additional follow up is needed.

1. Lot # 43 was previously deleted in the January 29, 2014 draft environmental impact statement. However, it was reintroduced in the final EIS. It is located on slopes steeper than 25% and should be deleted. The other reintroduced lots, #42 and #56, have been re-configured and appear to work with the topography.

2. Lots #83, #84, #87, #88, and #125 show significant construction disturbance on slopes greater than 25%. These lots should be further re-configured or deleted from the project. This is also true for new lots #162 and #163.

Again, quoting from our March 3, 2014 list –

"DEC comments dated February 3, 2014 raised concerns with the ability of the project to achieve the predicted reductions and request the necessary documentation/information to demonstrate that the bioretention units can be constructed on each lot as currently proposed."

3. Attached are a figure and table from the New York State Stormwater Management Design Manual, August 2010, that show the typical configuration and physical feasibility parameters required for bioretention practices. Although the response from the LA Group shows that there is spatial room to construct this practice on these lots, additional criteria must be met. The depth to the groundwater table and maximum ground slope of 6% have not been verified as having been met. Since this practice is critical for runoff reduction on this site, and has been shown by www.bmpdatabase.org to have an average total phosphorus (TP) removal of 18%, these criteria must be investigated and the results submitted to the NYSDEC for approval.

4. The LA Group should revisit its response letter to DEC, dated May 6, 2014, which addressed DEC's comments1-5 based on the site plan then being proposed. This is necessary due to subsequent changes reflected in the revised FEIS Master Plan dated

June 20, 2014. The LA Group's response to comments 1-5 addressed hydrology and the design points for drainage areas. Due to the recent reconfigurations in the revised plan, some of these comments may not be totally accurate due to the change in layout.

Figure 6.19 Bioretention (F-5)

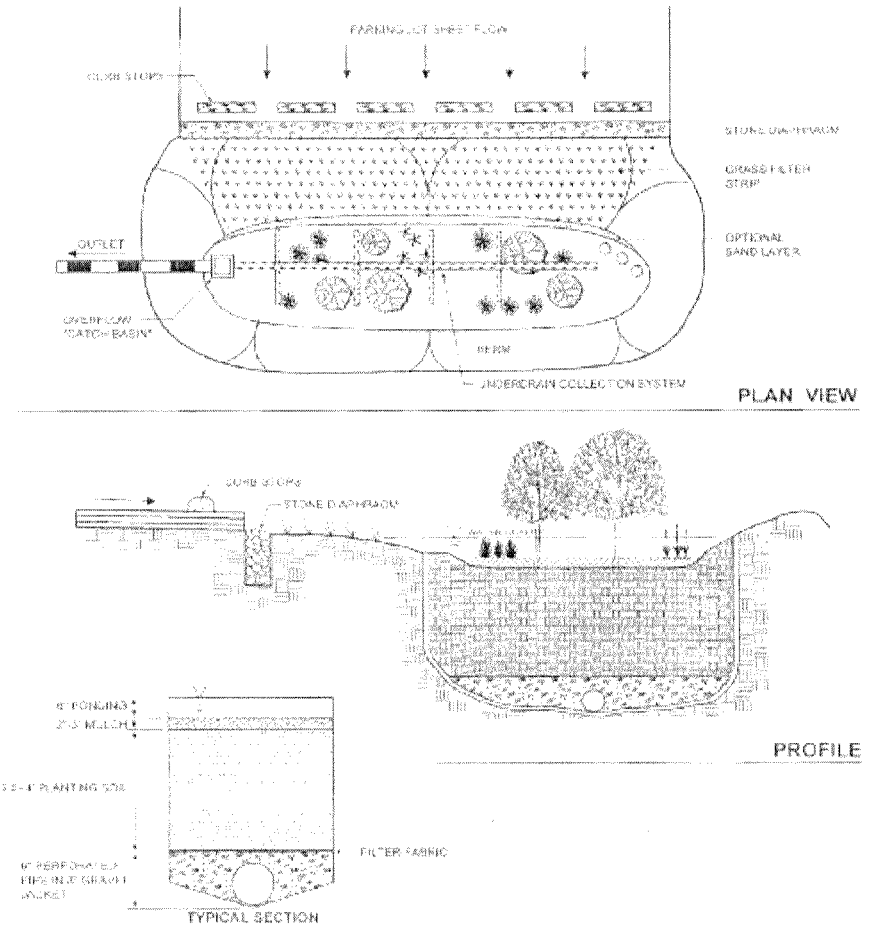

Table 7.2 Physical Feasibility Matrix

SMP Group	SMP Design	Soils	Water Table	Drainage Area (acres)	Site Slope	Head (ft)
Pond	Micropool ED	HSG A soils may require liner	2 feet separation to bedrock or seasonal high water table	10 min[1]	No more than 15%	6 to 8 ft
	Wet Pond			25 min[1]		
	Wet ED Pond					
	Multiple Pond					
	Pocket Pond	OK	Below WT	5 max[2]		3 ft
Wetland[3]	Shallow Wetland	HSG A soils may require liner	2 feet separation to bedrock or seasonal high water table	25 min	No more than 8%	3 to 5 ft
	ED Wetland					
	Pond/Wetland					
	Pocket Wetland	OK	Below WT	5 max		2 to 3 ft
Infiltration	Infiltration Trench	HSG A soils may require liner; minimum pretreatment required over 2.0 in/hr (See Section 6.3.5)	3 feet (4 feet if karst or sensitive aquifer)	5 max	No more than 15%	1 ft[4]
	Shallow Infiltration Basin			10 max		3 ft
	Dry Well			1 max[4]		1 ft
Filters	Surface SF	OK	2 feet[5]	10 max	No more than 8%	5 ft
	Underground SF			2 max[4]		5 to 7ft
	Perimeter SF			2 max[4]		3 to 5 ft
	Organic SF			5 max		3 to 5 ft
	Bioretention			5 max[4]		5 ft
Open Channels	Dry Swale	Made Soil	2 feet	5 max	No more than 4%	3 to 6 ft
	Wet Swale	OK	Below WT	5 max		1 ft

Notes

1. Unless adequate wet pretreatment and anti-clogging device installed
2. Drainage area can be larger in some instances
3. May be larger in areas where the soil percolation rate is greater than 0.5 in/hr
4. Designed to treat rooftop runoff only
5. If designed with a permeable underdrain, must meet the depth requirements for infiltration practices
6. Required bending depth assumes gravity flow

NYC Environmental Protection

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Commissioner

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August 14, 2014

Ms. Maureen Anshanslin, Chairwoman
Town of Windham Planning Board
371 State Route 296
Hensonville, New York 12439

Ms. Mary Beth Bianconi, Consultant to the Town of Windham
Delaware Engineering, P.C. (DE)
28 Madison Avenue Extension
Albany, NY 12203

Re: **Windham Mountain Sporting Club – Draft FEIS**
Trailside Road
Town of Windham, Greene County
DEP Log#: 2009-SC-0708-SQ.1

Dear Ms. Bianconi and Members of the Planning Board:

Thank you for provided the New York City Environmental Protection (DEP) the opportunity to review the draft Final Environmental Impact Statement (FEIS), prepared by The LA Group, dated July, 2014, for the above referenced project.

While DEP appreciates the project sponsor's responses to several issues DEP and other stakeholders have raised, DEP continues to have concerns about the completeness of environmental review, as expressed in each of its comment letters to the Town of Windham Planning Board. DEP can and will address many of its concerns through its regulatory review and approval of the stormwater pollution prevention plan (SWPPP) for the project, but urges the Planning Board to consider two fundamental issues before accepting the FEIS as complete: (1) the inadequate analysis of impacts to on- and off-site watercourses, and (2) the project sponsor's failure to have obtained a Jurisdictional Determination from the U.S. Army Corps of Engineers (ACOE).

1. <u>Downstream impacts have not been adequately addressed in the Draft FEIS</u>

As consistently noted, DEP remains concerned that the proposed density and change in perviousness associated with the project will likely result in the (further) degradation of on- and off-site receiving streams. In response to these concerns, in February 2014, the Planning Board provided DEP the June 2012 Alpha Geoscience report, yet that report does not acknowledge, let alone analyze, quantify, and address these potential impacts.

DEP urges the Planning Board to require an assessment of these potential impacts before accepting the FEIS as complete. At minimum, the Planning Board should require reasonable measures to avoid adverse downstream impacts. The LA Group's proposal to prepare a SWPPP that meets only the minimum runoff reduction (RRv) required by DEC's Design Manual does not constitute adequate avoidance or mitigation of these impacts. As DEP has consistently suggested, a SWPPP that goes above and beyond the minimum RRv and further reduces post-development runoff would, at least to some extent, alleviate DEP's concerns relative to impacts on receiving streams, where DEP has observed varying degrees of channel degradation.

2. The FEIS should not be accepted as complete until the project sponsor obtains an ACOE Jurisdictional Determination.

DEP and other involved agencies have consistently expressed concerns about the delineation of on-site wetlands. While project sponsor acknowledges a total of approximately 2.74 acres of wetlands that the project sponsor does not believe are jurisdictional, neither those wetlands nor their associated buffers are depicted on the project construction drawings. Without an assessment of the functions and values provided by those wetlands, and, at minimum, an ACOE Jurisdictional Determination confirming which, if any, are subject to federal regulation, it is not possible to properly assess potential surface water impacts and therefore premature to complete this environmental review. For the same reason, the Response to Comment 10, on page 116 of the FEIS, noting that "only" 60% of the on-site non-jurisdictional wetlands will be impacted is insufficient.

Accordingly, DEP urges the Planning Board to require a more thorough characterization of and collection of data in order to assess the function and value of each of the on-site wetland. Response to Comment 11, on page 117 of FEIS suggests that data was collected on only a little over a third of the on-site wetlands. This is not a representative assessment. Again, at a minimum, the Planning Board should require an ACOE Jurisdictional Determination before accepting the FEIS.

In addition to these major concerns, DEP noted several other deficiencies in the Responses to Comments:

1. Response to Comment 23, Pg. 12 of FEIS: There should be some mechanism, as suggested in DEP's earlier comment letters which would guarantee the restriction of development of the open space in perpetuity, other than limitations placed on development solely by the Town. As the open areas function both as a land use element and an important component of the stormwater management for the site, the Planning Board should require the restrictions to be memorialized in perpetually binding documents such as conservation easements.

2. Response to Comment 28, Pg. 13 of FEIS: The response assumes that DEP's intent in recommending deer-resistant plantings was to limit deer/human interactions. DEP's interest, however, is to help ensure the success of the plantings. Accordingly, DEP reiterates the recommendation.

3. Response to Comment 1, Pg. 111 of FEIS: To further enhance the project sponsor's efforts to control in-site movement of invasive species during construction, if pressure washing stations are set up at construction staging areas, the wash water and seeds must be collected and properly disposed of.

DEP urges the Planning Board to take these issues into consideration before accepting the FEIS as complete.

Thank you again for the opportunity to provide comments. You may reach the undersigned at cgarcia@dep.nyc.gov or (914) 773-4455 with any questions or if you care to discuss the matter further.

Sincerely,

Cynthia Garcia

Cynthia Garcia
SEQRA Coordination Section

X: A. Dangler, U.S. Army Corps of Engineers
D. Gasper, NYSDEC Central Office
W. Clarke/M. Bellinger, NYSDEC Region 4
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Tuck Eastside Partners, LLC
K. Frank, The LA group