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Town of Somers

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John Currie, Chairman
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Vicky Gannon
Nancy Gerbino
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SOMERS PLANNING BOARD
SPECIAL MEETING
AGENDA
OCTOBER 30, 2013
7:30 P.M.

MINUTES Consideration for approval of Draft Minutes for September 11, 2013

SEQRA

1. **GRANITE POINTE SUBDIVISION**
   [TM: 27.05-3-2 & 5]
   Discussion and consideration for adoption of the SEQRA Findings Statement.

Next Planning Board Meeting, November 13, 2013
Agenda information is also available at www.somersny.com

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PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
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MEMORANDUM

To: John Currie, Chairman, and Members of the Town of Somers Planning Board

Date: October 25, 2013

Subject: **Granite Pointe Subdivision Final Supplemental Environmental Impact Statement (FSEIS) – Draft Findings Statement [#210.201]**

As requested, the Draft Findings Statement as been revised to incorporate the items discussed at the September 24, 2013 meeting and to reflect revisions made by Paul Muessig of EA Engineering. Joe Barbagallo, the Consulting Town Engineer, is currently reviewing the Draft Findings Statement and will be prepared to discuss any needed revisions at the Planning Board meeting. The revisions are highlighted using underline and ~~strikeout~~.

We look forward to discussing the Findings Statement with you.

Sarah L. Brown
Senior Associate/Planning

cc: Joseph Barbagallo, P.E., Consulting Town Engineer
Roland Baroni, Esq.
Paul Muessig, EA Engineering
Marilyn Murphy, Planning Board Secretary

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For Discussion Purposes Only

DRAFT
LEAD AGENCY'S SEQRA FINDINGS STATEMENT
SUELAIN REALTY
APPLICATION FOR GRANITE POINTE SUBDIVISION APPROVAL

After due discussion and deliberation, the Planning Board of the Town of Somers, as Lead Agency, adopted the following SEQRA Findings Statement pursuant to Article 8 of the Environmental Conservation Law, 6 N.Y.C.R.R. Part 617 and Chapter 92 of the Code of the Town of Somers.

I. INTRODUCTION

This SEQRA Findings Statement pertains to the proposed Granite Pointe Subdivision (the "Proposed Action"). It draws upon the facts and conclusions in the Draft Supplemental Environmental Impact Statement (DSEIS) accepted by the Planning Board on August 23, 2006 and the Final Supplemental Environmental Impact Statement (FSEIS) accepted as complete by the Planning Board on September 24, 2013.

This SEQRA Findings Statement attests to the fact that the Town of Somers Planning Board ("Planning Board"), as Lead Agency, has complied with all of the applicable procedural requirements of Part 617 in reviewing this matter, including but not limited to:

- The presence of lead was confirmed in a report prepared by the project's sponsor's consultant, Groundwater and Environmental Services, Inc. dated March 3, 2004, and was the basis for required preparation of the Supplemental Environmental Impact Statement (SEIS).
- Final Subdivision Plat approval was rescinded by the Planning Board at their meeting on June 9, 2004 by Resolution number 2004-12;
- Preparation of a Draft Supplemental Environmental Impact Statement (DSEIS) by the Applicant;
- Acceptance of the DSEIS by the Planning Board on August 23, 2006;
- Circulation of the DSEIS;
- The holding of public hearings on the DSEIS by the Planning Board on October 4, 2006, October 18, 2006 and establishment of a comment period to end on November 17, 2006;

- On November 15, 2006, the Planning Board extended the written comment period deadline to January 10, 2007;

- Preparation of a Final Supplemental Environmental Impact Statement (FSEIS);

- Acceptance of the revised FSEIS, dated July 31, 2013, as complete by the Planning Board on September 24, 2013;

- Circulation of the FSEIS and the establishment of an FSEIS written comment period through October 22, 2013;

This SEQRA Findings Statement also attests to the fact that the Planning Board has given due consideration to the Supplemental Environmental Impact Statement (SEIS) prepared in conjunction with this action, including all appendices thereto, and the public and agency comments submitted on the same. Further, this SEQRA Findings Statement contains the facts and conclusions in the Supplemental Environmental Impact Statement relied upon by the Planning Board to support its decisions and "indicates the social, economic and other factors and standards" that form the basis for its decision.

A. Site and Neighborhood Description

The subject property is a 28.8-acre parcel of undeveloped, mostly woodland located on Tomahawk Street in Somers, New York. The property is mainly surrounded by the Amawalk Reservoir.

B. Project History

The Applicant had been granted preliminary and final subdivision plat approval following a full SEQRA review which culminated in the adoption of findings for the development of 23 single-family residential lots on the property. Subsequent to the granting of final approval, it was further discovered that specific areas of the property were impacted with deposited lead from an old shooting range. The presence of lead was confirmed in a report prepared by the project sponsor's consultant, Groundwater and Environmental Services, Inc. dated March 3, 2004. As a result of this new information,

and in order to allow the Applicant sufficient time to prepare a Supplemental Environmental Impact Statement (SEIS) within the allowable time constraints, action was taken by the Planning Board to rescind the final subdivision plat approval and the application's status reverted to the preliminary subdivision plat approval stage.

II. PROPOSED ACTION

A. Proposed Action

The currently Proposed Action involves the proposed approval of a subdivision plat for 23 single-family residential lots on 28.8 acres located on Tomahawk Street, including the approval of required environmental permits and of a soil remediation plan to eliminate deposited lead, the presence of which was discovered after the Planning Board completed the original environmental review for the Proposed Action.

B. Required Approvals

The Proposed Action requires the following approvals:

1. Town of Somers Planning Board

- Final Subdivision Plat approval
- Tree Removal Permit approval
- Stormwater Management and Erosion and Sediment Control Permit approval

2. New York City Department of Environmental Protection

- Approval of a Stormwater Pollution Prevention Plan (SWPPP)
- ~~Brownfield Clean-up Program~~

3. New York State Department of Environmental Conservation

- Approval of a Stormwater Pollution Prevention Plan (SWPPP)
- Brownfield Clean-up Program

4. State of New York Department of Transportation

- Site Access Permit Approval

5. Westchester County Department of Health

- Reapproval of Septic System
- Reapproval of Connection to Water System
- Realty Subdivision Approval

III. HISTORICAL USES

A. Shooting Range

Trap shooting and target shooting was conducted on portions of the subject property between approximately 1938 and 1968. Shooting activities were not open to the public and only took place on weekends in the spring, summer and fall. The Boy Scouts also utilized the shooting range. The amount of sportsmen that utilized the subject property for trap or target shooting is unknown.

B. Cut/Fill Activity

The native soil horizon along the western margin was removed as part of cut and fill activities completed in the 1970s. The exact date of the cut and fill activities remains unknown.

C. Building Demolition

The abandoned remains of several residential and commercial buildings are located on the currently undeveloped parcel. The buildings include a restaurant, which no longer exists but was located in the central portion of the site, several dwellings, and some storage buildings.

DRAFT

IV. ENVIRONMENTAL IMPACTS

Shooting Range Related Site Impacts

A. Evaluation of Site Soils

1. Impacts Identified

a. The lead concentration in site soils outside the area of expected shot fall was calculated at 70.47 mg/kg; this is below the New York State Department of Environmental Conservation (NYSDEC) average range of 200-500 mg/kg for suburban areas. The background concentration was determined by averaging the XRF screening and laboratory results of soil samples collected from outside the expected area of impact. Soil sampling of the expected shot fall area revealed that a portion of the subject property is impacted with lead and semi-volatile organic compounds (SVOCs) at concentrations above applicable guidance values. Others metals, such as arsenic – arising from the same source and in the same locations as the lead – were found on the site. The impacts associated with the presence of lead, other metals and SVOCs include impacts to air quality from dust, impacts to humans due to contact with the soil, impacts to wildlife inhaling or ingesting soil, impacts to surface water and groundwater that make contact with the impacted soil.

b. The Area-1 (located on proposed Lots 10-13) sampling results indicate a wide range of primarily lead impact within the top 1.5 feet of soil as a result of the historical land use. The horizontal limits of lead impact extends from the cut and fill area located on the western portion of the sampling grid, across the stone wall separating the site from the NYCDEP property. The area of impact widens to a maximum width of approximately 540 feet along the eastern property boundary. The vertical limit of the lead impact extends from grade to approximately 1.5 feet below grade in the area of expected shot fall. There are risks

of potential exposure to contaminants by humans and wildlife from incidental ingestion of contaminated soil, inhalation of dust/soil particles, and dermal contact.

c. SVOCs were detected at concentrations above the NYSDEC guidance values along the southwestern portion of Area-1 from grade to 1.5 below grade. The source of these SVOCs could be attributed to historical dumping in the cut and fill area and the subsequent runoff during storm events. There are risks of potential exposure to contaminants by humans and wildlife from incidental ingestion of contaminated soil, inhalation of dust/soil particles, and dermal contact.

d. The Area-2 (located on proposed Lot 19) sampling results indicate the presence of low level lead and SVOC concentrations in one sample located in this portion of the property. The horizontal and vertical delineation of impact were adequately defined and the impact can be attributed to the parking of vehicles in this area of the site over time and the proximity of this location to the road. There are risks of potential exposure to contaminants by humans and wildlife from incidental ingestion of contaminated soil, inhalation of dust/soil particles, and dermal contact.

e. Soil samples collected during the investigation of the cut and fill area indicate that the native soil interface has not been impacted from the historical land use. The depth of the native soil layer varied across this area with the deepest observation, at 17 feet below grade, along the eastern margin. The native boundary along the western margin was removed as part of the cut activities completed in the 1970s. SVOC concentrations were detected in one sample which was located in the northeast corner of the fill area. Lead concentrations detected in soil samples collected from the cut and fill area were well below the established average background for the site.

f. Approximately 30 Town regulated trees are proposed to be removed as part of the remediation to remove lead and SVOC impacted soil from the site. Of this number, 12 trees would have been removed anyway as part of the development of the originally-approved subdivision. Replanting to prevent erosion, provide screening, preserve ecological systems or remediate effects on neighboring properties will be required as part of the permit.

2. Mitigation Provided

a. The Applicant has applied for and received inclusion into the NYSDEC Brownfield Clean-up Program (BCP) for ~~remedial~~ contaminated site clean-up. The project was accepted into the BCP on February 22, 2010. A Remedial Action Work Plan has been accepted for the site resulting in the excavation and removal of impacted soils. The project will follow a Track 1 clean-up, as defined by NYSDEC, and utilize the Brownfield Remedial Program Soil Cleanup Objectives. Remedial activities will be performed at the Site in accordance with the NYSDEC-approved Remedial Action Work Plan. The removal will be overseen by a Remedial Engineer. The Remedial Engineer will certify the Final Engineering Report that the removal activities were observed by qualified environmental professionals under his/her supervision and that the remediation requirements set forth in the Remedial Action Work Plan have been achieved in full conformance with that Plan.

b. The NYSDEC was contacted regarding the SVOC results and Spill Number 04-11922 was assigned to the site. Data gathered regarding the location of the SVOCs will guide the remediation process. The SVOCs will be removed from the site as part of the NYSDEC approved Remediation Plan.

3. Findings and Conditions

Specifically, the Planning Board finds that:

a. The Remedial Action Work Plan approved by NYSDEC will result in the removal of lead and SVOC impacted soil on the subject property. Other metals found in excess of regulatory limits, being from the same source as the lead, will be removed from the site as part of the remediation. Therefore, the Proposed Action will not have a significant negative impact on soils or potential exposure to contaminants by humans and wildlife from incidental ingestion of contaminated soil, inhalation of dust/soil particles, and dermal contact.

b. A Town of Somers Tree Removal permit will be required for the removal of Town regulated trees. Replanting to prevent erosion, provide screening, preserve ecological systems or remediate effects on neighboring properties will be required as part of the permit.

c. The area of the proposed remediation including tree removal is not readily visible from areas outside of the site and, therefore, remediation is not expected to have significant visual impacts.

~~de.~~ As a condition of Subdivision approval, the supplemental ~~revisions~~ additions, requested by the Town Engineer in his memoranda dated April, 2013 and August 8, 2013, to the NYSDEC approved Stormwater Pollution Prevention Plan (SWPPP) shall be made prior to the issuance of the Town of Somers environmental permits.

e. The stormwater management and sediment and erosion control plans for the subdivision as a whole will need to be updated once subdivision design is finalized. The SWPPP will need to obtain approvals from the NYSDEC under the SPDES program, from the Town, in the guise of a stormwater management and soil erosion and sediment control permit, and from the NYCDEP. As the SWPPP will have to meet all current regulations and the NYSDEC Stormwater Design Manual, the environmental impacts associated

with stormwater, including phosphorus loading, will be mitigated to the maximum extent practicable.

B. Evaluation of Groundwater/Surface Water

1. Impacts Identified

a. Soil contamination impacts were detected from 0 to 4 feet below grade, with the majority within 2 feet below grade. Detectable soil impacts, which have existed for approximately 40 years, have been limited to at least 6 feet above the water table. ~~Therefore, the water table has not been affected by the lead and SVOC contamination.~~

b. Lead and manganese above NYSDEC Groundwater Quality Standards were found in samples collected along the eastern boundary of the area being remediated. The proposed subdivision will utilize a municipal water system for potable water.

~~b~~c. Based on the United States Geological Survey (USGS) map of the site, the maximum elevation on the subject property in the area of soil impact is approximately 445 feet above mean sea level. The Amawalk Reservoir is at an elevation of approximately 400 feet above mean sea level. Based on the semi-circular topographic contours on the subject property, surface water flows gently out, radially, towards the reservoir. No areas of channelized flow (permanent or intermittent) within or exiting the site were identified in the areas of soils impacted by lead and other metals. The existence of heavy vegetation and undergrowth has prevented any permanent or intermittent, channelized, surficial flows. These site conditions do not reveal a risk of surface run-off transporting contaminants. During remediation, there is a low risk of surface run-off transporting contaminants in either a lead particulate or lead enriched soil form.

2. Mitigation Provided

a. Installation of monitoring wells was only necessary if the soil investigation revealed that mobilization and transport of impacted soils are indicated by depth distribution of contaminants. Monitoring wells are not required since detectable soil impacts were located 6 feet above the water table and the impacted soils will be removed from the site as part of the Remedial Action Work Plan.

b. Removal of the soil will eliminate the potential source of groundwater contamination. Additional groundwater sampling will be undertaken to assess whether there has been a bulk reduction in groundwater contamination to asymptotic levels, meaning below NYSDEC Groundwater Quality Standards

~~b~~c. Erosion and sedimentation will be controlled during the remediation period through the use of temporary devices best management practices in accordance with a Soil Erosion and Sediment Control Plan developed specifically for this site in accordance with NYSDEC's *New York State Standards and Specifications for Erosion and Sediment Control*.

3. Findings and Conditions

Specifically, the Planning Board finds that:

a. The Remedial Action Work Plan approved by NYSDEC will result in the removal of lead, together with other trace metals and SVOC impacted soil on the subject property. Therefore, the Proposed Action will not have a significant negative impact on groundwater and/or surface water.

b. As a condition of Subdivision approval, the supplemental additions ~~revisions~~, requested by the Town Engineer, to the NYSDEC approved Stormwater Pollution Prevention Plan (SWPPP) shall be

made prior to the issuance of the Town of Somers environmental permits.

C. Risk Assessment

1. Impacts Identified

a. Environmental assessment activities conducted on the subject property identified the presence of lead, other metals, and SVOCs above applicable guidance values. The main exposure pathways for adults and children would be incidental ingestion of contaminated soil, inhalation of dust/soil particles, and dermal contact. Ecological receptors of concern include invertebrates, fish, mammals, and birds, particularly waterfowl. Pathways for the ecological receptors include ingestion of soil, intentional ingestion of lead fragments as grit, and ingestion of impacted food.

b. There are risks of potential exposure to contaminants during remediation. Under the proposed remediation method, excavated, impacted soil would be loaded into trucks and transported off-site to an appropriate disposal facility.

2. Mitigation Provided

a. The Applicant has applied for and received inclusion into the NYSDEC Brownfield Clean-up Program (BCP) for remedial site clean-up. The project was accepted into the BCP on February 22, 2010. A Remedial Action Work Plan has been accepted for the site resulting in the excavation and removal of impacted soils. The project will follow a Track 1 clean-up, as defined by NYSDEC, and utilize the Brownfield Remedial Program Soil Cleanup Objectives. Remedial activities will be performed at the Site in accordance with the NYSDEC-approved Remedial Action Work Plan. The removal will be overseen by a Remedial Engineer. The Remedial Engineer will certify

the Final Engineering Report that the removal activities were observed by qualified environmental professionals under his/her supervision and that the remediation requirements set forth in the Remedial Action Work Plan have been achieved in full conformance with that Plan.

b. All trucks transporting impacted soil will be required to adhere to all Department of Transportation regulations and requirements. Additionally, the trucks will be covered in a manner to prevent spilling of soil or emission of dust and be subject to decontamination procedures as part of the Remedial Action Work Plan approved by the NYSDEC.

c. Erosion and sedimentation will be controlled during the remediation period through the use of temporary devices in accordance with a Soil Erosion and Sediment Control Plan developed specifically for this site in accordance with NYSDEC's *New York State Standards and Specifications for Erosion and Sediment Control*.

d. Dust-control measures will be implemented in accordance with the RAWP. A Community Air Monitoring Program (CAMP) will be implemented to reduce the risk of any airborne contaminants. The CAMP ensures that the engineering controls designed to protect the community from fugitive releases are functioning properly and, should any such releases occur, ensure immediate notice of regulatory and local authorities to ensure appropriate abatement actions may be implemented. Monitoring of the site will include all standard monitoring functions for environmental remediation projects including observations for visible emissions, air sampling and analyses, inspection and monitoring of the contractor's work practices, and reporting to the Remedial Engineer. The general monitoring functions will be applied to both the excavation and removal phases of the remediation.

3. Findings and Conditions

Specifically, the Planning Board finds that:

a. The Remedial Action Work Plan approved by NYSDEC will result in the removal of lead, other metals and SVOC-impacted soil on the subject property. Therefore, the Proposed Action will not have a significant negative impact on human and ecological receptors.

b. The requirements of the Remedial Action Work Plan, Erosion and Sediment Control Plan and the CAMP will result in the prevention of exposure to contaminants during the remediation process.

V. General Findings

The Planning Board concludes that the areas of significant environmental impact associated with the project involves lead, other metals and SVOC impacts to site soils, surface run-off and exposure to contaminants during remediation. As such, the Planning Board has addressed in the FSEIS and Findings how these impacts can be mitigated.

The Planning Board, acting as Lead Agency, finds that:

a. The Board has given due consideration to the Draft and Final Supplemental Environmental Impact Statements.

b. The Board has weighed and balanced relevant environmental impacts with social, economic and other considerations.

c. This SEQRA Findings Statement provides a rationale for the Board's decision(s).

d. The Board hereby certifies that the procedural requirements of Part 617 of Title 6 NYCRR have been met.

e. The Board hereby certifies that consistent with the social, economic and other essential considerations, from among the reasonable alternatives

available, the proposed action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.

NOW THEREFORE, BE IT RESOLVED, that the foregoing SEQRA Findings Statement is hereby adopted.

BY ORDER OF THE PLANNING BOARD

_____ Date: _____
John Currie, Chairman

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C/
PB
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October 1, 2013

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PLANNING ENGINEERING
TOWN OF SOMERS

Mr. John Currie, Chair
Town of Somers Planning Board
Somers Town House
335 Route 202
Somers, New York 10589

Re: Granite Pointe Subdivision;
Final Supplemental Environmental Impact Statement (FSEIS) Completeness and SEQRA Findings Statement;

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Dear Mr. Currie and Members of the Board:

I submit the following comments on behalf of the Croton Watershed Clean Water Coalition ("CWCWC"), a not-for profit organization dedicated to the protection and preservation of the Croton watershed and its reservoirs. The Croton supplies 10% of the New York metropolitan area's needs. In times of drought, it can be called upon to supply up to 30%.

CWCWC appreciates the opportunity to comment to the Somers Planning Board ("Board") on the Granite Pointe development ("project"), a 23-unit residential development proposed by Suelain Realty ("Applicant") located on a peninsula extending into the Amawalk reservoir. CWCWC has remained concerned regarding the project's environmental impacts and our original comments date back to 2004 and in 2006 we retained the services of hydrogeologist John Conrad who submitted comments on our behalf.

Pursuant to the analysis below, we respectfully request that the Board refrain from accepting as complete the project's State Environmental Quality Review Act ("SEQRA") findings statement based upon the Final Supplemental Environmental Impact Statement ("FSEIS") until the Board has fully reviewed the project's phosphorus loading impacts and has crafted appropriate mitigation measures as required by SEQRA and the Federal Clean Water Act ("CWA").[1]

[1] 33 U.S.C. §1313.

CWCWC identified phosphorus loadings as a significant issue requiring study in 2004. Specifically, on May 26, 2004, CWCWC urged the Board to revise the project's Stormwater Pollution Prevention Plan ("SWPPP") to include a complete phosphorus loading analysis:

> According to the Nonpoint Source Implementation of Phase II TMDLs,[2] April 2001 by the DEC and DEP, the phosphorus reduction for the Amawalk reservoir is calculated at 268 lbs/year. Of these, Somers has been allocated a reduction of 92 lbs/year. The applicant's Stormwater Pollution Prevention Plan (SPPP) will have to comply with the Phase II stormwater regulations, the NYS Stormwater Design Manual, October 2001, and more recent values of pollutant removal coefficients.

CWCWC also stated in a letter dated March 24, 2004 that:

> It is difficult to conceive how this 23-luxury home development on a 29-acre peninsula jutting into the Amawalk could, in any way, contribute to the reduction of phosphorus impacting this reservoir.

Now, nine years later, these concerns have only heightened as awareness of phosphorus has become more widespread and its removal targeted by a number of regulatory programs. Reflecting this awareness, Westchester County Legislators Harckham and Kaplowitz requested the following in a letter of September 11, 2013:

> We respectfully urge the Board to carefully evaluate whether the 2013 FSEIS and Findings Statement adequately identify and mitigate all impacts associated with the proposed site remediation, as well as whether the previous FEIS and Findings Statement for the Preliminary Subdivision Plat at Granite Pointe warrant revision because of new requirements and other changes during the last fifteen years.
>
> The FSEIS will also not address regulatory and other changes that have occurred since the Board's adoption of the Final Environmental Impact Statement ("FEIS") for the project in 1997 and the issuance of a Findings Statement in 1998. The last fifteen years have introduced new federal and state regulatory requirements in the East-

[2] A TMDL describes a value of the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

of-Hudson watershed in which the site is located. For example, phosphorus Total Maximum Daily Loads ("TMDLs"), Municipal Separate Storm Sewer System ("MS4") permitting, New York City watershed regulations, Final Supplemental Environmental Impact Statement (FSEIS) Completeness Review and amended New York subsurface treatment system regulations (septics), and EPA surface water treatment rules are now applicable to the development of the site and to the protection of the Amawalk Reservoir, a drinking water supply for 40,000 individuals.

Unfortunately, despite CWCWC's identification of the issue almost ten tears ago, the SEIS's scope did not identify as an issue the project's physical impact upon the Croton system resulting from the project's annual total phosphorus ("TP") loadings.

Fortunately, it is still not too late in the process to require a loading analysis and determine appropriate mitigation. While CWCWC applauds the Board for its open process and inclusiveness in drafting its FSEIS and proposed Findings Statement, we note that none of the FSEIS Appendices were available on the Town's website, including the project's SWPPP. The Environmental Conservation Law ("ECL") requires the full draft and final EISs and appendices to be available to the public on internet. ECL § 8-0109(6).

Identification of the TP loading in a SWPPP is a pre-requisite to assessing the project's consistency with Federal, State and local laws designed to rehabilitate the Croton's polluted reservoirs. The FSEIS's lack of a pollutant loading analysis renders it impossible for involved agencies such as the New York State Department of Environmental Conservation ("DEC") and New York City Department of Environmental Protection ("DEP") or the public to assess TP impacts.

In order to comply with SEQRA's "hard look" requirement, the Applicant must complete a pollutant loading analysis for TP identifying the project's pre-development loadings and must detail precisely how the Applicant will achieve a "no net increase" in TP. This loading analysis must be completed in a supplemental report. (*See* discussion of 6 NYCRR §617.9[a][7][i] below).

To advance the state and Croton municipalities' water quality goals, the project should result in an overall *reduction* of TP loadings as compared with pre-development loadings. In addition, the supplemental report should discuss in precise terms (pound per acre per year) how the Applicant's TP mitigation measures are consistent with state, regional and local efforts to reduce phosphorus loadings in the Croton.

As set forth below, the Board as lead agency must exercise its authority under SEQRA to ensure that the project does not result in further degradation of water quality in the Amawalk, thereby frustrating Somers' mandated reduction strategies targeting phosphorus, the primary pollutant of concern ("POC").

I. Federal, State and Local Regulatory Framework

To achieve the CWA's goal of rehabilitating the nation's waters, three primary initiatives have been implemented by the states - waterbody use classifications, water quality standards ("WQS") and antidegradation.

A. WQS and TMDLs

With a target year of 1979, the CWA required states:

> to study their water bodies, set quality standards, prioritize their water-quality improvement needs, and establish Total Maximum Daily Loads ("TMDLs") for pollutants. The benefit of this approach is that it facilitates the state's ability to meet its water-quality standards by controlling those sources of pollution that are easiest to control.

Natural Resources Defense Council, Inc. v. Fox, 30 F.Supp.2d 369, 374 (S.D.N.Y. 1998).

Almost twenty years later, DEC finally compiled a list of the state's polluted waterbodies. DEC identified the Amawalk as in violation of the state's water quality standard ("WQS") for phosphorus.

The state's WQS for phosphorus permits *no discharge of any amount* "that will result in growths of algae, weeds and slimes that will impair the waters for their best usages." 6 NYCRRR §703.2. The Amawalk is one of eight Croton reservoirs overloaded with phosphorus, a condition which poses a serious threat to public health and safety. [3]

---

[3] As explained by the NYS Attorney General's office:

> Each year during the summer and fall, phosphorus in the New Croton sets off a biological chain reaction. It promotes algae blooms that result in poor water taste, odor and color. Phosphorus-induced algae blooms also reduce dissolved oxygen in the bottom waters (due to increased bacteria ingesting dead algae), cause increased levels of the heavy metal pollutants iron and manganese, and increase levels of organic carbon. The chlorine-based disinfection of waters that are high

DEC then developed Phase I and Phase II TMDL implementation plans for the Croton targeting reductions in phosphorus to bring these waters back into compliance with state WQS. Phase II identified a total phosphorus reduction target of 14,861 pounds per year[4] ("lbs/yr") for the eight impaired Croton reservoirs and allocated specific reduction targets to each basin.

The Amawalk basin's annual reduction target is 269 lbs[5] of which Somers' (the "Town") allocation is 35% equaling 94 lbs/yr.[6] (*See* Attachment "A").

In 2009, DEC issued a specific TMDL plan for the Croton[7] ("2009 Plan"). The 2009 Plan states:

> This plan is largely structured to use existing programs, primarily the New York State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-08-002 for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). New York State

---

> in organic carbons results in the formation of chemicals [e.g. trihalomethanes] that are suspected of having a number of serious adverse health impacts.
>
> These water quality problems at the New Croton have created an 'operational nightmare' for DEP. As water quality degrades each summer (with a corresponding increase in customer complaints), DEP has to shut down the flow from the New Croton or blend New Croton waters with higher quality waters from the Catskills to dilute the pollutants. These reservoir shut downs often occur for months at a time. Such actions by DEP support a finding that the New Croton water quality often does not meet its New York State classification and best use as a source of drinking water. This problem, if unaddressed, could significantly worsen under drought conditions, flooding scenarios, operational failures in other portions of the water supply system, or increased demand for water in the New York metropolitan area over time.

"Reducing Harmful Phosphorus Pollution in the New York City Reservoirs through the Clean Water Act's 'Total Maximum Daily Load' requirements: a Case-study of the New Croton Reservoir and Recommendation to EPA." (7/5/00 Press Release and Report at www.oag.state.ny.us/press/2000/jul/jul05a_0 0.html).

[4] Or 6,741 kilograms per year. *See* "Nonpoint Source Implementation - Phase II NYC Watershed Phosphorus TMDL (March 2002) pg. 8 available at: http://www.dec.ny.gov/chemical/23835.html.

[5] 122 kilograms per year.

[6] "Nonpoint Source Implementation - Phase II NYC Watershed Phosphorus TMDL" (April 2001), at pg. 15 available at: http://www.dec.ny.gov/chemical/23835.html.

[7] "Croton Watershed Phase II Phosphorus TMDL Implementation Plan." Available at: http://www.dec.ny.gov/chemical/23835.html.

> has designated each municipality in the Croton watershed as an entity requiring Phase II stormwater permit coverage. GP-0-08-002 requires MS4 permittees to develop, implement and enforce a stormwater management program (SWMP) to reduce the discharge of pollutants from their MS4s in accordance with NYS Environmental Conservation Law and the Clean Water Act.

The 2009 Plan identifies high-intensity development areas where stormwater retrofits are projected to reduce existing TP loadings.[8] Retrofitting Somers's high-intensity developed areas would reduce the Town's allocation from 94 lbs/yr to 28 lbs/yr. (*See* excerpt from 2009 Plan included herewith as Attachment "B" [pg. 2 of 2] identifying the projected reduction as 30 kg/yr [66 lbs]).

However, DEC identifies that the 2009 Plan's retrofits are only part of the solution:

> Targeting retrofits in high intensity developed areas alone will achieve perhaps 20% of the required phosphorus reductions. Therefore, retrofits in lower intensity urban areas and non-urban areas may be required, along with other permit compliance measures to further reduce phosphorus, as part of achieving compliance with the TMDLs.

Attachment B, (1 of 2). As further explained below, the Town has joined with other Croton municipalities as part of the East of Hudson Watershed Corporation ("EOHWC") to achieve a "bubble compliance" with DEC's TMDL reduction requirements.

However, the "bubble compliance" does not extend to private developers, such as the Applicant, whose project may reverse EOHWC phosphorus reduction efforts. Consequently, the lead agency must recognize that the Town remains under the affirmative duty to reduce its annual *non-point* source ("NPS") loads to the Amawalk by 28 lbs/yr.

II. Implementation

A. The MS4 Permit

[8] Only 20% of the Croton's phosphorus loads originate from forests. *See* "Nonpoint Source Implementation - Phase II NYC Watershed Phosphorus TMDL (March 2002) pg. 7 available at: http://www.dec.ny.gov/chemical/23835.html.

Implementing the 2009 Plan, DEC's SPDES General Permit[9] for stormwater discharges from MS4s (GP-0-10-002) states:

> *Covered entities* must develop (*for newly authorized MS4s, implement*) and enforce a *SWMP* [Stormwater Management Plan] designed to reduce the *discharge* of pollutants from *small MS4s* to the *maximum extent practicable* ("MEP") in order to protect water quality and to satisfy the appropriate water quality requirements of the ECL and the CWA. The objective of the permit is for MS4s to assure achievement of the applicable water quality standards.[10]
>
> [and]
>
> *Covered entities* shall modify their *SWMP* to meet the additional requirements as set forth in Part IX.A to address phosphorus as the *POC* ['Pollutant of Concern"] for the portion of their *storm sewershed* in the watershed.[11]

Under the MS4 general permit, MS4 operators must modify their SWMPs to ensure that reduction of the pollutant of concern specified in the TMDL is achieved. *Id.* at 23.[12]

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[9] DEC also regulates phosphorus discharges under its SPDES stormwater permit. Specifically:

> [N]o SPDES or other permit shall be issued authorizing any such discharge:
>
> (e) When the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA; and...
>
> ...The provisions of each issued SPDES permit shall ensure compliance with... more stringent limitations, including those:
>
> (ii) necessary to implement a total maximum daily load/wasteload allocation/load allocation established pursuant to Section 303(d) of the Act and 40 CFR Part 130.7.

6 NYCRR §§750-1.3(e), 1.11(a)(5)(ii).

[10] Municipal Separate Storm Sewer Systems Permit, GP-0-10-002 (May 2010) at pg. 14 available at http://www.dec.ny.gov/chemical/43150.html.

[11] *Id.* at Part III(2)(b)(a).

[12] *See also* DEC's response to comment 27 in the "Croton Watershed Phase II TMDL Implementation Plan Comment Responsiveness Summary" (January 15, 2009) "*DEC is requiring all MS4s in the East of Hudson watershed to reduce phosphorus pollution in*

B. Somers' SWMP

Pursuant to the above, the Town's SWMP states it will meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), as amended or revised. Specifically, the Town must:

- Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;

- Reduce… nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.[13]

The Town Code requires that SWPPPs meet DEC's enhanced phosphorus removal standards 93-7(A)(1) and that SWPPPs:

> shall also include water quantity and water quality controls (postconstruction stormwater runoff controls) designed in conformance with the enhanced phosphorus removal standards in the New York State Stormwater Management Design Manual.

Town Code at 93-6(A)(2). [14]

Significantly the MS4 Permit requires that:

Once a TMDL is issued for an impaired water, the no net increase will be the minimum requirement.[15] (Emphasis added).

C. SEQRA

SEQRA requires the lead agency to certify that the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable.[16]

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the NYC watershed through compliance in the MS4 General Permit." At: http://www.dec.ny.gov/chemical/23835.html.

[13] Town Code at 93-2.

[14] Available at: http://ecode360.com/SO0406.

[15] "2010 MS4 Permit (GP-0-10-002) Responsiveness Summary Response" (May 2010) to comment 39 at pg. 26. Available at http://www.dec.ny.gov/chemical/43150.html.

[16] 6 NYCRR §617.11(d)(5).

DEC's 2009 plan as well as the EPA, the National Research Council,[17] and case law all clearly rely upon the lead agency under SEQRA to analyze and mitigate phosphorus loadings in order to meet state WQS.

For example, the 2009 Plan states that local governments "*provide the first line of regulatory oversight by controlling local land use activity.*" *Id.* at 6; Emphasis added). Indeed:

> *Each local government in the Croton watershed is required to collect basic site specific data for all projects* and programs *within their jurisdiction that potentially affect phosphorus loads* and monitor project and program implementation status.

See Id. at pg. 6 "Task 2.1a Local Government"; Emphasis added.

Similarly, EPA recommended that projects in the NYC watershed result in a "no net increase in [phosphorus] loadings over pre-existing construction conditions." EPA further urged that stormwater management plans "include as much site-specific data as possible and that the most conservative measures are utilized to reduce stormwater loadings."[18] (*See* Attachment "C", excerpt from EPA Report).

Additionally, the National Research Council's assessment of efforts to rehabilitate NYC's watershed[19] cited SEQRA as the only means to implement the CWA's antidegradation policy:

> As set forth in federal regulations, *antidegradation dictates that waterbodies cannot be allowed to sustain pollutant loadings that will prevent them from meeting their specific use classification* and associated water quality criteria. [Antidegradation's] most important role is to describe the necessary steps that must be taken when

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[17] The National Research Council is the working arm of the United States National Academies, (comprised of the National Academy of Sciences, National Academy of Engineering and the Institute of Medicine) which produces reports that shape policies, inform public opinion, and advance the pursuit of science, engineering, and medicine.
[18] "Assessing New York City's Watershed Protection Program" (May 2000) at pg. 192; Available at: http://www.epa.gov/region2/water/nycshed/fadmidrev.pdf.
[19] "Watershed Management for Potable Water Supply: Assessing the New York City Strategy" (2000). Available at http://www.nap.edu/openbook.php?record_id=9677&page=360.

> additional pollutant loading is proposed that would eliminate part or all of a waterbody's assimilative capacity...[20]
>
> *An explicit consideration of a receiving water's assimilative capacity should be required as part of draft environmental impact statements....* The stated purpose of antidegradation is for communities, regulators, and dischargers to consider the assimilative capacity of waterbodies. However, this language is not part of federal regulations and, as a consequence, most state antidegradation policies do not require an explicit consideration of assimilative capacity. Although such a consideration is an integral part of the SPDES permitting program, it is less obvious during the SEQR process. *Because SEQR is the only avenue for regulating nonpoint sources that will impact water quality, this requirement for addressing assimilative capacity is critical if the SEQR process is to be relied upon for implementing New York's antidegradation policy.*

Id. at pg. 373, Emphasis added.

In addition to implementing antidegradation, the lead agency must identify and ensure mitigation of impacts such as phosphorus loadings – even where the expertise for such decisions may lie elsewhere. (*See* for example, *Coca Cola Bottling Co. v DEC of Estimate,* 72 NY2d 674 (1998), holding that while a lead agency may rely on outside sources, it must exercise its own critical judgment and is principally responsible for crafting appropriate mitigation).

The matter of *County of Orange v Village of Kiryas Joel*, 44 AD3d 765, 768 (2d Dept 2007) is directly on point:

> Where an agency fails or refuses to undertake necessary analyses, improperly defers or delays a full and complete consideration of relevant areas of environmental concern, or does not support its conclusions with rationally-based assumptions and studies, the SEQRA findings statement approving the FEIS must be vacated as arbitrary and irrational.

(See also Penfield Panorama Area Community, Inc. v Town of Penfield Planning Bd. 253 AD2d 342, [4th Dept 1999] the lead agency "must exercise its critical judgment on all of the issues presented" during the SEQRA review; and

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[20] "Assimilative capacity" refers to the ability of a body of water to cleanse itself; its capacity to receive waste waters or toxic materials without deleterious effects and without damage to aquatic life or humans who consume the water.

Department of Environmental Protection v. Department of Environmental Conservation, 120 AD2d 166 [3rd Dept 1986] where compliance with another agency's regulations does not absolve the lead agency from reviewing the project's impacts).

Finally, SEQRA explicitly requires inquiry into whether a project creates "a material conflict with a community's current plans or goals as officially approved or adopted"[21] such as the Croton TMDL program.

III. The Granite Pointe Project

The original Environmental Assessment Form ("EAF") dated July 24, 1987 indicated that the project will convert between approximately 20 acres of site's 28 acres into impervious surfaces and developed open spaces. (Id. at B[1][b]). The most recent site plan included with the FSEIS shows that ultimately most of the site will be disturbed when considering the disturbance will be required for the stormwater detention basins and remediation of the lead and other substances that was not considered by the EAF. As a result, there is the potential for a significant increase in phosphorus to the Amawalk as demonstrated below.

The basics are not in dispute though various stormwater modeling may be employed (and EPA recommends using the most conservative model).

Mature forests produce very little phosphorus A 1996 DEP report[22] analyzed 195 pollutant loading studies. Of these DEP selected 11 conducted in New York and Connecticut which most closely resembled conditions in the Croton. DEP then averaged the results from these studies to find that 0.05 per kilogram per hectare per year [equal to 0.045 per acre per year ("lbs/acre/yr")[23] was the appropriate export coefficient for phosphorus loadings from forested areas in the Croton.

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[21] 6 NYCRR §617.7(c)(1)(iv).

[22] "Methodology for Calculating Phase I Total Maximum Daily Loads (TMDLs) of Phosphorus for New York City Drinking Water Reservoirs" (June 1996).

[23] That export coefficient was less than half the 0.10 lbs ("lbs/acre/yr") which DEC had recommended in its 1993 Stormwater Guidance Manual. (*See* Attachment "F" also supplied to the Board with my comments at the public hearing on June 25, 2013. The discrepancy between DEC's guidance manual and more recent testing is most likely because DEC's figure was tabulated from older studies from forests in Northern Virginia and conditions in the Pacific Northwest.

That figure has been cited in every TMDL report for the Croton.[24] That figure is also consistent with three years of phosphorus export studies conducted in NYC's Catskill watershed where the annual TP export averaged .046 lbs/acre/yr.[25] (*See* Attachment "D" from DEP Report).

A. Pre-development

Applying the above figures to the 25 acres of forest to be removed by the Applicant, 25 acres of forest would produce approximately 1.15 phosphorus per year. Applying DEC's more generic 0.10 export coefficient, 25 forested acres would produce 2.5 pounds of phosphorus annually. [26]

Thus the existing forest under threat of removal produces 1.15 to 2.5 lbs of TP per year.

B. Post-development

Applying loading coefficients prepared by the EOHWC show phosphorus loads from impervious surfaces and developed open spaces to be more than three times the amount found in runoff from forests. (*See* Attachment "E").

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[24] NYCDEP: "METHODOLOGY FOR CALCULATING PHASE II TMDLS OF PHOSPHORUS FOR NYC DRINKING WATER RESERVOIRS" (March 1999) (pgs. 1-33).
NYCDEP: "DEVELOPMENT OF A WATER QUALITY GUIDANCE VALUE FOR PHASE II TMDLS IN THE NYC RESERVOIRS" (March 1999) (pgs. 1-53).
NYCDEP: "PROPOSED PHASE II PHOSPHORUS TMDL CALCULATIONS, FACT SHEETS FOR THE CROTON SYSTEM" (March 1999).
NYCDEC: "PHASE II PHOSPHORUS TMDLS FOR RESERVOIRS IN THE NYC WATER SUPPLY WATERSHED." (June 2000).
NYCDEC and NYCDEP "NONPOINT SOURCE IMPLEMENTATION OF THE PHASE II TMDLS" (April (2001).
NYCDEC: "INTERIM REPORT NONPOINT SOURCE IMPLEMENTATION OF THE PHASE II TMDLS IN THE NYC WATERSHED" (March 2002).

[25] DEP Appendix C.1 "Analysis of Impacts Associated with Stormwater at the Proposed Belleayre Resort." (April 2004) at pg. 15. Full report available at: http://www.nyc.gov/html/dep/pdf/belleayre/appendixc1.pdf.

[26] See also Attachment B showing impervious areas and developed open spaces to generate more than 3 times more phosphorus than forests. (Presentation by Rahul Verma, P.E., LEED AP, Executive Director, East of Hudson Watershed Corporation at the 2012 NYWEA Watershed Science and Technical Conference September 14, 2012. Available at: http://www.dos.ny.gov/watershed/2012presentations/NYWEA2012-Moving%20Watershed%20Management%20Into%20The%20Watershed.pdf.)

Similarly, applying DEC's export coefficient[27] of 0.80 lbs/acre/year to the project's 23 residences developed on approximately 23 acres results in a TP export of approximately 18.4 lbs/year. (*See* Attachment "F").

That is significant because each pound of phosphorus results in more than 500 lbs of algae growth. [28] As noted above, algae in drinking water sources, when mixed with chlorine as a disinfectant, produce by-products (trihalomethanes) that can be a health hazard.[29]

It is also significant because TP is extremely expensive to remediate.

The Town has joined the EOHWC to use $38 million dollars in ratepayers' money to reduce existing phosphorus loads through retrofits. The EOHWC treasurer has stated that it costs approximately $75,000 to remove one pound of TP from existing stormwater.

As above, even were all the retrofits completed as contemplated by the 2009 Plan, the Town would still need to reduce NPS TP by approximately 28 pounds per year. (See page 6 above). There is no justification to allow the mitigation of this project's phosphorus exports to be borne by water ratepayers, or the Town's taxpayers.

To the contrary, it is CWCWC's position that the project should reduce existing levels of TP export from the site thereby assisting the efforts by the Town and the EOHWC to bring the Amawalk back into compliance with state WQS. This view is shared by the attorney for the EOHWC.[30]

The FSEIS's failure to assess phosphorus also conflicts with New York's Antidegradation Policy as set forth above. Again, that policy requires that:

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[27] *See* Attachment "" Table 9 from DEC's 1992 publication "Reducing the Impacts from Stormwater."

[28] The formula for algae mass is 12C106 1H263 160110 14N15 31P1 with TP being the limiting factor. Source Dr. Jack Smith. *See also* http://www.cleanwatermn.org/learn/pdfs/Algae.pdf). Studies in the State of Maine show 1 lb. of TP producing 10,000 lbs. of algae. http://www.maine.gov/dep/land/watershed/fert/article.htm.

[29] *See* footnote 3 above and EPA's web site "Basic Information about Disinfection Byproducts in Drinking Water: Total Trihalomethanes, Haloacetic Acids, Bromate, and Chlorite" at: http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm.

[30] Telephone conference between James Bacon and George Rodenhausen, Esq. June 2013.

> Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.[31]

Though the site plans show detention basins, there is no discussion as to how much phosphorus will be removed.

Under SEQRA, the FSEIS's failure to assess the project's phosphorus discharges renders the FSEIS incomplete.

For example, in *Matter of Kirk-Astor Drive Neighborhood Assn., et al., v. Town Board of Pittsford* 106 AD2d 868 (4th Dept 1984), the Court annulled a lead agency's SEQRA determination as the applicant:

> failed to provide complete information relating to water table, soil, surface water runoff, plant and animal life and other aspects of the proposed development…

Further, in *Brookville Taxpayers Ass'n v. Town of Oyster Bay*, N.Y.L.J., May 8, 1985, at 15, col. 3 (Sup. Ct. Nassau Co.), the Court determined an EIS was inadequate where the lead agency:

> failed to intelligently consider the Long Island Comprehensive Waste Water Treatment Management Plan prepared by the Long Island Regional Planning Board pursuant to the Clean Water Act section 208. That provision of the Clean Water Act requires areas identified by the Environmental Protection Agency and the states as being 'beset with substantial water quality control problems' to plan for area-wide wastewater treatment management.[32]

Here, the exact set of circumstances exist as in *Brookville*, where water quality plans comparable to the Croton's MS4 and TMDL programs were developed to bring state waters into compliance with the CWA.

Importantly, the Board's analysis of phosphorus cannot be deferred to DEC (or DEP) as it is the sole obligation of the lead agency *during* SEQRA to identify and require mitigation measures to protect WQS and ensure TMDL compliance. (See *Coca Cola Bottling Co.* et al.).

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[31] http://www.dec.ny.gov/docs/water_pdf/togs139.pdf.

[32] "Environmental Impact Review in New York State," *Gerrard, Ruzow, Weinberg* §8.05 citing 33 U.S.C. §1288(a)(2), (b).

In sum, the project is within the basin of the Amawalk reservoir which is impaired by phosphorus. Despite the extensive network of rules and regulations designed to stem the increase of phosphorus in these water bodies, the FSEIS utterly fails to disclose the quantity of the project's phosphorus loadings and impacts to the Amawalk.

IV. Supplemental Review

SEQRA provides:

> The lead agency may require a supplemental EIS, limited to the specific significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from:
>
> ('a') changes proposed for the project; or
> ('b') newly discovered information; or
> ('c') a change in circumstances related to the project.[33]

If the lead agency learns of important new issues about significant adverse environmental effects regarding the proposed action in the course of receiving public comments or issues that were omitted or not adequately addressed in an EIS, the lead agency must require the preparation of the SEIS in order to solicit additional public comment on the new issues.[34] The cure requires the lead agency to prepare a new scoping document requesting not only compliance with all environmental regulations but also a reasonable range of alternatives that will "minimize to the maximum extent practicable" impacts to the environment. ECL §8-0109(2)(f).

Here, a supplemental SWPPP should:

- Discuss the project's pre-development baseline and post-development levels of phosphorus loadings to receiving waters.
- Address whether the project's phosphorus loadings will increase the amount of phosphorus Somers will need to remove as part of its TMDL allocation and MS4 requirements. (See GP-0-010-002 and the 2009 Plan.)[35]

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[33] 6 NYCRR. 617.9(a)(7(i)).
[34] 6 NYCRR §617.9(a)(7); and see discussion of *VLG Real Estate Developers v Goold*, Index No. 170227 (Sup. Ct. Rensselear County, December 19, 1989) "Environmental Impact Review in New York State," *Gerrard, Ruzow, Weinberg* at §3.13[1]).
[35] Available at: http://www.dec.ny.gov/docs/water_pdf/jan09crotontmdl.pdf.

- Address the assimilative capacity of the project site's receiving waters in order to implement New York's anti-degradation policy.[36]

CONCLUSION

As an MS4, the Town of Somers is required to significantly reduce existing phosphorus loads to the Amawalk reservoir. For that reason, the Board must ensure that baseline phosphorus loadings are accurately reported in order to compare the project's pre-development and post-development loadings. The failure to maintain or decrease pre-development phosphorus loadings would violate New York's antidegradation policy and shift the burden to offset phosphorus loadings to the Town of Somers or the EOHWC. Somers would then be forced to use tax dollars to expand its retrofitting of stormwater management systems to account for additional phosphorus loadings to the Amawalk – essentially subsidizing the development of the project. We recommend that the Board require a supplemental EIS to remedy the FSEIS's incomplete and inaccurate data and hold a public hearing on the SEIS scope consistent with SEQRA's requirements.

Respectfully submitted,

James Bacon

Cc: Mary Beth Murphy, Supervisor Town of Somers
Philip Bein, Watershed Inspector General

[36] http://www.nap.edu/openbook.php?record_id=9677&page=360; "SEQR is the only mechanism by which New York can implement its antidegradation policy for activities that cause nonpoint source pollution." At pg 369.

Table 4.1. Example Load Reduction Allocation by Town for Each Reservoir Basin.

	Percent of Basin		Phosphorus Reduction		
	Area	Load	Proportional to Area (kg/yr)	Proportional to Load (kg/yr)	Total Required (kg/yr)
Amawalk Reservoir Basin					122
Carmel	64%	62%	78	75	
Putnam Valley	4%	4%	5	4	
Somers	33%	35%	40	42	
Croton Falls Reservoir Basin					885
Carmel	82%	85%	722	754	
Kent	7%	7%	59	65	
Somers	2%	2%	19	20	
Southeast	10%	5%	85	46	
Cross River Reservoir Basin					57
Bedford	24%	27%	14	16	
Connecticut	10%	8%	6	4	
Lewisboro	49%	56%	28	32	
North Salem	1%	0%	0	0	
Pound Ridge	17%	9%	10	5	
Diverting Reservoir Basin					983
Patterson	3%	1%	29	5	
Southeast	97%	99%	954	978	
East Branch Reservoir Basin					993
Beekman	0%	0%	0	0	
Connecticut	13%	10%	131	100	
Kent	1%	0%	8	5	
North Salem	1%	2%	13	23	
Patterson	40%	33%	396	325	
Pawling	26%	24%	263	239	
Southeast	18%	30%	182	300	
Middle Branch Reservoir Basin					204
Beekman	7%	3%	15	6	
Carmel	4%	4%	8	9	
East Fishkill	18%	11%	37	23	
Kent	33%	45%	67	91	
Patterson	9%	9%	18	17	
Pawling	6%	3%	13	6	
Southeast	23%	25%	46	52	
Muscoot Reservoir Basin					2058
Bedford	26%	27%	530	557	
Carmel	4%	5%	88	97	
Lewisboro	8%	7%	166	140	
North Salem	9%	8%	187	166	
Pound Ridge	6%	2%	117	45	

A

Table 1 - Water Quality Limited Reservoirs - Remaining Phosphorus Reductions							
RESERVOIR	Current PS Loads (Kg/yr)	Current NPS Load (Kg/yr)	Available Load TMDL-MOS (Kg/yr)	WLA (Kg/yr)	LA (Available Load - WLA) (Kg/yr)	Total Reductions Needed (Kg/yr)	Remaining Reductions Needed (Kg/yr)
Amawalk	241	1,077	1,196	390	806	122	122
Croton Falls	1,710	3,300	3,030	615	2,415	1,980	885
Diverting	159	3,685	2,392	322	2,070	1,452	983
East Branch	233	3,229	2,469	449	2,020	993	993
Middle Branch	99	921	816	184	632	204	204
Muscoot	1,631	9,929	8,457	1,405	7,052	3,103	2,058
New Croton	191	10,998	8,758	209	8,549	2,431	1,356
Titicus	0	1,124	984	0	984	140	140

Note: Current PS is WWTP measured load from 1996. Current NPS is (1992-1996) measured reservoir concentrations minus Current PS. WLA is WWTP loads once upgrades are achieved with all WWTPs operating at design flow. Total Reductions Required is Current PS + Current NPS minus Available Load. Remaining Reductions is Current NPS + WLA minus Available Load (once WWTP upgrades are achieved).

Target High-Intensity Development First

DEC has performed an analysis of the MS4s in the Croton Watershed and prioritized areas where stormwater retrofits will most effectively result in reduction of phosphorus loading to adjacent waterbodies. This analysis is focused on high intensity developed land use within the various reservoir watersheds, because this land use produces higher phosphorus loading than other less intensely developed land uses, as indicated in Appendix B.

Table 2 below shows the results of Arc View Generalized Watershed Loading Function (AVGWLF) modeling of high intensity development phosphorus loading per reservoir basin by DEC. Boyd's Corners and West Branch Basins are included, though these basins are not water-quality limited, because these reservoirs feed downstream reservoirs that are water-quality limited. DEC has used the results of this model to allocate five-year phosphorus reduction values for MS4s in the Croton watershed that will meet plan approval from DEC, a requirement for compliance with the MS4 General Permit.

Since these modeled phosphorus reductions are derived from a specific subset of urbanized land use, it does not fully describe the phosphorus reductions required in the Croton watershed. Targeting retrofits in high intensity developed areas alone will achieve perhaps 20% of the required phosphorus reductions. Therefore, retrofits in lower intensity urban areas and non-

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urban areas may be required, along with other permit compliance measures to further reduce phosphorus, as part of achieving compliance with the TMDLs. Table 2 reveals the level of high intensity development-based phosphorus loading each MS4 contributes to a given reservoir basin. This information will be useful to a regional approach to permit compliance in allowing a more complete view of the Croton reservoir system.

Table 2 – Modeled High Intensity Development Phosphorus Loading By Watershed Basin

Watershed	Municipal High Intensity Development Phosphorus Load (kg/yr)								Total
Amawalk	Carmel	Putnam Valley	Somers						220
	190	0	30						
Croton Falls	Carmel	Kent	Somers	Southeast					139
	106	25	6	2					
Diverting	Brewster	Patterson	Southeast						135
	37	0	98						
East Branch	Kent	North Salem	Patterson	Pawling	Southeast				192
	1	6	98	48	39				
Middle Branch	Beekman	Carmel	East Fishkill	Kent	Patterson	Pawling	SE		165
	1	5	12	88	12	2	45		
Muscoot	Bedford	Carmel	Lewisboro	North Salem	Pound Ridge	Somers	SE	Yorktown	786
	143	48	72	106	23	207	34	153	
Boyd's Corners	East Fishkill	Kent	Putnam Valley						47
	4	38	5						
West Branch	Carmel	East Fishkill	Kent						68
	30	2	36						
New Croton	Bedford	Cortlandt	Mount Kisco	New Castle	North Castle	Somers	Yorktown		480
	46	49	115	131	0	5	134		
Titicus	Lewisboro	North Salem							17
	1	16							
Cross River	Bedford	Lewisboro	North Salem	Pound Ridge					138
	2	114	0	22					
Bog Brook	Patterson	Southeast							4
	1	3							
								Total	2,391*

* This table has been extracted from Appendix B, "Technical Background for Retrofitting Practices." This total does not include values for the towns of Harrison and Mount Pleasant, as these towns are not part of the Croton watershed.

"B" 2 of 2

review process was lengthy and cumbersome in relation to the small size of some of the projects being evaluated. In addition, there has been confusion among engineers and applicants as to what an SPPP requires versus what are only recommendations - an important distinction when the City will pay only for what is required under the WR&R that is not otherwise required by state or federal law. Watershed stakeholders also complained that the City was inconsistent in defining a "watercourse" for particular projects (which often times triggers the need for a SPPP).

Some of these problems derive from the fact that regulating stormwater management is new in the watershed and that the regulations and existing guidance lend themselves to uncertainty and conflict. The City has stated that it has developed draft guidance to help applicants and NYCDEP staff determine the presence and limits of watercourses. It is important that this guidance be finalized expeditiously, and that it be accompanied by appropriate training so to minimize such conflicts in the future. In most instances, it appears that problems could have been resolved if clear lines of communication had been developed early in the SPPP process. As EPA stated in the Public Education section of Chapter VI, it is critical that there be a continuation of efforts to strengthen communication with and gain the trust of communities. More recommendations are provided below.

ii. Recommendations - Regardless of which model is used to develop SPPPs, the result must be BMPs that are designed, built and maintained consistent with Section 18-39 of the WR&R with an overall goal of no net increase in loadings over pre-existing construction conditions. **EPA recommends that NYCDEP ensure that SPPPs include as much site-specific data as possible and that the most conservative measures are utilized to reduce stormwater loadings.**

With large development projects, the uncertainties built into stormwater models and potential impacts of stormwater runoff become much greater. **To address the environmental impacts from large projects, EPA recommends that the City vigorously apply its authority under SEQRA.** Through SEQRA, the City can work to reduce the project's footprint during the planning stage - a much more effective mechanism to reduce stormwater runoff than to rely solely on BMPs. **In addition, EPA recommends that the Lead Agency under SEQRA ensure that the project applicant initiates the SPPP early and on a parallel track with the project planning process to more effectively and efficiently address water quality concerns.**

EPA commends the City on its new monitoring initiatives that are meant to provide performance based information on BMPs. This information should enhance the effectiveness of the SPPP program and provide a basis for the long-term evaluation of this element of the WR&R.

There is some confusion among consulting engineers and applicants on SPPP requirements on relatively small projects. This has resulted in long delays in the NYCDEP approval process and frustration among watershed residents and businesses. **EPA recommends that the City develop more explicit guidance on SPPP requirements and BMP criteria and apply this guidance in a consistent manner. EPA recommends that NYCDEP spearhead watershed workshops or**

immediately upstream (Appendix 10A, Page 10). Exclusion of this upstream input may result in an underestimate of the pollutant loading. As the ponds are not 100 percent efficient at pollutant removal, carryover of pollutants to downstream ponds is not accounted for by the water quality modeling. The loading effects from one pond to the next must be addressed to accurately depict the cumulative loadings from the proposed project.

4. Pre-development total phosphorus loads estimated by the model are high compared to site-specific data collected by NYCDEP and values reported in the literature. This overestimate of pre-development total phosphorus load will result in an underestimate of the net change in loadings during the operational phase of the proposed project. Considering that the DEIS already projects an increase in total phosphorus loading from pre- to post-development conditions, then the difference between the pre- and post-development may be even greater than that reported in the DEIS. The DEIS claims that pre-development total phosphorus concentrations may be as high as 0.27 mg/L (Appendix 10A, Page 12) and pre-development export coefficients for the Big Indian parcel may be as high as 0.23 lb/acre or 0.258 kg/ha/year (Appendix 10A, SLAMM output tables). These values are greater than typical total phosphorus exports from relatively undisturbed forested watersheds, such as Giggle Hollow, which encompasses portions of the proposed resort as noted in the table below. Oftentimes modeling applications use literature data to validate models because local data are not available. However, NYCDEP data were provided to the applicant and are presented in the DEIS, but were not used in the modeling effort. Based on literature review and NYCDEP data, it appears that Giggle Hollow yields very little total phosphorus, suggesting that pre-development total phosphorus export in SLAMM is potentially overestimated.

TOTAL PHOSPHORUS EXPORTS FOR FORESTED WATERSHEDS AS REPORTED IN LITERATURE, MODELED BY SLAMM, AND CALCULATED WITH NYCDEP DATA FROM THE BELLEAYRE MOUNTAIN WATER QUALITY MONITORING PROGRAM

Location	Land Use/Land Cover	Date	TP Conc (mg/L)	Export (kg/ha/yr)	Water Yield (meters)	Source
Big Indian Pre-Development	Predominantly forest	3/15/93 - 11/30/93	**0.23**	**0.258**	**0.114**	**DEIS SLAMM MODELING**
Giggle Hollow	Predominantly forest	4/24/01 - 11/30/01	0.016	0.023	0.155	Calculated with NYCDEP data
Giggle Hollow	Predominantly forest	3/15/02 - 11/30/02	0.017	0.068	0.498	Calculated with NYCDEP data
Giggle Hollow	Predominantly forest	3/15/03 - 8/12/03	0.013	0.066	0.536	Calculated with NYCDEP data
Chesapeake Bay forested areas	Forested sources	1985	---	0.038	---	Shuyler 1993
Town Brook, Catskills	54% Ag; 45% Forest	1/1/99 - 12/31/99	0.64	1.2		McHale and Phillips 1999
Lakes Bennery and Major, Nova Scotia	Forested	---	---	0.054	---	Hart et al. 1978
Multiple	Forested sources	---	---	0.05 - 0.8	---	Uttormark et al. 1974
Multiple	Forested sources	---	---	0.005 - 1	---	U.S. EPA 1976
Copper Mountain	Mixed	---	0.039 - 0.017	---		Lewis and Saunders 2000

"D"

How?

- Calculate WQ_v using the 90th percentile storm.
- Loading Coefficients

Land Use	Phosphorus Concentration
Developed Open Spaces (golf courses, parks, large lawns)	0.59 mg/L
Impervious	0.50 mg/L
Industrial	0.45 mg/L
Residential	0.41 mg/L
Actively Grazed Pasture	0.40 mg/L
Commercial	0.34 mg/L
Forest	0.15 mg/L

EAST OF HUDSON WATERSHED CORPORATION

TABLE 9. Uncontrolled Nonpoint Pollution Loading Rates (lbs/acre/year)

LAND USE	Density DU / Acre	Percent Imperviousness*	BOD SOILS Clay Loam Silt Loam Loam	BOD SOILS Sandy Loam	TP SOILS Clay Loam Silt Loam Loam	TP SOILS Sandy Loam	TN SOILS Clay Loam Silt Loam Loam	TN SOILS Sandy Loam
I. Undeveloped Forest		1%	7	6	0.1	0.1	2.5	2.4
Abandoned Farm Land		1%	8	6	0.2	0.1	3.0	2.6
Cropland								
A. Conventional Tillage		1%	45	29	4.2	2.3	18.6	12.5
B. Minimum Tillage		1%	22	19	1.5	1.1	9.6	8.7
Cow Pasture		1%	32	13	0.5	0.3	6.2	4.3
II. Developed								
A. Residential Categories								
Large-Lot Single Family	0.5	9%	22	13	0.8	0.5	6.1	5.1
	1.0	12%	23	14	0.8	0.6	6.6	5.7
	2.0	18%	25	17	0.9	0.7	7.5	6.7
Medium Density Single Family	3.0	20%	27	18	1.0	0.8	8.0	7.1
	4.0	25%	28	20	1.1	0.9	8.8	7.9
	5.0-6.0	35%	32	25	1.3	1.1	10.4	9.7
Townhouse/ Garden Apt.	6	35%	35	26	1.5	1.2	11.7	9.9
	8-10	40%	40	32	1.6	1.5	12.4	10.8
	10-20	50%	50	36	1.8	1.7	13.9	12.5
High-Rise	30%	60%	113	111	1.2	1.2	10.1	10.1
	30%	75%	138	137	1.4	1.4	11.6	11.6
B. Commercial/ Industrial								
Industrial		(Medium) 60% (High) 80%	113 146	111 145	1.2 1.5	1.2 1.4	10.1 12.2	10.1 12.2
Suburban Shopping Ctr.		90%	163	163	1.6	1.6	13.2	13.2
Central Business Dist.		95%	206	206	2.7	2.7	24.6	24.7

Source: Regional Resources Division, Northern Virginia Planning District Commission. Guidebook for Screening Urban Nonpoint Pollution Management Practices. (Prepared for Metropolitan Washington Council of Governments) November, 1979.

Rooftop areas are not included in the percent imperviousness for large lot and medium density single family uses.

1

C/
PB
CTE
FPC
EA ENG
APPLICANT

Date: October 19, 2013

To: Mr. John Currie, Chair
Town of Somers Planning Board
Somers Town House
335 Route 202
Somers, New York 10589

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OCT 22 2013
PLANNING-ENGINEERING
TOWN OF SOMERS

From: Keith Ford
P.O. Box 324
Amawalk, NY 10501

Olga Shamraj
1 Adele Ct.
Amawalk, NY 10501

585

Sent 5 pages via Facsimile to the Somers Planning Board, fax number 914-277-4093

Re: **Granite Pointe Subdivision; Notice of Completion of Final SEIS and Lead Agency's SEQRA Findings Statement**

Dear Mr. Currie and Members of the Somers Planning Board,

As an initial matter, it is our understanding that the comment period in connection with the Board's consideration of the Final SEIS and Lead Agency's SEQRA Findings Statement runs through October 22, 2013.

In reviewing the history of the project - and as the members of this Board are well aware - in 1998 the Somers Planning Board adopted the Granite Pointe Finding despite the knowledge of the presence of a shooting range on the property which was mentioned in a cursory fashion on Page 12 of the FSEIS dated 1990 (See attached FSEIS Revised March 19, 1990; page 12, paragraph 3), stating:

> *"Approximately 30 or more years ago, an area consisting of approximately 2.2 acres, located behind and to the east of the restaurant was regraded and leveled for use as a 'trap and skeet' shooting range".*

We note that both Bibbo Associates and F.P. Clark Associates were involved at that time - as they currently are - and neither entity raised concerns regarding potential for dangerous levels of lead contamination (See attached FSEIS Revised March 19, 1990; Cover sheet "Bibbo Associates, Consulting Engineers – Planners" and page 11, "Response to Memorandum From Frederick P. Clark Associates"). Clearly this was a mistake of monumental proportions on the part of the Planning Board and the consultants. It was left to concerned citizens to ensure that the issue was properly addressed by calling for additional testing for lead and other metals, the presence of which was subsequently confirmed.

Given the current involvement of the identical parties (i.e., F.P. Clarke Associates, Bibbo Associates and the Planning Board), we are understandably apprehensive that once again this Board is "rushing" the process and overlooking salient facts regarding issues such as the proposed remediation, as well as the failure of the FSEIS to address the issue of phosphorus loading impacts on the Amawalk Reservoir. Many of these concerns were expressed in the September 11, 2013 letter to the Board signed by County Legislators Peter Harkham and Michael Kaplowitz, as well as the October 1, 2013 letter to the Board from James Bryan Bacon, Esq. on behalf of the Croton Watershed Clean Water Coalition [CWCWC].

For example, the Harkham/Kaplowitz correspondence pointed out that the excavation and removal techniques selected in the FSEIS are the most invasive of the alternatives considered. This fact necessarily raises serious concerns regarding the potential for dispersal of contaminants during the excavation and removal process. Who will be overseeing that process to assure the safety of children at the daycare center across the street? Or to prevent contamination of the Amawalk Reservoir which provides drinking water for 40,000 people?

We note the points raised in the Harkham/Kaplowitz and Bacon/CWCWC correspondence were addressed in a rather cursory fashion by representatives from F.P. Clarke Associates at the September 24, 2013 Board meeting. They indicated that the points either had no validity or would be addressed at "a later time". What assurances do we have that these issues will in fact be seriously addressed? Who is responsible for monitoring the remediation of the site? What procedures are in place to prevent the dispersal of contaminants during excavation and hauling?

Similarly with respect to new regulations regarding phosphorus loading impacts and storm water runoff, the issues have not been adequately addressed in the FSEIS. In order to comply with the federal, state and local regulatory framework, these issues should be and must be addressed before this Board can contemplate accepting the FSEIS. What assurances do we have that the Board will take the necessary steps to ensure compliance with the law?

We understand the Board's legitimate concern for the rights associated with the ownership of private property; however, such rights should not be elevated above concern for the health, safety and welfare of the community at large.

Until these concerns are addressed, we urge the Planning Board to consider the FSEIS incomplete.

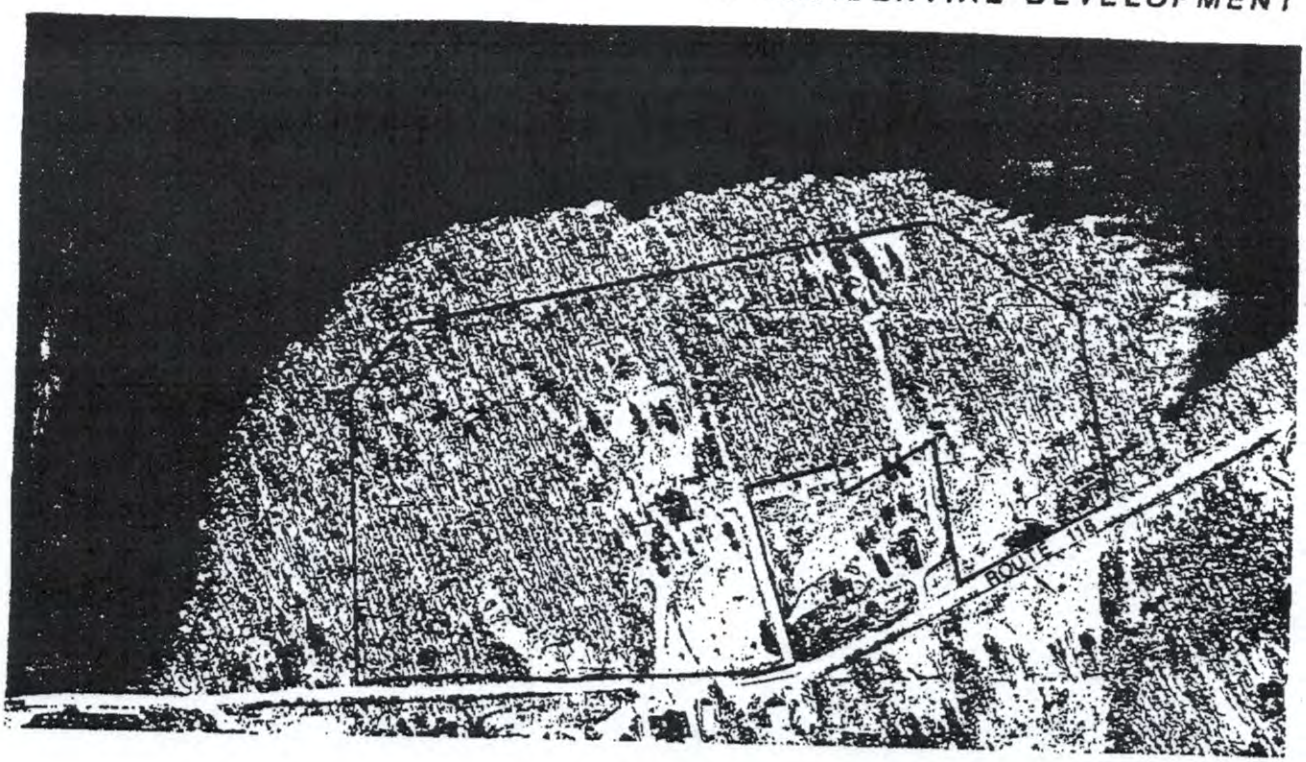
Sincerely,

Olga Shamraj

Keith Ford
Olga Shamraj

GRANITE POINTE

A RESIDENTIAL DEVELOPMENT



FINAL
ENVIRONMENTAL IMPACT STATEMENT

TOWN OF SOMERS, NEW YORK

AUGUST 22, 1989

REVISED: JANUARY 23, 1990

MARCH 19, 1990

BIBBO ASSOCIATES
CONSULTING ENGINEERS - PLANNERS
CROTON FALLS, NEW YORK

FEIS cover sheet

Response to Memorandum
From
Frederick P. Clark Associates

11-1. When the Granite Pointe project was presented to the Town Board, in 1987, for its review and concurrence with the Planning Boards's recommendation to "cluster", the Town Board asked the applicant his intent in regard to payment of recreation fees. The Town Board indicated to the applicant that he could construct a recreation area if he so desired, but that the Town was solely interested in the payment of the recreation fees. The intent of the applicant to pay recreation fees, in lieu of recreational land reservations was publicly stated to the Town Board at its meeting of December 3, 1987.

In addition to the payment of recreation fees, the applicant has stated his intent to build a recreation facility for the private use of the Granite Pointe Homeowners. Since the proposed facilities are to remain in private ownership (H.O.A.), the General Standards of Section 150-24.A are not applicable. However, the area to be set aside and used for the formal recreation facilities will be 1.4 +/- acres.

The proposed pool and cabana/meeting room building and other ancillary recreation facilities (horseshoes, boche court, shuffle board are currently under consideration) will occupy the area of the old restaurant and out buildings. Also being considered is an exercise trail to be located in certain open space areas. Access to the parking area will be from Station 7 + 0 +/- on the main roadway. The water storage tank will be placed under ground in the recreation area. The water treatment facility will be located in the water supply area which is proposed to consist of 2.4 acres located between and adjacent to Route 118 and the old restaurant facility. These areas and proposed facilities are shown on the preliminary plat. A schematic layout of the recreation facilities is shown on Exhibit II.

Plans for such facilities will be developed and presented to the Planning Board as part of the Final Approval process.

2. Vegetation
   a. A plan showing the mature trees with the original road, lot and house layout superimposed, is included as Exhibit A. Exhibit B shows a tentative scheme for fine tuning the design in order to preserve more trees. The preliminary plans have been revised in accordance with Exhibit B.

      There is no need to relocate lots to the southeast portion of the site. That area of the site is closest to the Reservoir edge. The design deliberately left this area open to act as a buffer.

6

Granite Pointe FEIS

to construct a filtration plant at the Jerome Park Reservoir, in New York City, to filter the water from the Croton Watershed system.

2.A.2 Existing Conditions - Site

The Granite Pointe site contains one existing residence with well and septic system located on Lot 19 of the proposed Cluster Plan. The well will eventually be abandoned when the water system for this project is installed. In addition, there also exists, on the easterly portion of the Recreation Area, an old uninhabited building, once utilized as a restaurant, a garage and an old covered pavilion. All the above structures will be removed once development is progressed.

Approximately 30 or more years ago, an area consisting of approximately 2.2 acres, located behind and to the east of the restaurant was regraded and leveled for use as a "trap and skeet" shooting range. The proposed Main road and a portion of road "B" will cover a portion of this shooting range area. The remainder of the leveled area exists on Lots 9, 10, 14 and 15 of the Cluster Plan. Some regrading will be done to return this area, as close as possible, to the contours that previously existed. New and native plants will be added to the area to effect a more natural setting. The regrading and plantings will be shown on the final construction plans.

C/ PB
FPC
CTE
EA ENS
applicant

The Residents of Gwynne Drive
Granite Springs, Somers

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TOWN OF SOMERS

583

October 22, 2013

Somers Planning Board
Town of Somers
335 Route 202
Somers, NY 10589

Somers Planning Board:

As Somers residents living across Rt. 118 from the forested promontory of Amawalk Reservoir—the proposed Granite Pointe housing development site, and as parents of school-age children, we write in solidarity to express our serious and unmitigated concerns with your upcoming vote on October 30, 2013 to potentially adopt the Granite Pointe SEQRA Findings Statement and allow the proposed remediation of the Granite Pointe site. Our careful examination of the DEC Decision Document of February, 2010, which your board ostensibly has failed to scrutinize, leaves each of us extremely concerned with its uninformed statements and decision. The Town of Somers will be acting negligently, will be exposing public health and the environment to harm, and will inviting legal action by citizens if you allow such uninformed, wrongful action to proceed.

Attached is the DEC Decision Document of February, 2010 to remediate the Granite Pointe site. Note the sections annotated for emphasis—sections that trigger severe, unmitigated concern:

- Inadequate site description on NYS DEC documents continues to camouflage the fact the site is a densely forested promontory that juts into and is surrounded by Amawalk Reservoir's drinking water on three sides.
- Subsurface, dormant soil contamination does <u>not</u> present a "significant threat" to public health and the environment. There has been <u>no</u> impact to the drinking water supply as NYC DEP testing has repeatedly shown. There has <u>not</u> been a single incident of health exposure or health claim over the past 50 years since deposition activities ceased. To the contrary, the proposed uninformed, inadequate, reckless remediation action will create significant threat to public health and the environment.
- Once excavated, unearthed, and brought to contact with air and water, contaminated soil particles will be "direct loaded unto dump trucks." Dump trucks are not cement or septic trucks that are sealed from leakage. Dump trucks are not sealed. Wind action blowing the "direct load" of dump trucks will transport contaminated particles to our front and back yards, to our exterior house surfaces, to the playgrounds where our children play, and to nearby school yards and play areas.
- The volume in thousands or tens of thousands of cubic yards of contaminated soil to be excavated, unearthed, "direct loaded" and transported on dump trucks was left intentionally undisclosed in the DEC Decision Document of February, 2010.
- The selected remedy to deforest and excavate the forested peninsula of Amawalk Reservoir, unearth thousands or tens of thousands of cubic yards of contaminated soil, bring contaminants lying dormant for 50 years in contact with air and water, load unto dump trucks, and transport such enormous volume of contaminated soil through our residential neighborhood, other residential areas, and school areas, is not only not protective of, but blatantly harmful to human health and the environment.

Unearthing of contaminants that lie harmless and dormant for five decades since deposition activities ceased in the 1960s will create a two-pronged, unacceptable health risk: to the 40,000 area residents who drink Amawalk Reservoir water in the towns of Yorktown and Somers and many more in NYC; and to local-area residents like us, who will be affected by the pollutants unearthed by this needless, perilous, and reckless action.

Is your board aware of both the Preschool and the WestCop Therapeutic Nursery School, both located on Tomahawk Street/RT 118 directly across the street from the Granite Pointe site? Between the two preschool facilities, there are over 50 children playing outside, as well as staff, on a daily basis. Children and staff would be directly affected by airborne contaminants resulting from this misguided and plainly wrong action.

Who will guarantee to us, neighborhood residents and our children, and to other residents and children of this area, that airborne contaminants, once they have been excavated, unearthed, and brought in contact with air, do not blow onto our and other neighboring properties? Who will guarantee that the hundreds of dump truck loads of contaminated soil won't leave a trail of lead-contaminated dust behind them? Are you aware—see attached annotated decision—that DEC approved a remediation plan that will use dump trucks, not sealed trucks, to transport unearthed contaminated soil? Since water is planned to be used in the remediation process, where will the contaminated water flow, if not into the adjacent Reservoir around the forested promontory on three sides? Who will test our and other neighboring properties to make sure our trees, shrubs, flowers, lawn, and the exterior of our houses, including our front steps, are not contaminated by airborne contaminants excavated and unearthed during the proposed "remediation" action? It is unacceptable for your board, as it is for NYS DEC, to plan and seek the "remediation" of the Granite Pointe site while being totally indifferent to the likelihood of contamination of neighboring properties and to toxicity exposure for us and our children. Our neighborhood's children play immediately across the street from the proposed "cleanup" site and will be breathing unearthed dust particles that become airborne during excavation and hauling. Who will guarantee that the unearthed contaminants will not affect the health of our children and all children in our area in the years to come? Look at the results from Ground Zero. The US-EPA had said the air was safe, but there have been thousands of documented toxicity and cancer cases in the people who worked to clean up the site.

If you on the Planning Board knowingly and willfully fail to carry out your required due diligence, following a history of Planning Board negligence and intentional breach of the public interest in rushing the Granite Pointe housing subdivision project on the forested promontory of Amawalk Reservoir through approvals, and if you give the developer the green light to put our health at risk for his own narrow profit interests, you will have committed multiple counts of negligence and will be liable in legal action you can be certain will result for exposing to potential harm our families and our properties—along with those of others who would be similarly affected from such harmful and reckless "remediation" plan. Neither the Somers Planning Board, nor NYS DEC, has the right to accommodate one party's (the developer's) request for "remediation" of his own property at the expense of transferring his property's contamination to us, our children, our properties, and the community at large. We will not allow such reckless action and the negligence of the Town of Somers and NYS DEC to put our families at risk. **We, the residents of Gwynne Drive across the road from the Granite Pointe site stand united in our resolve to proceed with legal action should your board move to adopt an incomplete SEQRA Statement and to negligently allow a reckless action, harmful to public health and the environment, to proceed.**

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OCT 22 2013
TOWN CLERK'S OFFICE
SOMERS, NEW YORK

Signed by: All Residents of Gwynne Drive, Rt. 118, Granite Springs

Marc and Diane Houslanger 5 Gwynne Drive	Marc Houslanger	
Jayne and Ron Jacobs 1 Gwynne Drive	Jayne Jacobs	
Ellen and Robert Hansen 3 Gwynne Drive	Ellen Hansen	Robert Hansen
Cindy and Rick Haas 8 Gwynne Drive		
Jack and Malerie Simon 4 Gwynne Drive	Jack Simon	Malerie Simon
Kate and Ron Weyhrauch 5 Granite Springs Road		Unavailable
George and MaryAnn Ballow 7 Gwynne Drive	MaryAnne Ballow	George Ballow
Ed and Rosemarie Miraglia 2 Gwynne Drive		Rosemarie Miraglia

Attachments:

1. *DEC Brownfield Cleanup Program Decision Document—Annotated—dated February, 2010*
2. *Excerpts from citizens' letters to NYS agencies on DEC decision to remediate the Granite Pointe site*

Excerpts from citizens' letter to George Heitzman, Acting Director of DEC Region 3, Remedial Bureau C – May 6, 2013

- While you refer in your decision document to "short term aesthetic and habitat disruptions," a leading biologist and/or ecologist would accurately inform your Decision Document on whether such disruptions would, in fact, be "short term." A leading biologist and/or ecologist would accurately inform your Decision Document on whether the ambiguously stated restoration steps would, in fact, "appropriately restore the area to provide habitat and minimize erosion." Your Decision Document fails to document the number and dbh measurements of significant vegetation that would be lost to accommodate your Bureau's actions. Nor does it state the dbh measurement and canopy height of vegetation that would replace those lost to your Bureau's actions. **Nor does it state the expected timeframe, likely to be measured in decades if not a century, before the "restored" forest area reaches the density and canopy height lost to your Bureau's actions.**

- Your Bureau has the responsibility to obtain the independent, expert review and comment of a reputable biologist and/or ecologist to credibly and diligently inform your Decision Document.

Excerpts from citizens' letter to DEP Deputy Commissioner Christopher Walsh -- September 10, 2013

- The densely forested promontory's unique physical location and land cover and its criticality as a public asset in providing clean air, natural filtration services to the drinking water supply, and scenic views and inspiration to the public, all **warrant differential treatment by DEC**.

- **DEC Region 3, Remedial Bureau C must not apply the same "remedy" it applies to its typical remediation projects: dry cleaning operations and inner city lots in Yonkers and Mt. Vernon. DEC has a responsibility to the environment, of which it is the state's ultimate steward, to resourcefully and creatively devise a solution suitable and appropriate to this unique site**

- **Citizens believe the highest and most responsible action by DEC on this site is NO ACTION—** leaving alone and undisturbed the scenic forest on the water, fencing off areas of residual lead remnants, and letting natural processes, as they have over decades, continue to define life on this site of ecological, scenic, and public health/drinking water significance.

- We ask that you immediately freeze remediation proceedings on the forested promontory of Amawalk Reservoir, "Granite Pointe" site; b) review for adequacy the science that gave rise to both decision documents to remediate this site; and c) seek and incorporate into DEC decision documents expert, credible and robust science by a reputable biologist and/or ecologist.. DEC owes the public and the environment diligence and requisite expertise to inform its decisions that permanently affect the environment.

Excerpts from citizens' letter to NYS Watershed Inspector General's Office – May 9, 2013

- DEC had a responsibility during January's public comment period to first and foremost seek comment from your office – the office of the Watershed Inspector General -- on this matter directly and critically affecting the Watershed. DEC failed to seek and incorporate comment by your office on an action targeting the forest and the water's edge along a scenic, densely forested peninsula situated directly **on** the drinking water source of more than 40,000 people in Yorktown and Somers and countless more downstream.

BROWNFIELD CLEANUP PROGRAM
DECISION DOCUMENT -- Annotated

Granite Pointe Subdivision Site
Somers, Westchester County, New York
Site No. C360107
February 2010

Statement of Purpose and Basis

This Brownfield Cleanup Program (BCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the Granite Pointe Subdivision site. The remedial program was chosen in accordance with Article 27 Title 14 of the New York State Environmental Conservation Law, and the 6 NYCRR Part 375 regulations relative to the BCP.

Description of the Site Inadequate site description

This BCP site is located in Somers, Westchester County, and is identified as lots 10-13 in the proposed Granite Pointe development, a single family residential home subdivision. The site is a 4.7 acre potion of located in the northeast corner if the 28.8 acre property. The site is a largely wooded, vacant parcel. To the east of the property is the Amawalk Reservoir. Tomahawk Street is located to the west, and residential properties are located to the north and south of the site. Trap shooting and target shooting were conducted on-site from 1938 to 1968.

Nature and Extent of Contamination There has been no impact to the drinking water supply.

Contamination was identified by the Remedial Investigation, which represents a significant threat to public health and the environment, requiring a remedial program to address the contamination identified below. The off-site exposure assessment identified the potential for impact, which will be assessed separately.

Nature of contamination: The primary contaminants of concern (COCs) at the site are inorganics (metals) and semi-volatile organic compounds (SVOCs).

Extent of contamination

Source areas/Waste disposal - Lead impacts in lot numbers 10-13 can be attributed to past trap and target shooting on-site. Analysis has identified lead concentrations in soil above 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) as well as values above toxicity characteristic leaching procedure (TCLP) levels which trigger handling and disposal as hazardous waste. SVOC impacts above Part 375 SCOs have also been observed and are likely due to historic dumping activities, including road construction debris.

Soil - The site is impacted by lead contamination that ranges in concentration from below detection limits, to 77,100 parts per million (ppm). The depth of lead contamination ranges from one foot below grade to four feet below grade. The SVOCs benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene were found above SCOs in shallow soils on-site

at maximum concentrations of 79.6 ppm, 82.2 ppm, 99 ppm, 37 ppm, 53.1ppm, and 54.6 ppm, respectively.

Groundwater - A total of ten groundwater samples were collected as part of the Remedial Investigation. Analysis revealed contravention of the groundwater standard for lead in only one on-site monitoring well. Lead was detected at a concentration of 98.3 parts per billion (ppb). As part of a pre-design delineation study, filtered groundwater samples were later collected from the well that showed lead detections above standards. Lead was not detected in any of the filtered groundwater samples.

DEP samples of the reservoir showed no contamination of drinking water.

Description of the Remedy

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, the Department has selected the excavation of contaminated soil to achieve a Track 1 cleanup for this BCP site. The components of the remedy set forth in the Remedial Work Plan are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. All necessary permits will be obtained (e.g., tree removal permit from the Town of Somers).

2. Prior to remediation, a soil erosion and sediment control plan will be established to eliminate the risk of surface water run-off transporting contamination from the site. The plan will be developed to protect natural resources including the Amawalk Reservoir. The soil erosion and sediment control plan will be submitted to the Town of Somers Planning Board and all applicable agencies, including the NYCDEP, for review and approval prior to the commencement of remedial activities.

3. The proposed excavation area will be fenced off.

4. Particulates and dust will be monitored and corrective measures implemented, as necessary, pursuant to the Department approved Community Air Monitoring Plan. Dust and particulates from construction activities will be controlled during all activities undertaken where contaminants remain in the area subject to the remedy, using water. Excavations, stockpiles, access roads, and other work areas associated with the remedial program within the site will be free from dust and particulates that may result in exposure or a nuisance to the neighboring community.

5. Any waste derived during the excavation activities and post-excavation sampling activities will be stored, sampled and properly disposed of at an appropriate disposal facility. Decontamination fluids will be temporarily stored on-site. Containers will be sealed and secured at the end of each work day and upon characterization, these fluids will be properly disposed.

6. A temporary access road or the proposed Munson Frost Road will be constructed in order to allow for truck traffic into and out of the excavation areas.

7. Impacted area soil will be excavated and direct loaded into dump trucks. Soils which exceed the toxicity characteristic (ref. 6 NYCRR Part 371.3) for lead will be managed, transported and disposed as hazardous waste. Soils excavated from the area with non-elevated TCLP lead results, but which

Dump trucks are not cement or septic trucks. They are not sealed. Wind action may transport contaminated particles to school yards and residential areas.

The volume in thousands or tens of thousand of contaminated soil to be excavated, unearthed and transported was undisclosed in this Decision Document.

exceed the SCOs, will be managed, transported and disposed of at an appropriate waste disposal facility.

8. All areas will have confirmatory sampling to assure the appropriate excavation limits (TCLP and unrestricted SCOs) have been achieved. In addition, post-excavation groundwater samples will be collected and analyzed.

9. Any soil to be used as backfill will meet the Track 1 SCOs.

Declaration

* The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

February 22, 2010
Date

Director
Remedial Bureau C
Division of Environmental Remediation

* The selected remedy to deforest and excavate the forested promontory of Amawalk Reservoir, unearth thousands of cubic yards of soil, bring contaminants lying dormant for 50 years in contact with air and water, and transport contaminated soil particles on dump trucks through school and residential areas is totally unprotective of human health and the environment.

C
PB
FPC
CTE
EA ENB
opplicant

DAVID K. GORDON

Attorney and Counselor at Law

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TOWN OF SOMERS

October 22, 2013

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BY ELECTRONIC AND U.S. MAIL
Hon. John Currie, Chair
Town of Somers Planning Board
335 Route 202
Somers, NY 10589

Re: *Granite Pointe Subdivision* FSEIS

Dear Mr. Currie and Members of the Board:

This office has been retained by certain neighbors to the above-captioned subdivision proposal. I write to highlight a prominent potentially significant adverse impact which has been ignored in the FSEIS.

The Granite Pointe peninsula juts into the Amawalk Reservoir and is thereby a critical scenic resource visible from numerous vantages in the town. Despite this, neither the draft nor final SEIS contains any review of the potentially significant adverse scenic impact from the remediation of the on site contamination.

The Board must correct this flaw before adopting a SEQRA findings statement. First, the main purpose of the SEIS was to review the added adverse impact from the new information and changes in the project, *i.e* the cleanup of contaminated soil. Second, the potential for damage to viewsheds is clearly a significant adverse impact under SEQRA, particularly in scenic areas such as the reservoir. Finally, the remediation is planned to remove seven acres of dense forest, and render the resulting clearcut visible from many vantages in the town adjacent to, and on the surface of, the reservoir.

Finally, the Board and the applicant may not hide behind the NY Department of Environmental Conservation ("DEC") determination to allow the cleanup into the brownfield cleanup program. The DEC determination is an optional benefit to the applicant (which the applicant applied for), not a state-required cleanup. And in any event, reviewing the scenic impacts is essential to ensure that the cleanup minimize the impact to the maximum extent practicable, as SEQRA requires. *See* 6 NYCRR § 617.11(d)(5).

For these reasons, the omission of any review of the scenic impact from the SEIS is a substantial flaw which the Board must rectify prior to issuing its findings statement. The Board should conduct its review pursuant to the DEC guidance document, *Assessing and*

Mitigating Visual Impacts (DEC, 2000)[1] which provides the basic procedure and analytical framework for visual impact review under SEQRA.

Thank you for your consideration.

Respectfully submitted,

David K. Gordon

[1] Available at http://www.dec.ny.gov/docs/permits_ej_operations_pdf/visual2000.pdf.

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

October 22, 2013

By Email and Mail

Mr. John Currie, Chair
Town of Somers Planning Board
Somers Town House
335 Route 202
Somers, New York 10589

Re: Comments on the Final SEIS for the Granite Pointe Subdivision

Dear Mr. Currie and Members of the Planning Board:

The Office of the Watershed Inspector General ("WIG" or "WIG Office")[1] respectfully submits these comments on the final supplemental environmental statement ("FSEIS") concerning the proposed Granite Pointe Subdivision project ("Granite Pointe" or "the Project"). We write to request that before any SEQRA determination is made, the Sponsor be required to submit a revised stormwater plan, subject to public review and comment. The revised plan is needed to protect the City of New York's Amawalk Reservoir from additional pollution from phosphorus and from lead-contaminated soil, and to ensure the Project's compliance with applicable federal and state water pollution laws.

Background

The Project consists of 23 single-family residential lots on 28.8 acres that are mostly undeveloped and wooded. It is located on a promontory that extends into the Amawalk Reservoir. Runoff from the Project would drain into the Amawalk Reservoir, that is part of the Croton Watershed, which has historically provided drinking water to almost one million New Yorkers each day. The State Department of Environmental Conservation ("DEC") has classified the Amawalk Reservoir as a class "A" water body. Pursuant to that classification, the Amawalk

[1] The position of WIG was established by the New York City Watershed Memorandum of Agreement and implemented through successive Executive Orders of four governors, most recently pursuant to 9 NYCRR § 8.2, "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 reviews and comments on development projects within the Watershed pursuant to WIG's obligation to "recommend legislative, regulatory and management practice changes . . . relating to the use, operation and protection of the Watershed." 9 NYCRR §§ 5.86, 6.5, 8.2. WIG previously submitted comments on Granite Pointe. *See* letter from James Tierney and Charles Silver, dated January 24, 2007.

Reservoir is to be maintained at a very high quality – one that allows it to serve as a source of drinking water.

The drainage area of the Amawalk Reservoir has been determined to be a "phosphorus restricted" basin by DEP and was listed by the DEC on its 1998 list of impaired water bodies pursuant to Section 303(d) of the federal Clean Water Act, 33 U.S.C. § 1251 *et seq.* ("the Act") because it suffers from nuisance algae blooms in the growing season due to excessive phosphorus pollution. As a result, phosphorus levels in this water body *must be reduced* to achieve water quality standards. The watershed for the Amawalk Reservoir is subject to heightened protections to reduce phosphorus pollution pursuant to the Act's total maximum daily load program.

The Project site was used as a trap and target shooting range from 1938 to 1968, resulting in lead contaminated soil from buckshot and bullets. Lead generally adheres to soil particles and is immobile when soil pH is between 6.0 to 8.0. However, lead in soil can mobilize when conditions are more acidic, that is, when soil exhibits a pH below 6.0.[2]

According to the Soil Survey of Putnam and Westchester Counties, New York, Paxton soils ("PnB [2-8% slope] and PnC [8-16% slope]") are the dominant soils at the subject property. Paxton soils are acidic, generally having a pH of 4.5 to 6.0. *See* U.S. Department of Agriculture Natural Resource Conservation Service, 2003, "National Soil Survey Handbook" Part 618.35. According to DEC, the average pH of rainfall in New York is also acidic, ranging from pH 4.0 to 4.5. Therefore, lead mobilization from the site into the adjacent Amawalk Reservoir and underlying groundwater is a cause of concern for human health.

DEC has determined that remedial action is needed to remove lead-contaminated soil from the Project site and from adjacent DEP property off-site. Granite Pointe Subdivision Site, Site No. C360107, Brownfield Cleanup Program Decision Document, Division of Environmental Remediation, DEC, February 2010; Granite Point Subdivision Off-Site, Site No. C360107A, Brownfield Cleanup Program Decision Document, Division of Environmental Remediation, DEC, February 2013. To eliminate the source of lead contamination and protect drinking water quality, WIG supports DEC's selected remedial action of removing and transporting lead-contaminated soil from the Project site and the off-site area.

Stormwater

Under the Act, when a waterbody fails to meet water quality standards, such as the Amawalk Reservoir, a "new source" or "new discharger," such as Granite Pointe, "from which there is or may be a discharge of pollutants [that] will cause or contribute to the violation of water quality standards," may not receive a NPDES permit authorizing such discharges. 40 C.F.R. § 122.2 (definition of "new source"), 122.4(i); *Friends of Pinto Creek v. EPA*, 504 F.3d 1007, 1011-12 (9th Cir. 2007); *see* 40 C.F.R. §sS 122.4(a), (d). Similarly, DEC, which administers the NPDES program in New York (called the State Pollutant Discharge Elimination

[2] U.S. Environmental Protection Agency. 2005. *Best Management Practices for Lead at Outdoor Shooting Ranges* (EPA-902-B-01-001).

System or "SPDES") and its own water pollution laws under Article 17 of the Environmental Conservation Law, prohibits discharges of pollutants that would "cause or contribute to" the violation of water quality standards. ECL §17-0811(5). DEC requires all SPDES permits it issues to include provisions "necessary to insure compliance with water quality standards," and cannot issue permits without such provisions. 6 NYCRR §§ 750-1.3(e), (f).

Granite Pointe has not established that it will comply with these federal and state water laws which prohibit increased loadings of phosphorus within the Amawalk Reservoir's drainage basin. Preparing a stormwater pollution prevention plan ("SWPPP"), including a pollutant loading analysis, is critical to verifying that the proposed Project will not cause that prohibited increase. While a SWPPP for the 28.8 acre site containing that analysis was developed in 1998 and approved by DEP for the Granite Pointe subdivision in 2001, DEP has informed WIG that it revoked its approval of that SWPPP on July 2, 2004, and that the proposed site layout has been substantially modified since then. In addition, a SWPPP for the portion of the site that is to be remediated was prepared in 2008, but that SWPPP is incomplete and otherwise deficient, as discussed below.

Accordingly, a revised SWPPP for the entire site, including a phosphorus loading analysis, should be prepared and made available for public review and comment before any SEQRA findings are issued. When significant environmental concerns regarding stormwater pollution are raised as here, further environmental review is needed, even if it would entail additional time. *See Matter of Pheasant Meadow Farms, Inc. v., Town of Brookhaven*, 31 A.D.3d 770 (2d Dep't 2006) (delay in completion of environmental review excused for project which "presents significant environmental concerns with respect to stormwater drainage"). And because a complete Stormwater Plan is an integral part of the Project, issuance of SEQRA findings approving the Project in the absence of that plan could constitute illegal segmentation. *See AC I Shore Road v. Incorporated Village of Great Neck*, 43 A.D.2d 439 (2d Dep't 2007) (SEQRA review of redevelopment project must encompass related sewage diversion plan).

A SWPPP for the portion of the site in which remedial activity is to occur, dated June 17, 2008, was included as Appendix O of the Proposed Granite Pointe Subdivision Remedial Action Work Plan, dated January 2010, and referenced on page III-13 of the FSEIS. This SWPPP covered only the 8.1 acre brownfields portion of the project site and does not address the remaining 20.7 acres at the site. This SWPPP is deficient in various respects.

First, it does not include a site restoration component, to ensure careful and effective site restoration activities. Site restoration at the Project entails filling of soil and planting new vegetation. The new fill needs to remain on site and not enter the reservoir, via stormwater runoff and/or wind. Vegetation should be introduced to stabilize or immobilize top soil and its attached nutrients (*e.g.* phosphorus) and pollutants (*e.g.* lead). Vegetation also contributes to water quality by removing nutrients from the soil, which can reduce the occurrence and severity of algal blooms that have impaired the Reservoir.

Concerning site remediation, DEP previously proposed specific recommendations to DEC for post-removal site restoration on DEP's "off-site" property adjacent to the Granit Pointe

site.[3] The letter included a detailed discussion, suggesting what type of replacement soil should be selected and which vegetative species should be planted at the project site. We recommend that the site restoration component of a revised SWPPP for the Project site follow the same approach as outlined by DEP for the adjacent off-site area. Replacement soil should be of similar texture and pH to native soil so that it can replicate the physical and chemical characteristics of the natural condition and support the vegetation selected for site restoration. In addition, DEP conducted vegetation field surveys around other sections of the Amawalk Reservoir, recording what species are present. The restoration component of a revised SWPPP should rely on this data and additional survey data to the extent needed to select plant species that thrive in acidic (or low pH) soils.

Second, WIG stormwater management expert Donald Lake, P.E., CPESC,[4] has reviewed the stormwater section of the FSEIS, which is based on the 2008 SWPPP, and has concluded that it is deficient in various respects. As a result, it cannot be relied on to mitigate effectively stormwater pollution from the Project:

1. The water quality treatment volume (WQv) presented on page 10 (pagination by the pdf file, since pages were not numbered) was not calculated correctly. The WQv for the NYC watershed is the runoff from the 1 year, 24 hour duration storm. This cannot be calculated using the WQv formula shown in the SWPPP on page 9. (The misapplied formula is only to be used to calculate the 90% storm.) Appropriate runoff values for the 1 year storm are calculated using the runoff curve number procedure developed by the Natural Resources Conservation Service (NRCS) and contained in most computer models, including HydroCAD.

2. The SWPPP quantifies the percent of impervious area in the assessed watersheds to be zero, which reduces the runoff coefficient, Rv, to 0.05. This dramatically and erroneously minimizes the WQv values. The SWPPP values and the appropriate values for the 1 year storm runoff and WQv volumes are compared below:

Sed Trap	SWPPP WQv	Total Str Vol	1 Yr Runoff	Rev WQv
1	459 ft^3	3,024 ft^3	1.31"	4, 003 ft^3
2	2,011	13,284	1.66	22,255
3	656	4,356	1.66	7,261
4	1,584	10,476	2.07	21,861

The SWPPP WQv values (column 2) are underestimated in comparison to the revised WQv values (column 5). The revised WQv values are shown to significantly exceed the total available storage volume provided at each sediment trap (column 3).

3. The HydroCAD model is improperly used for calculating the inflow into and out of Sediment Trap #3. The discharge from Sediment Trap #2 flows directly into ST #3. Yet the model only represents the 1.21 acre drainage area from ST #3, while not taking into account the

[3] *See* enclosed January 29, 2013 letter from Charlene Graff of DEP to Mr. Randy Whitcher of DEC.

[4] A copy of Mr. Lake's resume is enclosed.

additional drainage output from ST #2, which has a 3.69 drainage area. Catchment B and ST #2 generate an outflow during the 1 year storm and this volume and other discharges will affect the overall performance of ST #3. These calculations should be revised to reflect correct WQv's and discharges.

4. No final developed condition routings, grading plans or stormwater drainage plans were presented in this document. These developed conditions must be finalized to assess the potential environmental impacts to the site. For example, Lots 7 and 8 do not show any treatment measures and they are both draining away from all structures into the reservoir area.

5. No soil restoration plan is presented in the SWPPP. This is required in Chapter 5, pages 5-20 to 5-24 of the New York State Stormwater Management Design Manual, August 2010.

6. A site plan should be presented showing the soil survey boundaries and proposed grading limits.

7. A stone barrier should be used at the upstream entrance to the culvert under Tomahawk Street instead of the slit fence as shown. This will allow for overtopping without damage or plugging of the culvert.

8. No discussion was found regarding the site's proximity to the Amawalk Reservoir shoreline. DEP requires water quality mitigation for impervious areas within certain distances of a reservoir, reservoir stem, or a waterway. These water quality practices could include rain gardens, bioretention areas, dry swales and other green infrastructure practices to treat water quality and reduce runoff volume. This issue should be addressed.

* * *

Finally, if the Project, under its revised SWPPP, would cause an increase in phosphorus loadings, then the Sponsor would need to obtain additional reductions in phosphorus to offset that increase, to be accomplished through funding off-site retrofit projects to be carried out by the Town or another appropriate government entity. WIG obtained an agreement with the sponsor of the Bridleside project (formerly known as "Salem Hunt") in the Town of North Salem to fund such projects and ensure compliance with applicable water pollution laws. The Sponsor of Granite Pointe should be required, as a condition in any SEQRA findings statement, to do so as well if, after review of a revised SWPPP such offsets are shown to be necessary.

Conclusion

The WIG Office appreciates this opportunity to comment on the Project's FSEIS, and looks forward to working with the Town Planning Board on environmental review of this project in the future.

Respectfully yours,

Philip Bein
Watershed Inspector General
Assistant Attorney General
Environmental Protection Bureau
Office of the Attorney General
The Capitol
Albany, New York 12224
(518) 474-4843

Charles Silver, Ph.D.
Watershed Inspector General Scientist
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Encl.

cc: Cynthia Garcia, DEP
Matt Gianetta, DEP
Charlene Graff, DEP
Randy Whitcher, DEC
Tom Snow, DEC

Environmental Protection

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Return Receipt Requested

January 29, 2013

Mr. Randy Whitcher
NYSDEC
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7014

Re: Granite Pointe Subdivision – OFF-SITE
DEC Site#: C360107A
144 Route 118
Somers, NY 10589

Dear Mr. Whitcher:

The New York City Department of Environmental Protection (DEP) has reviewed the Proposed Decision Document (PDD) prepared by NYSDEC for the above-referenced project in conjunction with the Final Remediation Investigation Report (RIR) prepared for the site by Shaw Environmental & Infrastructure Engineering of New York.

Based upon the review of the materials, DEP respectfully submits the following for your consideration:

Erosion and sediment control:

1. The soil erosion and sediment control plan (ESC Plan) described in Section 7, item 2 of the PDD should be prepared in accordance with the document: *New York State Standards and Specifications for Erosion and Sediment Control (August 2005)*. In particular, the ESC Plan should show the limits of soil disturbance and note the location of a staging area, a stabilized construction entrance, and soil stockpiles; details for the specified practices should be included, and a sequence/schedule of construction activity should be provided as well. Specifics concerning re-vegetation and final stabilization of the site should also be included in the ESC Plan.

Clearing, grubbing and tree removal:

1. Attached is a copy of clearing & grubbing specifications that are routinely included in contracts issued for work occurring on City property. DEP requests that these specifications be incorporated into the remedy. If the full document is not incorporated, DEP requests that, at a minimum, the proposed remedy does include the following tree protection measures from those specifications:

    a. Within 15 feet of the limits of disturbance, install protective barriers around all trees with greater than 4 inches diameter at breast height (DBH) that are to remain on site at the completion of the project, including those adjacent to temporary roads, storage, staging and lay down areas.

    b. Construct protective barriers by covering a frame of 2 inch by 4 inch boards with plywood or oriented-strand board (OSB). Barriers must be at least 4 feet tall and 4 feet wide or three times the DBH of the tree to be protected, whichever is larger. Drive boards supporting the barriers at least 18 inches into the ground. Place barriers on the operational side(s) of trees that will remain, and center trees behind them. Orange construction fencing is not an acceptable substitute for plywood or OSB.

    c. Wherever possible, locate barriers outside the drip lines of trees that will remain. Do not in any case locate barriers less than 4 feet away from the trunks of trees that will remain.

    d. Inspect barriers on a regular basis and repair as necessary for the duration of the project.

    e. At completion of the project, remove barriers and properly dispose of off-site.

2. All trees within the area where soil is being removed should be cut; it is virtually impossible to remove the top 18 inches of soil around a tree without killing it. Trees outside the area being remediated may need to be cut as well depending on how close they are to the soil removal work. Please be advised that tree removals may require a permit from the Town.

3. Aerial photos from the RIR seem to show an impacted forest with portions of the tree canopy appearing to be tan or pink in color rather than green. While the soil and groundwater impacted areas have been well delineated by the field investigation, the impacted over-story vegetation may not have been fully assessed and delineated.

The site photos and the Biologic Resource Inventory report from the RIR indicate that the stand in question is a beech-maple mesic forest. Sugar maple, which has shallow spreading roots, can often suffer from contamination that occurs some distance from the location of the tree's bole and crown. Beech trees can be even more prone to mortality at long distances from contamination sites due to a shared root system with distant trees and the ability to regenerate via root suckers. Although some of the impacted trees are located outside the delineated impact zone for soil and groundwater, it is likely that the trees with unhealthy crowns will die within a relatively short time. All impacted trees should be considered when developing the remedy for the site.

Site Restoration:

1. It is noted that the biological resources inventory conducted by Shaw Environmental & Infrastructure Engineering in September of 2011 was limited, and a systematic survey was not performed in similar areas outside the subject site to provide a thorough survey of plants that are likely to appear in the subject area in the absence of contamination. Additionally, it is noted that a survey conducted in September is unlikely to capture spring ephemerals and many rare plant species that can only be identified earlier in the growing season. NYCDEP's Forest Science Program has surveyed other areas around Amawalk Reservoir and maintains a database of the forest communities. Utilizing these data, the following recommendations are made to ensure successful restoration of the site to support its function of protecting the New York City water supply.

    a. Neither the PDD nor the RIR provided sufficiently detailed information regarding site soils to enable us to determine whether restoration efforts will use soil appropriate for the area. A review of DEP's GIS SSURGO soil data layer indicates that soil on this site is an acidic Paxton fine sandy loam.

    Soil used to replace the contaminated soil should be of a similar texture (fine sandy loam) and pH so that it will support similar plant growth. In the surface layers, the soil is typically at least 50% sand (65% on average), up to 50% silt (25% on average) and up to 20% clay (10% on average), with 15% coarse fragments (gravel). Soil pH is approximately 4.5, with an organic content of about 3.5% in the top 5 inches. To support plant restoration, replacement site topsoil should fall between 4.5 and 6.0 pH and have 3-5% organic matter. At about 20-30" depth, there is a dense layer (hardpan) that tends to perch water during the winter months. If desired, this layer could be replaced with a clay layer, or, if soil is removed to that depth, similar hydrology could be obtained by compacting sub-soils.

b. A specific site re-vegetation plan should be developed to include not only the native trees, shrubs and herbs noted during the biotic assessment, but others that would be expected to occur on similar soils in the area. The plan should include a native seed mix that will stabilize site soils both in the short- and long-terms. Herbivory of vegetation by deer, rodents and waterfowl is always a concern on NYC water supply lands, and an appropriate method of fencing or other deterrents may be needed. Specific recommendations for the site are as follows:

i. Seed Mix:

1. 10 lbs./acre annual ryegrass (*Lolium perenne ssp. multiflorum)* as a nurse crop/quick stabilization plus
2. 20 lbs./acre native grass and wildflower meadow mix to provide deep-rooted stabilization and wildlife benefits, to include:
   - *a.* 3 lbs./acre Switchgrass (*Panicum virgatum)*
   - *b.* 3 lbs./acre Canada Wildrye (*Elymus canadensis)*
   - *c.* 2 lbs./acre Purpletop (*Tridens flavus)*
   - d. 2 lbs./acre Little Bluestem (*Schizachyrium scoparium)*
   - *e.* 2 lbs./acre Indiangrass (*Sorghastrum nutan)*
   - *f.* 2 lbs./acre River Oats (*Chasmanthium latifolium)*
   - *g.* 2 lbs./acre Deertongue (*Panicum clandestinum)*
   - *h.* 2 lbs./acre Broomsedge (*Andropogon virginicus)*
   - *i.* 0.5 lb./acre Indian Hemp (*Apocynum cannabinum)*
   - *j.* 0.5 lb./acre Canada Goldenrod (*Solidago canadensis)*
   - *k.* 0.5 lb./acre White Snakeroot (*Ageratina altissimma)*
   - *l.* 0.5 lb./acre Golden Alexanders (*Zizia aurea)*

Many species found around Amawalk Reservoir can be difficult to source from wholesale nurseries, even those that frequently provide materials for native plant restorations. In addition, certain plants are preferred by deer and waterfowl. For these reasons, a limited number of plants are recommended. Species to plant include:

ii. Herbs, Ferns, Sedges—2" plugs to 1 gallon pots, 3500 per acre planted in naturalistic groupings, 18-24 inches apart on centers:

1. Christmas fern (*Polystichum acrostichoides)*
2. White wood aster (*Eurybia divaricata)*
3. Wild cranes-bill (*Geranium maculatum)*
4. Lady fern (*Athyrium filix-femina)*
5. Pennsylvania sedge *(Carex pensylvanica)*
6. Spinulose or marginal wood fern (*Dryopteris carthusiana, D. marginalis)*

iii. Shrubs and Vines—minimum 18-24" shrubs and quart to gallon vines, 450 per acre planted in naturalistic groupings, 6-8' apart on centers:

1. Arrowwood (*Viburnum dentatum*)
2. Spicebush (*Lindera benzoin*)
3. Black haw (*Viburnum prunifolium*)
4. Gray dogwood (*Cornus racemosa*)
5. Virginia creeper (*Parthenocissus quinquefolia*)

iv. Trees—minimum 6-8' tall, 200 per acre planted approximately 15' apart on centers:

1. Sugar maple (*Acer saccharum*)
2. American beech (*Fagus grandifolia*)
3. White oak (*Quercus alba*)
4. Red oak (*Quercus rubra*)
5. Black oak (*Quercus velutina*)
6. Black cherry (*Prunus serotina*)
7. Black birch (*Betula lenta*)
8. Red maple (*Acer rubrum*)
9. Shagbark hickory (*Carya ovata*)
10. White pine (*Pinus strobus*)
11. Tuliptree (*Liriodendron tulipifera*)

While most of the herbaceous material listed above is fairly unpalatable to deer, and shrubs will usually re-sprout if browsed lightly, it is recommended that the entire area be fenced with an appropriate temporary deer fencing material that will be removed after 3-5 years when trees are well-established. Alternatively, tree tubes could be used around individual trees. In either case, periodic maintenance is required to assess and repair these measures to assure successful vegetation establishment. Please be advised that fencing may require a permit from the Town. Tree removals may also require a permit.

2. The biological resources inventory also indicates that a potential small wetland was observed in the southeastern corner of the site. This identified area appears to be located within the 0 to 1 foot impact zone for unrestricted use as shown in figure 7A of the RIR. This wetland should be delineated and shown on any remedial design plans developed. It is not clear whether this wetland will be disturbed for the proposed remediation or how it will be restored. If remediated, wetland restoration should use appropriate native hydrophytic plant materials and adequate soil organic matter (5% minimum), and should be returned to current elevations to ensure successful wetland re-establishment. Local and federal

regulatory requirements of any proposed wetland disturbances should also be determined.

Additional recommendations:

1. It is noted that reservoir sediment samples were collected at a depth of 0-3 inches. Lead inputs to the site occurred from 1938 to 1968 when the range was active; as these inputs began 75 years ago, the collection of deeper sediment samples should be considered to ensure that the full potential impact of lead in the sediment over time has been evaluated.
2. It is stated in the biological resources inventory in the RIR that an evaluation of the impacts to fish resources in the adjacent Amawalk Reservoir was not part of the assessment. Consideration should be given to conducting a fish survey, as lead bio-accumulates and bottom feeding fish may re-suspend lead in the sediment allowing for ingestion.

Finally, NYCDEP requests the opportunity to review work plans, drawings, and specifications as the project is designed so that site-specific concerns can be addressed as efficiently as possible without impacting DEC's remedy implementation timeline.

Thank you for the opportunity to provide comments. Please feel free to contact me at (914) 773-4418 with any questions or concerns.

Sincerely,

Charlene Graff

Charlene Graff, Director
Compliance Directorate, Bureau of Water Supply

Copy to:

J. Cohen
S. Klepacki
P. Lenz
M. Donecker
M. Giannetta
M. Usai
File

Attachment:

Clearing and Grubbing Specifications

DETAILED SPECIFICATION

CLEARING AND GRUBBING

CONTENTS

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PART 1 GENERAL

1.01 Description

A. Scope

1. Provide all labor, tools, equipment, materials and incidental items required to clear and grub all areas as shown and specified in the Contract Documents.
2. Remove any trees within 100 feet of the limits of clearing as shown on the Contract Drawings that pose a threat to safety and/or security of the work site as determined by the Engineer or DEP for the duration of the project.
3. Transport and dispose of all cleared and grubbed material, and pay all costs associated with such.

B. Related Specifications

1. General Specification 02230: Clearing and Grubbing
2. General Specification 02316: Excavation
3. General Specification 02317: Backfilling
4. General Specification 02371: Dust, Soil Erosion and Sedimentation Control
5. General Specification 02920: Soil Mixes
6. General Specification 02910: Planting

1.02 References

A. American National Standards Institute ("ANSI") Standards for Tree Care and Arboricultural Operations. All applicable standards, including, but not limited to A300 Part 1: Pruning; A300 Part 5: Management of Trees and Shrubs during Site Planning, Site Development, and Construction; and Z133.1: Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements.

B. New York State Standards and Specifications for Erosion and Sediment Control. August 2005.

1.03 Definitions

A. Clearing: Clearing is the removal from the ground surface and disposal off-site of all trees, brush, shrubs, wood chips, decayed wood, vegetation, rubbish, scrap metal, debris and other objectionable material as required to complete the project.

B. Grubbing: Grubbing is the removal and disposal off-site of all stumps, buried logs, roots greater than 2 inches in diameter, and other organic material as required to complete the project.

1.04 Quality Assurance

A. Professional Arborist

1. Engage an accredited Professional Arborist who is either a Certified Arborist with the International Society of Arboriculture or a Registered Consulting Arborist with the American Society of Consulting Arborists to oversee all clearing and grubbing operations, unless otherwise authorized by the DEP Forester.

B. Notification

1. Notify DEP Wildlife Studies at least 20 business days prior to commencement of clearing and grubbing operations so that a field review may be conducted to determine if there are any wildlife issues such as endangered/threatened species or migratory birds on site that require protection during work.

2. Notify the DEP Forester of intent to commence clearing and grubbing at least 48 hours prior to mobilizing equipment.

C. Site Inspection

1. At least 10 business days prior to commencement of clearing and grubbing, arrange and hold a site inspection with the Professional Arborist, the Engineer, the DEP Forester, the clearing and grubbing subcontractor, if any, and any other representatives required by the Engineer or DEP to review the site and discuss specific details of execution. The limits of disturbance must be clearly staked in the field prior to the site inspection. For efficiency, the site inspection may be held on the same day as the pre-construction meeting to review the erosion and

sediment control plan, if possible. During the site inspection, the parties will review the requirements of the Contract Documents and any necessary submittals, the exact trees to be removed, the equipment to be used for clearing and grubbing, methods and materials for protection of vegetation to remain on site at completion of the project, methods for disposal of cleared and grubbed material, and any other pertinent issues.

2. Upon completion of clearing and grubbing, but prior to removal of clearing and grubbing equipment, request a review by the DEP Forester to obtain final sign-off on clearing and grubbing execution. The Contractor shall correct at no additional cost to the City and to the satisfaction of the Engineer and DEP any portion of the clearing and grubbing not in compliance with the details of execution as agreed upon at the pre-work site inspection.

1.05 Compliance

A. Comply with all applicable State and/or local laws or ordinances, including but not limited to those regarding noise, tree removal, hauling, and debris disposal.

1.06 Submittals

A. If not prepared as part of the project design or permitting process, submit a tree removal plan to the Engineer, the DEP Forester, and DEP Regulatory Review & Engineering for approval at least 20 business days prior to commencement of clearing and grubbing. Do not commence clearing or grubbing prior to approval of the tree removal plan. Unless otherwise authorized by the DEP Forester, the tree removal plan must include, at minimum, the following information:

1. A list by species and diameter of all trees 4 inches or greater in diameter at breast height as measured at 4½ feet above the ground ("DBH") that will be removed;

2. A description of:

   a. The equipment that will be used to perform tree removal;

   b. The method for removing woody debris from the site;

   c. The name and address of the disposal facility;

   d. The measures to be used to stabilize soil during tree removal;

3. Any other pertinent information as determined by the DEP Forester.

B. Submit the name and qualifications of the Professional Arborist to the Engineer and the DEP Forester for approval at least 10 business days prior to commencement of clearing and grubbing. Do not commence clearing or grubbing prior to approval of the Professional Arborist.

1.07 Protection of Property

A. Public or private roads, adjacent property, infrastructure, including underground infrastructure, facilities, vegetation not identified for removal, including trees, shrubs, turf, or other plants, and other works or structures, collectively known as "property," shall be protected from damage throughout the entire project.

B. Trees to remain on site after completion of the project shall be protected as specified in 3.03.

C. Return to original condition or replace, at no additional cost to the City and at the discretion and to the satisfaction of the Engineer and DEP, any property damaged by the clearing and grubbing operations. In the specific case of vegetation, determination of damage and necessary repair or replacement will be made by the DEP Forester.

1.08 Guarantee

A. Guarantee that all clearing and grubbing will be conducted in accordance with generally accepted industry standards and will not permanently damage any property. If damage resulting from the clearing and grubbing operations appears within 12 months of completion of the project, repair or replace damaged property at the discretion and to the satisfaction of the Engineer and DEP at no additional cost to the City.

PART 2 PRODUCTS

2.01 Materials for Tree Protection

A. Burlap: Provide burlap, as necessary, made of jute not less than 7.2 ounces per square yard.

B. Plywood or oriented-strand board ("OSB"): Provide plywood or OSB, as necessary, of 3/8 inch thickness or greater.

C. Lumber: Provide 2 inch by 4 inch boards, as necessary.

PART 3 EXECUTION

3.01 Timing and Order

A. Do not clear or grub between April 1 and August 1 without the prior written authorization of DEP Wildlife Studies.

B. Clear and grub when soil is dry to minimize soil disturbance and the potential for erosion unless otherwise approved by the Engineer and the DEP Forester. Temporarily suspend grubbing operations if heavy rainfall or saturated soil conditions are encountered.

C. Execute clearing and grubbing in the following order:

1. Complete all items specified in 3.02.

2. Conduct pre-work site visit specified in 1.05. Any alterations to the plan for clearing and grubbing occurring after the site visit must be reviewed and approved by the same parties prior to implementation.

3. Perform clearing and grubbing.

3.02 Preparation

A. Clearly delineate the limits of disturbance in the field with stakes. Replace any stakes that are lost, removed or destroyed until clearing and grubbing is complete and removal of stakes is authorized by the Engineer.

B. Unless otherwise authorized by the DEP Forester, clearly delineate with paint all trees greater than 4 inches DBH that will be removed.

C. Install protective barriers around all trees to remain on site at the completion of the project, if any, as specified in 3.03.

3.03 Protection of Resources

A. Protect from defacement, damage and destruction all trees and shrubs that are to remain after completion of the project.

B. If any endangered or threatened species are encountered during clearing and grubbing, immediately suspend operations and notify DEP Wildlife Studies. DEP Wildlife Studies will review the site to determine what protective measures must be implemented. Clearing and grubbing operations must not resume until approved in writing by DEP Wildlife Studies.

C. Birds and their nests are protected under the federal Migratory Bird Treaty Act, federal and state Endangered Species Laws, and, for eagles, the Bald and Gold Eagle Act. Do not under any circumstances disturb active bird nests. If an active bird nest is encountered, immediately suspend clearing and grubbing within 150 feet of the nest and notify DEP Wildlife Studies. Clearing and grubbing operations in the area must not resume until approved in writing by DEP Wildlife Studies.

D. If an active mammal den is encountered during clearing and grubbing, do not disturb the den until DEP Wildlife Studies has been notified and has had the opportunity to review the site to determine how the den should be addressed. Do not resume clearing and grubbing until authorized to do so by DEP Wildlife Studies.

E. Within 15 feet of the limits of disturbance, install protective barriers around all trees greater than 4 inches DBH to remain on site at the completion of the project, including those adjacent to temporary roads, storage, staging and lay down areas. Construct protective barriers by covering a frame of 2 inch by 4 inch boards with plywood or OSB. Barriers must be at least 4 feet tall and 4 feet wide or three times the DBH of the tree to be protected, whichever is larger. Drive boards supporting the barriers at least 18 inches into the ground. Place barriers on the operational side(s) of

trees to remain, and center trees behind them. Orange construction fencing is not an acceptable substitute for plywood or OSB unless approved in writing by the DEP Forester.

Locate barriers outside the drip lines of trees to remain wherever possible. Do not in any case locate barriers less than 4 feet away from the trunks of trees to remain.

Inspect barriers on a regular basis and repair as necessary for the duration of the project. At completion of the project, and upon approval of the DEP Forester, remove barriers and properly dispose of off-site.

Any deviations from the specifications for protective barriers must be approved in advance in writing by the DEP Forester.

F. Within the drip line of trees to remain, perform any unavoidable excavation with extreme care using either hand tools or equipment that will not cause damage to tree root systems. Avoid compacting soil. Do not permit vehicular traffic of any kind within the drip lines of trees to remain unless otherwise approved by the DEP Forester. Do not stockpile or stage any equipment, materials, debris, topsoil, or other excavated material within the drip line of trees to remain.

G. Do not disturb or cut tree roots unnecessarily. Do not cut roots 2 inches or larger of trees to remain unless otherwise approved by the DEP Forester. Where clearing and grubbing exposes roots of trees to remain, cover with well-watered burlap and keep damp to prevent desiccation. Permanently cover exposed roots with topsoil as soon as practicable. Compact topsoil only to the extent necessary to ensure good contact between roots and soil.

H. Protect vegetation from damage caused by emissions from engine-powered equipment.

I. Do not allow runoff to accumulate around trees to remain on site after construction.

J. Do not fasten or otherwise attach ropes, cables, or guy wires to trees to remain without the prior authorization of the DEP Forester. When such authorization is granted, protect trees beforehand as directed by the DEP Forester.

K. Do not use axes or climbing spikes for trimming trees to remain unless otherwise approved by the DEP Forester.

L. Remove shrubs to be transplanted and restored at completion of the project by taking a sufficient earth ball with the roots to maintain the shrub. Temporarily replant during construction and replace on-site at the completion of the project in a condition equal to that which existed prior to removal. Replace shrubs in kind if transplant fails within 12 months of project completion at no additional cost to the City. Provide transplanting, planting, watering and guarantee as specified in General Specification 02910.

3.04 Clearing

A. Clear and dispose of all trees, brush, shrubs, wood chips, decayed wood, vegetation, rubbish, scrap metal, debris and other objectionable material within the limits of clearing as shown and specified in the Contract Documents unless otherwise directed by the Engineer. Trim trees and shrubs in accordance with generally accepted industry standards when so doing will avoid removal or damage.

B. Do not cut or damage any trees larger than 4 inches DBH outside the limits of clearing without written permission from the Engineer and the DEP Forester.

C. Do not cut or damage any vegetation on property belonging to a party other than the City. If the Contract Documents specify removal of vegetation on adjacent property, obtain written permission from the property owner and submit such permission to the Engineer prior to clearing.

D. All bar and chain oil used in clearing must be biodegradable.

E. Whenever trees are felled or trimmed on or adjacent to public roads, immediately remove all woody debris from areas where it presents a hazard to traffic. Do not allow woody debris to remain within 30 feet of the edge of pavement.

F. In areas that are cleared but not grubbed, if any, cut stumps as close to the ground as practicable. Do not leave any stump higher than half its diameter.

G. The DEP Forester may require collection of merchantable logs at a specified site that will not interfere with other operations. If such collection is required, trees with merchantable logs and a collection site will be clearly designated in the field by the DEP Forester prior to the start of clearing.

H. Do not grade, excavate or perform other earthwork operations in an area prior to completion of clearing in that area.

3.05 Grubbing

A. Grub and dispose of all stumps, buried logs, roots and root clusters greater than 1 inch in diameter, and other organic material in all areas shown in the Contract Documents to be excavated, graded and/or upon which structures are to be constructed, unless otherwise directed by the Engineer.

B. Backfill to grade all voids and excavations left after grubbing with material suitable for backfill as specified in General Specification 02317.

C. At the discretion of the Engineer and DEP, in areas receiving more than 3 feet of fill, grubbing may be limited to large stumps or groups of stumps that could leave a sufficient void in the soil as decomposition occurs to cause surface collapse.

D. Do not under any circumstances use explosives in grubbing operations.

E. Immediately move grubbed material at least 30 feet back from all public roads.

F. Inform the Engineer of all pipes and drains encountered during grubbing that are not shown on the Contract Drawings. Do not disturb pipes or drains until so directed by the Engineer and DEP.

G. Grading, excavation, or other necessary earthwork operations may take place concurrently with grubbing.

3.06 Disposal

A. Remove from site and properly dispose of all cleared and grubbed material, including wood chips, as specified in General Specification 02316, subsection A: Segregation, Storage and Disposal of Materials, unless required by the DEP Forester to stockpile merchantable logs or otherwise directed by the Engineer. If approved in advance in writing by the DEP Forester, wood chips may be spread on cleared areas to a depth not to exceed 3 inches.

All cleared and grubbed material, including wood chips, shall become the property of the Contractor unless the DEP Forester requires stockpiling of merchantable logs in which case ownership of such logs only will remain with the City.

B. Do not dispose of cleared and grubbed material in wetlands, watercourses or bodies of water.

C. Do not use cleared or grubbed material, including wood chips, as fill, backfill or in embankments.

D. Do not burn cleared and grubbed material on City property. Any off-site burning must comply with all applicable laws, rules, and regulations.

E. Dispose of woody debris potentially infested with harmful agents such as Dutch elm disease, Emerald Ash Borer, Asian Longhorned Beetle, etc. in accordance with all applicable laws to prevent the spread of such agents.

F. Dispose of cleared and grubbed material as promptly as possible. Do not delay disposal until final clean up at completion of the project.

3.07 Completion

A. Remove excess soil, stones, and debris that have not previously been cleared and properly dispose of off-site.

B. Provide certification from the Professional Arborist that trees and other vegetation to remain on-site at completion of the project were protected as specified, and that only trees identified for removal during the pre-work site inspection were removed.

C. Certify that all damage to property was promptly repaired to the satisfaction of DEP or the property owner, if other than the City.

* * END OF SECTION * *

Donald W. Lake Jr. P.E.
Curriculum Vitae

EMPLOYMENT

Adjunct Assistant Professor, SUNY-College of Environmental Science & Forestry
2011 - 2014

Visiting Instructor, SUNY-College of Environmental Science and Forestry,
2003 – 2010

Adjunct Professor, Department of Civil & Environmental Engineering,
Syracuse University, 1991 – 2012

Engineering Specialist, New York State Soil & Water Conservation Committee,
1997 – 2006

President, DuLac Engineering, 1995 – current

State Conservation Engineer, USDA-Natural Resources Conservation Service,
1983 – 1995

State Design Engineer, USDA-Natural Resources Conservation Service, 1978 – 1983

Project Engineer, USDA-Natural Resources Conservation Service, 1973 – 1978

Staff Engineer, USDA-Natural Resources Conservation Service, 1970 – 1973

Engineering Student Trainee, USDA- NRCS, 1966 - 1970

EDUCATION

B.S. Civil Engineering, State University of New York at Buffalo, 1970

LICENSES/CERTIFICATIONS

Professional Engineer, New York State (#53844), 1976
Certified Professional Erosion & Sediment Control Specialist (CPESC #738)
Certified Stormwater Quality Specialist (CPSWQ #2)

MEMBERSHIPS/ACTIVITIES

Erosion & Sediment Control Expert Panel, Chesapeake Bay Program (2013)
Chair, International CPESC Council (2010-2012)
Past Chair, International CPESC Council (1996-1998)
Past Technical Vice-Chair, International CPESC Council
New York State Department of Conservation Stormwater Workgroup

MEMBERSHIPS/ACTIVITIES cont'd

National Society of Professional Engineers
Soil and Water Conservation Society
Association of State Dam Safety Officials
American Society of Testing & Materials (Committee D 18.25)
International Erosion Control Association
USDA-Natural Resources Conservation Service, Standards Committee
New York Non Point Source Committee
New York State Department of Transportation Erosion & Sediment Control Task Force

HONORS & AWARDS

Commendation Award, NY Land Improvement Contractor's Association, 2009
Commendation Award, New York Association of Conservation Districts, 2006
CPESC Distinguished Service Award, 2004
Presidents Citation, Soil and Water Conservation Society, 1998
International Erosion Control association, Sustained Contributor Award, 1996
NY Land Improvement Contractors of America Outstanding Service Award 1995
Commendation Award, Empire Chapter, Soil and Water Conservation Society 1995
Conservation Education Award, Empire Chapter, Soil And Water Conservation Society, 1992
Special Award, NY Conservation District Employees Association, 1991
Certificates of Merit (13), USDA-Soil Conservation Service

BACKGROUND & EXPERTISE

Civil Engineering – hydrology, urban hydrology, soil erosion evaluation, soil mechanics, development construction techniques and procedures, sedimentation processes and capture design, applied channel and structure hydraulics, site planning and resource assessments, pollutant wash off methods, stormwater management practices design including extended detention ponds, wetlands, filtering systems and infiltration, stormwater pollution prevention plan review, effect of vegetation in abating negative water quality impacts.

TECHNICAL SERVICE RECIPIENTS

New York State Dormitory Authority
New York State Office of General Services
New York State Office of the Attorney General
New York State Department of Environmental Conservation
New York State Department of Transportation
Loess Hills Alliance, Iowa
Nebraska Cooperative Extension Service

SERVICE RECIPIENTS cont'd

International Erosion Control association
Hansen Aggregates, Inc.
Groton Housing Authority
C&S Engineers, Inc.
O'Brien & Gere Engineers, Inc.
Lamont Engineers, Inc.
Barton & Loguidice, P.C.
North Carolina State University, Water Resources Institute
Energize Vermont, Inc.

PUBLICATIONS

1. Books/Manuals

    a. R. Pitt, S. Clark, D. Lake, Construction Site Erosion and Sediment Controls, Planning, Design and Performance, August 2007, ISBN: 1-932078-38-X. (College textbook)

    b. New York Standards and Specifications for Erosion and Sediment Control, August 2005.

    c. New York Guidelines for Urban Erosion and Sediment Control, 1988, Rev. 1991, 1994, 1997.

    d. New York Contractors Erosion and Sediment Control Field Notebook, 1994; Revised January 2013.

2. Papers

    a. D. Lake, "Struggle for Compliance (New York Perspective)", 15 pgs. Delaware Urban Erosion, Sediment and Stormwater Conference 2000, October 25, 2000.

    b. D. Lake, "Common Threads of Disaster", 1998, Newark, Delaware

    c. D. Lake, "Best Management Practices for Urban Erosion and Sediment Control in New York Counties and Towns", 1990

    d. J. Dickerson, D. Lake, "Biotechnical Slope Protection", ASAE Conference, New Orleans, 1989

    e. D. Lake, Transition Structure Performance for Flood Control", ASAE Conference, Chicago, 1987

2. Papers, cont'd

f. A. Feher, D. Lake, "Alternative Methods for Unloading Manure Storage Structures", 1994

g. D. Lake, "Rehabilitation of Embankment Conduits", ASAE Conference, New Orleans, 1984

h. S.K. Bhatia, J.L. Smith, D. Lake, D. Walowsky, "A Technical and Economical Evaluation of Geosynthetic Rolled Erosion Control Products in Highway Drainage Channels", May 2002.

i. J.L. Smith, S.K. Bhatia, D. Lake, D. Walowsky, "Evaluation of Vegetative and Root System Growth Through Different Geosynthetic Rolled Erosion Control Products in a Highway Drainage Channel", September 2003.

j. Donald W. Lake Jr., "National Urban Erosion Control Standards and Specifications, Do We Need Them? A Perspective From New York", November, 1993.

k. Donald W. Lake Jr., "Training For Use of New York's Guidelines For Urban Erosion And Sediment Control", March, 1993.

l. J. Dickerson, T. Kelsey, C. Jones, D. Lake, R. Godfrey, "Obtaining Plant Materials For Biotechnical Work", February, 1990.

m. T. West, J. Southerland, J. Bloomfield, D. Lake, " Final Report, A Study Of The Effectiveness Of A Vortechs Stormwater Treatment System For Removal Of Total Suspended Solids And Other Pollutants In The Marine Village Watershed, Village Of Lake George, New York", January, 2001.

INSTRUCTIONAL/TRAINING ACTIVITIES

Mr. Lake has an extensive training history presenting 1,540 courses, seminars, lectures and workshops for over 37,250 individuals. Some highlights of this career appear below:

A. Instructor for SUNY-CESF ERE – 596-02, Stormwater Management Design from 2003 to 2010. 205 students completed the course.

B. Organized the SUNY-CESF Stormwater Management Outreach Program in 2005. Through spring 2009, 104 courses have trained 3,027 participants. The venues included Syracuse, Buffalo, Rochester, Albany, Middletown and Fishkill.

C. Designed, prepared and presented 34, one day workshops for construction contractors and highway department employees. Sessions began 1987 and continue through 2000. 1,095 people attended.

D. Designed, prepared and presented 80, two day stormwater management and erosion control workshops for design professional. Sessions included field problems and dealt with water quality. Since these began in 1989, 2007 individuals have attended these courses.

E. Since 1988, prepared and conducted 155, one day seminars in erosion and sediment control and stormwater management. 5,701 people have attended these seminars.

F. Created, organized and coordinated the Syracuse University Stormwater Management Program Workshop Series through SUCE for the years 1997 through 2004. Since this 7 short course curriculum began the recorded attendance was as follows: 1997-84; 1998-104; 1999-93; 2000-217; 2001 – 180; 2002 – 164; 2003 – 270; 2004 – 439.

H. Instructed as Adjunct Professor, CIE 600/500 Urban Erosion and Stormwater Design at Syracuse University, fall 1992 – thru 2002. A total of 128 students completed the full semester course.

I. Developed the Regional Stormwater Training system creating four locations in New York State to host stormwater management and other courses. These locations, Henrietta, Syracuse, Ballston Spa, and Middletown, offered 63 courses from spring 2010 through the spring of 2011. Attendees for these courses numbered 1,306.

RESEARCH ACTIVITIES

a. "Controls on Water Quality in the New Croton Reservoir/Turkey Mountain Watershed" Final Report for NYS-DOT, March 2006.

b. "A Study of the Effectiveness of a Vortec Stormwater Treatment system in Total Suspended Solids and Contaminant Removal in the Marine Village Watershed, Village of Lake George, New York", New York Department of Conservation, $20,000, New York State Department of Transportation, $50,000, with J. Sutherland, NYS-DEC, and T. West, Darren Fred Water Institute.

c. "Economical Gains and Performance of Geocomposits in Preventing Erosion in Highway Ditches", Unfunded, with S. Bhatia, J. Hoy, and D. Walowsky

PUBLIC SERVICE

a. Scientific Community

Reviewed papers for the following professional journals:
Civil Engineering News
Erosion Control Magazine

Reviewed proposals for:
New York State Environmental Trust Fund
New York State Environmental Bond Act
New York State Transportation Infrastructure Research Consortium

b. General Community

Served as member of the Town of Manlius Planning Board since 1995 to 2001
Served as member of the Fayetteville Manlius School Board, 1992