Lake George Deltas Sediment Management/Shoreline Restoration Project - Final Supplemental Generic Environmental Impact Statement (FSGEIS)

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1.0 INTRODUCTION

1.1 Document Overview

This document is the Final Supplemental Generic Environmental Impact Statement (FSGEIS) for the Lake George Deltas Sediment Management/Shoreline Restoration Project. The FSGEIS addresses comment received on the Draft Supplemental Generic Environmental Impact Statement (DSGEIS) accepted by the NYSDEC on July 1, 2013.

Following acceptance of the DSGEIS as complete, the LGPC provided for public review and comment on the DSGEIS. The NYSDEC also established the period from July 1, 2013, to August 1, 2013 for receipt of written comments on the DSGEIS, and then extended the public comment period to August 31, 2013.

The FSGEIS responds to the substantive public comments received on the DSGEIS. The DSGEIS is incorporated by reference into this FSGEIS.

Collectively, the following documents:

- Draft Generic Environmental Impact Statement (DGEIS) Lake George Deltas Sediment Management/Shoreline Restoration Project – Accepted September 4, 2002;
- Final Generic Environmental Impacts Statement (FGEIS) Lake George Deltas Sediment Management/Shoreline Restoration Project – Accepted April 20, 2004;
- Draft Supplemental Generic Environmental Impact Statement (DSGEIS) Lake George Deltas Sediment Management/Shoreline Restoration Project – Accepted July1 ,2013; and the
- Final Supplemental Generic Environmental Impact Statement (FSGEIS),

form the basis of the environmental review record and the subsequent preparation of an amended Findings Statement by the SEQR Involved Agencies.

The scope and focus of the SGEIS were defined in the SEQRA Scoping document adopted by the NYSDEC on August 25, 2011. The introductory sections that follow provide a brief history of the Lake George Deltas Sediment Management/Shoreline Restoration Project ("Restoration Project"), a synopsis of the Conceptual Delta Management Plans included in the Draft Generic Environmental Impacts Statement for the Restoration Project, and the action(s) that triggered the preparation of the Supplement to the GEIS.

1.2 Brief Project History

Lake George Deltas Sediment Management/Shoreline Restoration Project
& the Generic Environmental Impact Statement

The Lake George Deltas Sediment Management/Shoreline Restoration Project ("Restoration Project") was formally initiated by The Lake George Association, Inc. in January of 2000. This decision was preceded by several years of discussion and debate involving the lake community, interested individuals

and various stakeholders regarding the need to remove the sediment laden deltas. Ultimately the removal of the deltas to restore navigability was identified as a desirable course of action.

The purpose of the Restoration Project is "*remediate the deltas that have formed along the shoreline areas of Lake George due to excessive sedimentation caused by human activities in upland drainage areas.*"[1] The Lake George Association (LGA) was established as the Project Sponsor on behalf of the various Towns and Village surrounding Lake George and the Lake George Park Commission (LGPC) was established as the Lead Agency for the purpose of conducting the environmental review of the Restoration Project.

The LGPC, in consultation with the involved and interested agencies, decided the preparation of a Generic Environmental Impact Statement (GEIS) was the appropriate method to evaluate the potential environmental impacts associated with the delta sediment removal. A GEIS is more general in scope and detail than a project specific EIS and is often prepared when evaluating a series of actions (i.e., dredging of individual deltas) in a similar geographic area or environment and/or when evaluating the cumulative impacts of a project on a common resource (i.e., Lake George). A GEIS can also be utilized in choosing alternatives as well as evaluating impacts on a resource when projects are being proposed by unrelated project sponsors. At the time the Restoration Project GEIS was prepared, the project sponsors and lead agency had not yet determined who would initiate/execute the dredging, nor had they established a timeline for completing the proposed activities.

The Lake George Deltas Sediment Management Shoreline Restoration Project Draft Generic Environmental Impact Statement was subsequently prepared in satisfaction of the requirements of the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617). The Draft and Final GEIS were issued and positive SEQRA findings were adopted, concluding the SEQRA process. A detailed summary of the SEQRA process is provided below in Section 1.4.

The Lake George Deltas Sediment Management Shoreline Restoration Project Draft Generic Environmental Impact Statement (DGEIS) evaluated impacts to water quality, invasive species, aquatic plants, animals and wetlands, fisheries, terrestrial plants animal and wetlands, and a variety of other resources. The DGEIS evaluated the removal of the stream delta sediments by conventional mechanical and hydraulic dredging techniques. As described in Section 3.0 of the DGEIS "(*t)he delta sediments will be removed from the deltas by utilizing either conventional mechanical or hydraulic sediment removal methods (or an appropriate combination of both methods, as may be determined as part of the subsequent Phase 2 detailed design work)*"[2]

For the purpose of project planning and the environmental evaluation, the Restoration Project DGEIS described the lake delta sediment management activities as occurring in three (3) phases:

> Phase 1: Environmental review, which included the Generic Environmental Impact Statement and the preparation of Conceptual Delta Management Plans (CDMPs); this work was concluded in 2004. Additional discussion on CDMPs is provided in Section 1.3 (that follows).

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[1] Lake George Park Commission, September 4, 2002. Lake George Deltas Sediment Management/ Shoreline Restoration Project Draft Generic Environmental Impact Statement, page 7..

[2] Lake George Park Commission, September 4, 2002. Lake George Deltas Sediment Management/ Shoreline Restoration Project Draft Generic Environmental Impact Statement, page 15.

Phase 2: Preparation of detailed design plans and specifications for the individual deltas as well as any required permit applications/permits, and

Phase 3: Implementation of the approved delta remediation measures for the individual deltas as well as any necessary post-remediation monitoring measures.

In this fashion, the Restoration Project was advanced through the complex environmental review process, the cost of the program could be managed, and flexibility on timing of the project was provided.

Sections 1.2.4 and 20.0 of the Restoration Project DGEIS provided guidance on how the Generic EIS was to be utilized as proposals to dredge an individual delta advanced through subsequent design phases:

> *"In the event that a positive findings statement is issued by the involved agencies for the GEIS, the Towns will be able to proceed with Phase 2 of the Project. Phase 2 will consist of preparation of detailed design plans and specifications and regulatory permit applications for the individual delta remedial projects. In concert with preparation of this detailed project information, the involved agencies will be required to confirm continuing compliance of the proposed detailed delta remedial measures with SEQR. The requirements of SEQR in this regard for the Project are as follows:*
>
> > *(1) No further SEQR compliance will be required if the more detailed proposed delta remedial measures will be carried out consistently with the specific conditions and thresholds established in the GEIS and the findings statements.*
> >
> > *(2) An amended findings statement must be prepared by the appropriate involved agency if the more detailed proposed delta remedial measures were adequately addressed in the GEIS but were not addressed or were not adequately addressed in the findings statements.*
> >
> > *(3) A negative declaration must be prepared by the appropriate involved agency if the more detailed proposed delta remedial measures were not addressed or were not adequately addressed in the GEIS and the proposed measures will not result in any significant environmental impacts.*
> >
> > *(4) A supplement to the GEIS must be prepared if the more detailed proposed delta remedial measures were not addressed or were not adequately addressed in the GEIS and the proposed remedial measures may have one or more significant adverse environmental impacts or if they exceed any of the specific conditions or thresholds established in the GEIS or the findings statements."*[3]

As noted previously, the LGPC ultimately adopted SEQR Findings that acknowledged the series of design measures as identified in the GEIS as well as mitigation measures to effectively minimize any potential adverse impacts on the natural environment. The DGEIS utilized development of Conceptual Delta Management Plans (CDMPs) to explore the project's impacts to develop these measures and illustrate their implementation.

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[3] Lake George Park Commission, September 4, 2002. Lake George Deltas Sediment Management/ Shoreline Restoration Project Draft Generic Environmental Impact Statement, Page 4

1.3 SEQRA History & Process

SEQRA History

A brief summary of key SEQRA milestones for the Lake George Deltas Sediment Management Shoreline Restoration Project:

- January 31, 2000 by LGA's Full Environmental Assessment Form ("Full EAF")
- May 23, 2000 the Lake George Park Commission ("LGPC") accepted the role of SEQR Lead Agency for the Project.
- June 27, 2000 LGPC issued a SEQR Positive Declaration
- June 28, 2000 to August 11, 2000 Scoping period
- March 20, 2001 LGPC issued a final scope for the DGEIS to LGA and the involved agencies
- September 4, 2002 DGEIS accepted by LGPC as complete
- September 23, 2002 public hearing on the DGEIS
- September 4, 2002 to December 23, 2002 written comments on DGEIS accepted
- Public information sessions on the DGEIS conducted on September 23, 2002 at the Lake George Town Center and on September 24, 2002 at the Hague Community Center
- December 2003 Final GEIS ("FGEIS") presented to LGPC
- April 20, 2004 FGEIS accepted by LGPC as complete
- May 25, 2004 SEQRA Findings adopted by LGPC

A summary of the Supplemental Generic Environmental Impact Statement process:

- February 18, 2011 NYSDEC declared itself lead agency
- April 25, 2011 the NYSDEC issued a Positive Declaration determining that the Finkle Brook, Hague Brook, and Indian Brook delta dredging projects may have a significant adverse environmental impacts and that a Draft (Supplemental) Environmental Impact Statement
- May 25, 2011 Public Scoping Session at Town of Bolton Town Hall
- June 6, 2011 Close of Comment on Scoping document (A copy of the SGEIS Scoping Document is included in Appendix A)
- August 25, 2011 NYSDEC adopted scoping document
- July 1, 2013 Draft Supplemental Generic Environmental Impact Statement (DSGEIS) accepted as complete by NYSDEC
- July 1, 2013 to August 31, 2013 written comments on the DSGEIS accepted

The DSGEIS was accepted as complete and adequate by the NYSDEC on July 1, 2013, and the document was made available for public review and comment. At the conclusion of the public comment period, the NYSDEC directed preparation of a Final Supplemental Generic Environmental Impact Statement (FSGEIS). The FSGEIS responds to substantive comments received by the NYSDEC on the DSGEIS.

Consistent with the requirements of SEQRA, comments on the DSGEIS were limited to new issues identified and discussed in the supplement, and not on elements already addressed in the original Restoration Project GEIS.

Upon completion and acceptance of the FSGEIS, the NYSDEC will prepare a findings statement. The findings statement documents that the requirements of SEQR have been met. A positive findings statement means that the project is approvable after consideration of the EIS and determines that the project will minimize or avoid environmental impacts to the maximum extent practicable. If the project is not approvable, a negative findings statement documenting the reasons for the denial must be prepared. In findings either supporting or denying a project, the reasons must be given in the form of facts and conclusions that are derived from the EIS.

The Restoration Project GEIS, its supplements and the associated SEQRA Findings establish criteria under which the future dredging actions will be specifically undertaken or approved, including requirements for any subsequent SEQR compliance.

Prior to proceeding with actual remediation of the individual deltas, the NYSDEC (or whoever has appropriate jurisdiction) will evaluate the consistency of the actual proposed delta remediation measures with the DGEIS, the FGEIS, the DSGEIS and the FSGEIS and the Findings Statement (collectively the SEQR Record). Any significant inconsistencies that may exist between the actual proposed delta remedial measures and the SEQR Record will be subjected to further review under SEQR and may be the subject of a negative declaration of significance, a supplement to the GEIS, or a modified findings statement, as appropriate.

2.0 RESPONSES TO COMMENTS

This section addresses all comments received during the public comment period on the SGEIS, which extended from July 1, 2013, to August 31, 2013. Written comments were received from two (2) individuals:

- Lake George Waterkeeper — Letter dated August 30, 2013; and
- Carol D. Collins, Ph.D. — Letter dated August 31, 2013.

Copies of the correspondence are provided in Appendix B. These comments were assigned a unique comment number as follows:

- Lake George Waterkeeper comments: LGW-1, 2, 3, etc.
- Carol D. Collins, Ph.D. comments: CC-1, 2, 3, etc.

2.1 Lake George Waterkeeper Comments dated August 30, 2013

LGW-1: Lead Agency – NYSDEC. It is confusing to us as to why the lead agency changed from the Lake George Park Commission (LGPC) for the GEIS effort to the NYSDEC for the supplemental GEIS effort. Why wasn't a co-lead agency format established? What differing regulatory roles exist between the LGPC and NYSDEC that place each agency in an "involved agency/lead agency" capacity under SEQRA? This information/explanation could be incorporated into Section 1.0 – "Introduction" of the SGEIS.

Response: The Lake George Park Commission (LGPC) is not an involved agency as they are not issuing any approval or permit for the proposed action. NYSDEC sought and asserted lead agency status after receiving three (3) separate permit applications for dredge activities.

LGW-2: Project Counsel – FitzGerald Morris Baker Firth, P.C. At some point in time during April, 2013, attorney Matthew Fuller no longer was a principal in the firm of FitzGerald Morris Baker Firth, P.C. It is incorrect to attribute this law firm with the publication of this draft SGEIS. Upon information and belief, the Lake George Association is not represented by FitzGerald Morris Baker Firth, P.C.

Response: At the time the DSGEIS was issued, Mr. Fuller was counsel to the Lake George Association and employed by FitzGerald Morris Baker Firth, P.C. Mr. Fuller remains counsel to the Lake George Association and his contact information appears on the cover of this document.

LGW-3: §1.1 (page 2) – There has been no information provided regarding the evaluation of the cumulative impacts of the project actions on the common resources.

Response: Cumulative impacts were evaluated in the Draft Generic Environmental Impact Statement (See Section 19.2 of the GEIS.)

The Supplemental GEIS focuses on potential impacts to water quality and the benthic environment that may result from the construction of in-lake roads built with dredge materials (or clean fill/materials) and potential impacts from the operation of excavating equipment

directly in the lake as detailed in the scoping document adopted by the NYSDEC on August 25, 2011. The scope of the SGEIS is limited to those elements identified in the scoping document adopted by the NYSDEC.

LGW-4: §1.3 (page 4) - In the first paragraph it states: "These applications, received during 2009-2010, proposed the removal of the deltas by mechanical means generally consistent with those methods identified in the GEIS." The mechanical method with an excavator and access roads being evaluated in the DSGEIS is very different from the methods reviewed and accepted in the GEIS. First, the construction of access roads into Lake George will result in sediment being moved twice at a minimum and very possibly more times as the access road needs to be repaired due to construction activities, wave actions, etc. Therefore, the proposed methods of mechanical excavation with access roads into the lake will result in at least twice the resuspension of sediments and nutrients. A Tahoe Research Group study states that watertight clamshell buckets have been developed in which the top is enclosed and the joints are sealed, which can reduce the amount of sediment resuspension as much as 30-70%.1 While these buckets are mentioned in the FGEIS, there is no mention of their use in this draft SGEIS.

Response: The Supplemental GEIS examines the potential adverse impacts to the environment associated with the alternative dredging techniques including the use of in-lake access pads constructed of lake sediments (or fill), and the operation of excavation equipment directly on the lake bed. The next sentence in the paragraph that the commenter references acknowledges this and it states "However, the removal method included a proposal to construct "access pads" from lake sediments to facilitate access of excavation equipment." The paragraph goes on to describe the alternative techniques further. Re-suspension of sediments and duration of dredging are all impacts within the controlled work zone. The reference to use of watertight clamshell bucket in the Final GEIS was by a commenter (Letter 16 Adirondack Park Agency's Dan Spada) and not a requirement of the FGEIS. Watertight buckets are commonly used for environmental (contaminated sediment) dredging and were dismissed from consideration during the original review. In the case of dredge alternatives discussed in the DGEIS, alternatives that place the excavation equipment inside the work zone (i.e. in-lake access pads) would have little benefit, since any spilled dredge material would fall back into the work zone, where considerable suspension of sediments would already take place on a temporary basis. Nonetheless, the potential for using this equipment may be discussed with contractors during Phase II.

LGW-5: §1.4 (page 6) - In the second subsection under SEQR Process, it states: "Upon completion and acceptance of the FSGEIS, the NYSDEC will prepare a findings statement. The findings statement documents that the requirements of SEQR have been met. A positive findings statement means that the project is approvable after consideration of the EIS and determines that the project will minimize or avoid environmental impacts to the maximum extent practicable." This is confusing. It is our understanding that if a Positive Findings Statement is issued for the SGEIS, than the new dredging alternatives, i.e., mechanical dredging from equipment operating directly on the deltas AND conveyor system on barges sent to trucks onshore (both utilizing pads directly into the lake) would be added to those alternatives already deemed acceptable in the final GEIS. In essence, the FGEIS and FSGEIS would provide a series of alternatives wherein a determination of minimizing or avoiding environmental impacts to the maximum extent practicable would only be achieved when these impact statements are applied to a site specific delta project and considered/ evaluated in conjunction with the individual Delta Management Plan. This needs to be clarified.

Response: The commenter is correct; the adoption of positive findings will allow the alternative dredging techniques to be utilized. Selection of a preferred dredging method will occur during Phase II design.

LGW-6: §2.0 (page 8) - In the second paragraph of the quote under SEQR Process it states: "The deltas also affect the aesthetics of the affected areas of the Lake by creating a brownish shallow water look instead of the natural blue color of deeper water." This is a very subjective statement without any supporting scientific information. In fact, according to Nancy Williams, Lake George Land Conservancy (LGLC) Executive Director, the shallow area created by the Hague Brook delta where the LGLC has a park at the mouth of Hague Brook is a nice wading and recreational area for small children to enjoy the lake. It may be that in certain delta areas, such as Hague Brook, some residents and visitors see their recreational opportunities enhanced rather than diminished.

Response: This is a quote taken from the findings statement prepared and adopted on May 25, 2004, by the Lake George Park Commission for the Lake George Deltas Sediment Management Shoreline Restoration Project GEIS. The comments attributed to Ms. Williams are noted and may also be attributed as a subjective judgment.

LGW-7: §2.0 (page 8) - In the second paragraph of the quote under the subheading SEQR Process, it states: "The deltas are also believed to interfere with fish spawning in tributary brooks." There is no scientific information or data that supports this statement regarding interference with fish spawning. In fact, according to reports prepared by the FUND for Lake George on the annual smelt run, there were high numbers of smelt observed in Finkle Brook, Hague Brook and Indian Brook in 2009 and 2013.

Response: The 2009 Rainbow Smelt Report and the 2010 Rainbow Smelt Report prepared by the Fund for Lake George/Lake George Waterkeeper were obtained from the Fund's website and reviewed. According to the 2010 Rainbow Smelt Report do not provide an analysis of historic smelt populations within the spawning brooks examined. The 2010 report indicates "adult smelt number appears to be on the rise; however adequate historical data is not present to make comparisons." (p. 23). The report continues to say "Many factors could be affecting the smelt populations such as structural impedance, siltation, foraging pressure, habitat alteration, physiologically stressful conditions, and poaching." The report also indicates "streams that were determined to have a low spawning suitability had fine substrate, channelization, algae blooms, head cuts, in stream sediment ponds and loss of riparian buffers. Any obstacle (man-made or natural) that can raise water temperature, reduce riparian buffers, add nutrients, reduce dissolved oxygen, raise specific conductance and add fine substrate may affect the spawning suitability" (p. 22). The Fund's reports support the position that siltation of streams which is a delta formation process does have an negative impact on smelt spawning. Additionally, anecdotal evidence suggests that removal of the Foster brook delta has had a positive impact on the smelt spawning population. Based on personal communications[4] with property owner's adjoining the Foster Brook, smelt have returned to Foster Brook after dredging of the delta was completed for the first time in many years to spawn .

[4] Randy Rath of the LGA communications with Pat Gorman, Chris Hudson, and Patrick Peterson.

LGW-8: §2.0 (page 8) - In the first paragraph after the quoted language under SEQR Process, it states: "However, in determining if the risk of adverse impacts is appropriate, the positive aspects of the proposed action must be weighed. In this case, the removal of shallow, nutrient loaded sediments is believed to reduce the pool of available phosphorus to shallow sediments. As discussed in Section 4.1.1, these shallow sediments can support blooms of algae that lower water quality." This states that the removal of the shallow, nutrient loaded sediments are believed to reduce pools of phosphorus thereby reducing algae blooms that lower water quality. However, no data or studies have been submitted to substantiate this statement. In fact, this appears to contradict a statement in §4.1.2.1 (page 18) regarding "the composition of the sediments to be removed in the deltas is predominantly coarse and medium grained sands, low in organic material" which goes on to further state: "Thus, the material proposed for dredging is likely to settle rapidly and not be associated with a high level of fine material or organics that would be associated with turbidity and nutrient issues found when dredging under such as the marinas studied in Lake Tahoe." This contradiction in field conditions and impacts from dredging under these conditions must be reconciled.

Response: These statements were not intended to appear contradictory. The cores that were studied and described in Appendix D of the DEIS indicate that although the sediment material that was studied was predominantly (97- 100%) coarse to fine sand and gravel material low in organic material (less than 0.3% TOC at Indian Brook), some fine material (0.0 to 2.1%) was present. Among data from three deltas, (Indian Brook, Finkle Brook, and Hague Brook) the highest percentage of fine materials (silt and clay , < 0.063 mm) was observed at Indian Brook with 2.1 % silt and clay (data based on Indian Brook Results, 2009, Appendix C to Indian Brook Delta Dredging Project permit materials, submitted to NYSDEC Permits Section On June 7, 2010.). To clarify these statements, the fine sediment content of sediments deposited in shallow water in the deltas is low, but the removal of these sediments would remove the phosphorus associated with these small amounts of fine material.

The association of phosphorus with fine particulate material is well known and was not specifically cited in the DEIS because it has been understood and printed in textbooks since the seminal work of Einsele (1936)and Mortimer (1941, 1942) as summarized by many authors and updated by Golterman in 2001 (Golterman, H.L. 2001. Phosphate release from anoxic sediments or `What did Mortimer really write?' Hydrobiologia. 450:1-3 99-106).

LGW-9: §4.1.1 (page 15) - In the first paragraph under Environmental Setting it states: "More recent monitoring data from the Darrin Fresh Water Institute have reported variable conditions but no clear trend in water quality measurements." This refers to data gathered through a joint partnership between the FUND for Lake George and Darrin Fresh Water Institute but the statement is inaccurate regarding trends in water quality measurements. Dr. Jeffery Short, special consultant to the FUND for Lake George, states "As for the EIS questions, the first seems rather broad. If this is just a general summary statement then it is indeed incorrect, as the alarming increase in salt and less alarming but still significant increase in chlorophyll attests." This information was presented at the 2013 FUND for Lake George Annual Meeting held on August 17, 2013.

Response: The water quality data (30 year report) referenced by Dr. Jeffery Short and prepared by DFWI and the FUND has not been made available for public review and comment. The citation included in the DSGEIS was to the "Report on the Lake George Offshore Chemical Monitoring Program: 2009" prepared by DFWI and that report provided no trend in water quality based on the data collected. Water quality of Lake George continues to be impacted by

a variety of activities and the environmental community acknowledges increases observations of salt, phosphorous and other constituents.

LGW-10: §4.1.2.1 (page 17) - Under Impacts Common to All Alternatives, item 3 "Introduction of fill", it states: "The alternative that uses temporary pads in the water may require the introduction of fill. " Is it not a given that fill will be required with the introduction of temporary pads? This introduction of fill is not common to the alternatives evaluated in the final GEIS. Furthermore, are the alternatives being considered in this draft SGEIS at odds with NYSDEC's policy regarding the placement of fill into Lake George, which is designated as an impaired water body and listed on the New York State 303d-list as impaired due to sediment? This needs to be explained along with any available regulatory mechanisms which may overcome this encumbrance

Response: Introduction of fill into the lake is not a requisite for the construction of in-lake access pads. Pads may be constructed with delta sediments. In the event insufficient amounts or inadequate materials are available on the lake bottom; clean material (clean stone, crane mats or similar material staged on geotextile fabric) will be utilized. See Section 3.2.2 Mechanical Dredging from In-Lake Temporary Access Pads (page 12) of the DSGEIS which describes the dredging methodology.

LGW-11: §4.1.2.1 (page 17) - Under Impacts Common to All Alternatives, item 4 "Disturbance of existing contaminated sediments," it states: "If toxic materials reside in the sediment, the removal of this material could release toxic material to the water column. In addition, the removal of the sediments would release nutrients into the water column. As described in the previous statement, all materials would be tested. " There is no information provided in the DSGEIS regarding the testing protocol for toxic materials, such as the number of tests per cubic yard (CY) of dredged material or per ac of dredged area. In addition, it must be clarified that testing will be provided on the deltas where some test results were performed more than a decade ago. According to the Conceptual Delta Management Plan, sediment samples were taken by Darrin Fresh Water Institute in 2000. Of these samples, the average concentrations of copper in the surficial Finkle Brook sediments at the depths specified were high enough for the sediments to be considered as moderately contaminated under the NYSDEC's interim guidance (Sediment Class B/Placement Category 2). Additionally, although the average concentrations for lead in the "shallow" water sediments fall within Class A and Category 1 thresholds, one individual sample at the 1-meter water depth and three samples at the 2-meter depth, exceeded these thresholds. The most recent sampling for the testing of the Finkle Brook delta consisted of a single sample that did not show any levels for contaminants. Based on the information contained in the Conceptual Delta Management Plan, the following questions should be answered:

- What is the required number of samples for a 3.5 acre dredge site? It would seem a single sample would not provide enough coverage for a delta with a tributary watershed of 4 square miles that includes an old landfill, transfer station, town highway department and urban areas.
- Plans do not indicate where the single sample test was taken.

Some investigation into the higher levels of copper and lead that were previously discovered in the Conceptual Delta Management Plan but now are not indicated in the most recent single sample. It would seem these higher levels previously encountered alone would require additional sampling.

Response: The scope of the Supplemental GEIS is primarily focused on the impacts associated with alternate dredging techniques as described in Section 3 of the DSGEIS. No additional protocols for pre-removal lake delta soil sampling are proposed.

Consistent with the measures identified in the Restoration Project GEIS, testing of Lake Delta sediments prior to removal will occur under Phase II (Detailed Design) of the Lake George Deltas Sediment Management/Shoreline Restoration Project. NYSDEC Division of Water Technical & Operational Guidance Series (TOGS) 5.1.9: In-Water and Riparian Management of Sediment and Dredged Material provides guidance on the frequency of testing of sediments targeted for dredging. The number of samples and the analytical characterization requirements will be developed during Phase II.

As indicated in Section 3.1 of the DGEIS, sediments removed from the deltas will be limited to uncontaminated sediments meeting regulatory thresholds and approvals for unrestricted upland reuse. As detailed throughout the DGEIS, such uncontaminated sediments are defined as Class A sediments that further meet Placement Category 1 thresholds and which are the subject of a NYSDEC-issued BUD. As indicated in Section 5.4 of the DGEIS, the actual extent and depth of the delta sediments proposed for removal will be revised as necessary during Phase II detailed design work and based on the results of the requisite sediment testing and characterization program.

As previously indicated, delta sediments will be removed only to the extent that the exposed sediment layer remaining after removal of the sediment deltas will also meet the NYSDEC interim guidance (or TOGS 5.1.9) thresholds for Class A sediments. In the event that the Phase II detailed sediment testing and characterization program indicates the proposed exposed sediment layer exceeds the threshold for Class A sediments, as indicated in Section 5.4 of the DGEIS, the depth of the delta sediments proposed for removal will be revised to ensure that this Project criteria is directly met by the sediment removal activities, as opposed to providing bottom treatment of the contaminated exposed sediment layer. Although bottom treatment of a proposed contaminated exposed sediment layer could be provided (such as providing capping or in-situ treatment of the exposed sediment layer, as is sometimes provided for environmental dredging project), such alternatives would not be cost-effective in comparison to simple revision of the proposed sediment removal depth and are somewhat technically challenging and difficult to maintain over the course of time.

As detailed in Section 5.3 of the Conceptual Delta Management Plans, the Phase II Pre-design Investigation will include sampling and testing of the delta sediments for pertinent physical characterization, including grain size distribution, hydrometer analysis and organic matter content. This testing will confirm and quantify the amount of fines and silts occurring close to the mouth of the tributary brooks.

The detailed delta removal plans (Phase II detailed design) prepared by the Warren County Soil and Water Conservation District (WCSWCD) for Hague and Finkle Brooks include both physical (soil size) and analytical (chemical) characterization of the sediments proposed for removal. Four (4) samples were collected from the Finkle Brook Delta and six (6) samples were collected from Hague Brook Delta and analyzed for Total Organic Carbon (TOC). Two samples collected from Hague Brook Delta and one sample from Finkle Brook Delta were analyzed for the presence of metals and pesticides. The results of the analyses were provided to NYSDEC. The

NYSDEC found the soil acceptable for unrestricted use and satisfying the Phase 2 detailed design criteria.

*LGW-12: §4.1.2.1 (page 17) - Under Impacts Common to All Alternatives, at the end of the first paragraph after the numbered items, it states: "*Unless there is a failure of a silt curtain or an accident, these impacts (previously described in Items 1-7) would be limited to the area within the work zone, not affecting the lake water quality and would be temporary in nature.*" This statement is inaccurate and is not supported by historical evidence of dredging operations on Lake George, where under many dredging permits there have been discharges from within the work zone into the main body of the lake including the Lodges at Cresthaven dredging permit (DEC Permit No. 5-5222-00268/00001) (Appendix A); Herrmans property in Huddle Bay (DEC Permit No. 5-5220-00102/00007) (Appendix B), Foster Brook Dredging (DEC Permit No. 5-5324-00073/00001) (Appendix C) and Hondah Cottages (on the Finkle brook delta) (Appendix D). In regards to the Cresthaven project, the two turbidity curtains installed were not adequate to contain the resuspended sediment from a very small dredging operation for the removal of 400 CY. During the second day of dredging activities, operations had to be shut down due to failure to contain turbidity, resulting in substantial, visible contrast to natural conditions and negative impacts to Lake George. Please refer to photographs in Appendix A. The turbidity levels in samples taken by the Lake George Waterkeeper 100 feet north of the exterior turbidity curtain were 10.46 NTUs, despite the use of two turbidity curtains. It should be noted that the only reason two turbidity curtains were installed was due to a condition required by the Town of Lake George Planning Board. It was the opinion of the NYSDEC that only one turbidity curtain was needed, which was how the permit was issued. The Herrmans project provides evidence that two turbidity curtains are not necessarily sufficient to contain turbidity and maintain natural conditions. At this project, the project manager felt it was necessary to install three turbidity curtains. These curtains remained in place four weeks after the dredging operations were stopped. In that time, turbidity within the curtains had not settled out to normal conditions but the curtains were removed due to oncoming winter conditions and freezing. Please refer to photographs in Appendix B. The Hondah Cottages permit was issued for the removal of sand to increase depth of a swimming area and replacement with pea gravel. This was permitted with a single turbidity curtain with extensive turbidity release. These projects demonstrate the problem with this method of mechanical dredging and the significant negative environmental impacts even with two or more turbidity curtains installed.*

Response: The statement referenced by the commenter was intended to communicate that water quality impacts within the controlled work zone will be contained within the work zone unless there is a failure of the best management practices prescribed for the dredging activities.

The Conceptual Delta Management Plans prepared as a part of the Lake George Deltas Sediment Management/Shoreline Restoration Project Draft GEIS include the provision of two silt/turbidity curtains and a turbidity monitoring program.

Dredging activities will be subject to NYSDEC permit conditions. Compliance with the permit conditions is an obligation of the permit holder and subject to enforcement by the NYSDEC.

LGW-13: §4.1.2.1 (page 17-18) - Under Impacts Common to All Alternatives, the last paragraph on page 17 refers to a study conducted by Grimes (1980) regarding Mississippi River sediments where: "… water around the dredge pipe effluent had high levels of bacteria and high turbidity. The upstream water had a turbidity of 17.7 NTU and the turbidity in the river at the dredge effluent discharge was 151.4 NTU. However, 2 km downstream the turbidity and the bacterial level were down to pre-impact levels. At the

mean flow rate of 0.15 m/s this represents a settling of suspended material in 222 minutes, or under 4 hours. In the controlled and isolated conditions anticipated in Lake George it is reasonable to assume that any suspended material would settle at a similar or more rapid rate within the containment zone" It does not appear this study should be applicable to conditions on Lake George. The river condition referenced in the study fails to consider the dilution impact of upstream water on the turbidity levels.

Response: Studies of recovery to dredging in very low-nutrient lakes like Lake George are not available. In particular, no relevant data for the short-term response of a water body to dredging could be found. The research cited in the Mississippi River was presented to indicate the boundary condition of recovery from very high levels of turbidity. It represents a "worst case" condition for a system like Lake George, not an expected condition. It is more characteristic of what might happen within the containment system after dredging stops. Even with these high turbidity levels (151.4 NTU) the water cleared, and bacterial levels fell, within four hours.

Dilution in the Mississippi River study was minimal, as the flow down the river tracked a parcel of sediment-loaded water for just four hours.

LGW-14: §4.1.2.1 (page 18) - Under Impacts Common to All Alternatives, it refers to a Reuter and Miller review of the water quality issues of Lake Tahoe, stating that this review: "… summarized past studies on nutrients released from dredging around marinas and put those impacts in context with other inputs. They concluded that the bioavailability of phosphorus and nitrogen varied from marina to marina, but generally only 1-6% of the total phosphorus was biologically available." The DSGEIS fails to reference the type of dredging that occurred for these studies or the mitigation techniques used, which would impact the resuspension encountered. Of greater concern is the reference to percentage of biologically available phosphorus, which is directly related to algal growth. Based on the 30 year study of the FUND for Lake George and the Darrin Fresh Water Institute, according to Dr. Jeff Short, "regarding phosphorus, about half the total is soluble and thus biologically available." Therefore, the Lake Tahoe study referenced is not applicable to Lake George and significantly underestimates the impact of the resuspension of nutrients and the potential of algal growth from the biologically available phosphorus, which is a much higher percentage of the total phosphorus.

Response: The study by Dr. Jeffrey Short that is referenced is not publicly available and was not reviewed for the SGEIS. The dredging described in Lake Tahoe was of very fine sediments that deposited in the still waters of a marina. It is reasonable to assume that these fine sediments would contain more phosphorus than the coarser sediments of the shallow deltas in Lake George.

Typically much more phosphorus is bound to solids in sediments, and is therefore not as available to support algal growth as the phosphorus that is in the open water column. A ratio of 1:1 for soluble reactive to total phosphorus is expected for the water column, but not for the sediments.

LWG-15: Table 4-1 (page 19) - Potential Significant Adverse Impacts of All Dredging Alternatives under Release of Turbidity – Potential Significant Impacts – Within Work Zone, it states: "Turbidity in the work zone would not cause impacts beyond those resulted from the dredging activity." This is a very general, broad statement and needs to be explained.

Response: Consistent with the GEIS and SEQR findings: employment of silt/turbidity curtains and other BMPs are effective measures to contain turbidity within the work zone. The statement was intended to communicate that elevated turbidity levels will occur and be contained within the controlled work zone.

LGW-16: Table 4-1 (page 19) - Potential Significant Adverse Impacts of All Dredging Alternatives under Runoff from shoreline activities – Within Work Zone it states: "Plans would capture any runoff within the work zone, where sediments would settle." This statement needs to be explained. The "plans" would not capture any runoff. Would runoff be directed into the dredged area and if so, what would the quantities of runoff be and what would the impact be for resuspension?

Response: As indicated in the scoping document "Generic potential environmental impacts of dredging." were identified as having been adequately addressed in the prior environmental review. The Supplemental EIS does not revisit those issues previously explored and addressed during the GEIS but for those identified in the scoping document.

As described in the GEIS, all near shore site work associated with the dredging activities will take place within the controlled work zone. Erosion and sediment (E&S) control measures will be provided for all near shore areas within the work zone. Runoff from areas within the work zone will be managed within the work zone. Details of the E&S control measures will be provided during Phase II (Detailed Design.)

LGW-17: Table 4-1 (page 20) - Under Potential Significant Adverse Impacts of All Dredging Alternatives under Runoff from shoreline activities – Within Work Zone – Potential Significant Impacts it states: "Runoff from the shoreline might increase turbidity in the work zone, but this area would already [be] temporarily impacted." This is non-responsive to the problem. What the potential impact would be needs to be quantified. In addition, earlier in this Table 4-1 under Within the Work Zone – Release of turbidity – Potential significant impacts, it states: "turbidity in the work zone would not cause impacts beyond those resulted from the dredging activity." This appears to state that runoff will also cause turbidity. These two statements appear to be in contradiction of each other.

Response: See response to LGW-16 above.

LGW-18: §4.1.2.2 (page 21) - In the first paragraph under Mechanical Dredging from In-Lake Temporary Access Pads, it refers to the construction of temporary access pads for dredging activities on Lake George and states: "This method has been used in the lake before at several sites including the Darrin Fresh Water Institute and the Sheriff's dock with success and without significant adverse impacts." The DSGEIS provides no comparison table evaluating the DFWI and Sheriff's dock site with the proposed 7 delta dredging sites. This evaluation should include: size of area dredged, depth of water, specific access pad techniques utilized, description of water work areas, equipment used, turbidity monitoring, lake bottom removal, etc. Furthermore, it has been shown in Item 12, supra. that there have been other dredging operations that have resulted in impacts outside the work zone.

Response: The statement is attributable to NYSDEC and WCSWCD representatives who observed the dredging activities and is a comment on the logistical aspects of mobilizing excavation equipment on the lake bed and/or the lake bottom. The work was performed under a NYSDEC permit. NYSDEC permit conditions as a rule are protective of the environment and no violation of the permit(s) were noted/issued.

LGW-19: §4.1.2.2 (page 21) - Under Mechanical Dredging from In-Lake Temporary Access Pads, second paragraph, it states: "This equipment is designed to federal standards to work in wet and harsh conditions, and all fluid reservoirs are sealed." Does this apply to all equipment that will be used and how will that be certified?

Response: The reference to "federal standards" is incorrect. All modern excavation equipment utilizes fully sealed mechanical and hydraulic systems and designed to operate in wet and harsh environments. The portion of the equipment that would be submerged is self-contained and designed to operate within wet/harsh environments.

LGW-20: Table 4-2 (page 22) - Potential Significant Adverse Impacts Specific to the Mechanical Dredging from In-Lake Pads Alternative under "Release of turbidity – Within Work Zone – Potential significant impacts" it states: "Turbidity in the work zone would not cause impacts beyond those resulting from the dredging activity." This statement is not accurate and needs clarification. The turbidity from the mechanical excavators from in-lake conditions would result in significantly higher turbidity levels that would have greater out-of-work zone impacts. From a Tahoe Research Group study (1996), "observations of the excavator dredging at Crystal Shores East indicate sediment resuspension from this type of dredging is high. Maximum turbidities with the dredge area at Crystal Shores East ranged up to 195 NTU. Factors governing sediment resuspension from the excavator bucket are similar to those for other bucket type dredges, i.e. impact, penetration and removal of the bucket from sediment and withdrawal through the water column. Additionally, the bucket typically removes a volume of turbid water overlying the sediment which may be sloshed out of the bucket."

Response: See response to LGW-12 above.

This type of dredging does result in high turbidity levels within the work zone. This is disclosed in the third column of Table 4-2 that states: "Construction of pads near silt curtains could increase the risk of a release outside the work zone." To clarify, dredging would create high turbidly levels, similar to those described in the comment, within the work zone. There is additional risk that turbidity might be elevated if a breach of the silt curtain occurred. However, since the work pad would be within the silt curtain, material spilling from the dredge bucket would be contained within the silt curtain and not released as described in the comment.

LGW-21: §4.1.2.3 (page 24) - Mechanical Dredging From Equipment Operating Directly On the Deltas. There is no consideration of thermal impacts to the water from the equipment being in direct contact with the water column.

Response: The action includes the mobilization of excavation equipment directly on the lake bed where suitable substrate is present. Under typical conditions, a track excavator (or similar machine) designed operate in 3 to 4 feet of water will not be submerged above the turntable of the device. The engine and other heat generating elements of the equipment will not be submerged.

LGW-22: §4.1.3.1 (page 30) - Under Mitigation Measures Common to All Methods: regarding timing of the removal of curtains, it states: "Although specific studies documenting the use of silt curtains to retain turbidity and nutrients in conditions similar to those for this project are not commonly published, there is extensive literature on artificially increasing the nutrient content in low-nutrient lakes within small to moderate-sized enclosures (mesocosms). The data gathered over many decades since the 1970's whole

lake experimentation of Schindler have provided a wealth of information …" It should be explained how these small studies with small volumes of contained water can be compared to the large scale dredging projects covering 5-10 acres on Lake George with significant volumes of contained water (upwards of 50 ac-ft of contaminated water). Furthermore, when the draft SGEIS uses the term "are not commonly published", does that mean some "specific studies" have been published? If the answer is yes, they should be identified and analyzed against what is being proposed in the draft SGEIS. If the answer is no, than clearly say so.

Response: The comment raises the difficulty in extrapolating from small studies in laboratory studies or small outside "mesocosms" to full-scale natural systems. Much of what is known about how nutrients and contaminants affect natural systems is based on laboratory studies. Conclusions drawn from small scales to larger scales need to be carefully qualified, but nonetheless are the foundation of much of our understanding of the large natural systems. The text from the DGEIS that is quoted in the comment attempted to make this qualification. The authors of the DGEIS were not able to find any published studies of long-term impacts of contained dredging on northeastern lakes similar to Lake George.

LGW-23: §4.1.3.1 (page 31) - Under Mitigation Measures Common to All Methods, first full paragraph, it states: "Observations on Lake George or in other lake studies of high turbidity behind silt curtains may not be representative of the proposed delta dredging since the composition of the material to be dredged in this project is dominated by sand and gravel and not by finer sediment particles." This statement is confusing since it appears to be referring to a single project but this actually applies to 7 different project locations and this statement is too generalized to apply to 7 different locations and project conditions. With regarding to the Finkle Brook delta, stream data that has been collected by Jim Sutherland, PhD on Finkle Brook after the installation of the Artist's Falls Instream Sedimentation Basin reflected much finer sediment in runoff during storm events than the sediment in runoff prior to the installation. This would also be the case in the Hague Brook delta, which has two instream sedimentation basins installed. These instream sediment basins have been recognized to remove sediment, the majority of which is coarse sands, leaving finer particles in the water column. It is agreed that finer sediments will stay suspended longer in the water column but this generalized statement is not justified by the historical evidence of dredging projects on Lake George as evident by photographs provided in Item 12. In addition, please refer to sampling data from a Gull Bay dredging project of delta sediments (NYSDEC Permit No. 5-5346-00012/00008) from 2007. Can the applicant provide any supporting turbidity information from the various dredging projects referenced in this DSGEIS to support their statements?

Response: See response to LWG-8 above.

LGW-24: §4.1.3.1 (page 32) - under Mitigation Measures Common to All Methods- Monitoring turbidity, item 2: "Failure of a silt/turbidity curtain", it states: "The work zones would be protected by two layers of turbidity curtains. If either curtain is breached a repair would be effected as quickly as possible. " This has not been the history of projects on Lake George. For example, the Gull Bay dredging project (NYSDEC Permit No. 5-5346-00012/00008) had failed turbidity curtains for more than 2 weeks during the summer of 2007 and NYSDEC recognized the violation. However, dredging operations were allowed to continue despite the violations. How will future violations be handled by the NYSDEC?

Response: See response to LGW-12 above.

LGW-25: §4.2.1 (page 36) - "Other Aquatic Plants and Animals; Aquatic Wetlands and Benthics" - Environmental Setting – Asian clam, first paragraph, it states: "No Asian clams have been observed in any of the proposed dredging sites." This statement is erroneous. Based on recent survey information from the Lake George Park Commission, the English Brook delta is completely infested with Asian clams. Please refer to Appendix F. In addition, based on survey information from Summer 2012, the Asian clams were within 120 feet of the southern boundary of the proposed Finkle Brook dredging project. Please refer to Appendix G. Due the inability to provide treatment for the Asian clam in the Norowal area, there is the unfortunate possibility that the Asian clam may have extended into the Finkle Brook delta. It would be disastrous to the lake if dredging operations were permitted in any area infested by the Asian clam due to the high potential of suspension of the larvae and small clams into the water column and the ability of this invasive species to spread.

Response: New monitoring data do show more widespread occurrence of Asian Clams (Corbicula fluminea) in the bays and shallow waters of Lake George. The DSGEIS assumed that these invasive species could be present at any of the proposed dredge sites. The DSGEIS explains that the removal of the shallow sandy substrate in the bays would reduce the amount of preferred habitat for Asian Clams. The proposed activity would remove clams and any larvae they contain from the bays. Removal of veliger/juvenile stages of the clam would not be affected. The removal of sediments has been used to eliminate Asian Clams in Lake George and elsewhere (see page 37 of the SGEIS), although suction dredging has been preferred. More recently, benthic mats have been the preferred means of control. The mitigation section of the DGEIS describes monitoring and control measures that would be invoked to prevent the establishment of these invasive species.

LGW-26: §4.2.1 (page 36) - In the first paragraph under Environmental Setting – Asian clam, it also states: "The existing shallow, sandy deltas are preferred habitat for Asian clams. The restored habitats would be deeper than the existing deltas and not characterized by coarse sand. These factors would not favor the development of this species." No information is provided to substantiate this statement and it is contrary to available information and protocol for Asian clam treatment on Lake George. The Asian clam has been observed and treated to depths of 10 feet of water for the past three years. Therefore, the increase in water depth to six feet would not prevent the development and growth of the Asian clam. The statement that the restored habitats would not be characterized by coarse sand is contrary to a statement on page 38 of this DSGEIS, which states "These studies indicate that the high sand content of the final substrate conditions after dredging in Lake George ...". In fact, the core samples provided by the applicant indicate 98% of the materials are medium sands or larger size. Therefore, it can be assumed the entire area would be consistent and contain medium to coarse sand, which is the preferable substrate for the Asian clam. Finally, according to research performed by the Tahoe Regional Planning Authority, warmer water and high energy (i.e. nutrients) provide the best conditions to support the development of Asian clams, which will be provided by the dredging activities as noted in the DSGEIS on page 18 as well as from input from runoff of storm events.

Response: The commenter is correct in explaining that Asian Clams can inhabit substrates as deep as those that would be present after dredging, and they can also tolerate a wide range of particle size. The statement in the comment that nutrients would increase subsequent to dredging, citing page 18 of the DGEIS, is taken out of context. The text discloses that nutrients would be released within the work zone during dredging, but "utilization of the best management practices proscribed in the DGEIS, including the use of double layers of silt curtains, would reduce these potential inputs of nutrients to the water column." Thus the

increase in nutrients would be short-term within the work zone and would not be a long-term factor in the establishment of invasive Asian Clams. An additional mitigation tool would be to convene meetings with the Lake George Asian Clam Rapid Response Task Force to discuss ways to avoid any dispersal of larvae, veliger, juveniles or adults and to prevent the establishment of Asian Clams subsequent to dredging.

LGW-27: §4.2.2 (page 36-37) - under Potential Significant Adverse Impacts, fourth paragraph, there is a reference to an Illinois study on recolonization of macroinvertebrates which states: "Presumably an area that was dredged in Lake George would also take more than a year to recolonize. This study area was very soft muddy sediment, quite different than the deltas of Lake George, which would likely recolonize faster." These are conclusory statements with no explanation or supportive documentation. An impact analysis should not be using words like "presumably" and "likely". This conclusion needs supportive documentation. In fact, any disturbed areas near sites with Eurasian watermilfoil will be colonized within a very brief period of time and create yet another problem as a result of the dredging disturbance.

Response: The qualifying language used in the text was inserted because the systems are different, and the results are not applicable without these caveats. Left with a paucity of directly applicable data on dredging in low-nutrient systems with mostly sandy substrates, the DGEIS used studies that described dredging but from different systems. It is a reasonable assumption that colonization rates of macroinvertebrates would be lower in Lake George than in central Illinois. Lake George is much lower in nutrients than the system described in the Illinois study. A similar conclusion was drawn comparing Lake George to Lake Erie, where data also indicated slow recolonization rates.

The recolonization of milfoil and other macrophytes was not part of the studies described in Illinois and Ohio. After dredging milfoil could invade the fresh habitats in Lake George, and monitoring and mitigation for this are described in the Section 4.2.3 of the DGEIS.

LGW-28: §4.2.2 (page 37) - under Potential Significant Adverse Impacts, top partial paragraph, last sentence, there is a reference to the U.S.ACOE evaluating potential impacts of dredging Lake Erie in Toledo Harbor which concluded: "Recolonization of these areas by benthos from the surrounding bottom substrate typically occurs rapidly following the dredging activities. Such impacts would be minor, adverse and short-term." There is no information provided regarding the dredging technique used and the composition of the sediments. Additional information should be provided to determine if this is a legitimate comparison.

Response: The sediments characteristic of the study areas described by the U.S Army Corps of Engineers for the dredging project in Toledo Harbor are described in Appendix EA-B of dredging study. A link is on page 37 of the DGEIS. Here is an excerpt from the Toledo Harbor study:

2.1.2 Sediment Type. Bottom sediments at the open-lake placement area consist primarily of silts and clays, as does the dredged material to be placed at the area.

LGW-29: §4.2.2 (page 37) - first full paragraph, it states: "'Recovery' of the benthic community from dredging is difficult to define, since the post dredging community may not be the same composition as the pre-impact community." There is no information provided as to what communities are likely to develop post-dredging based on the increased water depth and sediment composition. There is a great deal of discussion regarding invasive species but there is limited information regarding potential

communities that could develop and establish. What would the potential impacts be of different communities?

Response: As stated in the DGEIS, it would be purely speculative to predict the community composition of the benthic material. A baseline from which to start would be that the benthic community would not be dissimilar from the types of communities seen elsewhere in the Lake at similar depths.

LGW-30: §4.2.2 (page 38) - End of the first full paragraph, it states: "These studies indicate that the high sand content of the final substrate conditions after dredging in Lake George will not likely provide a preferred substrate for the invasion of milfoil." This statement is not supported by research performed on Lake George by the Darrin Fresh Water Institute, funded by the Fund for Lake George, which performed annual studies of the tributaries to Lake George for the presence of Eurasian watermilfoil. The following is a statement from the opening of the study – "Streams entering Lake George, with nutrients and suspended sediments derived from the terrestrial basin and deposited at their deltas, are prime locations for the continued establishment and re-establishment of Eurasian watermilfoil (Myriophyllum spicatum L.). Delta areas are also disturbed habitats, as a result of sedimentation and terrestrial derived materials and scouring of existing sediments at times of accelerated runoff. The combination of sediment conditions and habitat disruption make tributary deltas prime locations for Eurasian watermilfoil infestation." This statement should be eliminated from the DSGEIS. In addition, there are documented Eurasian watermilfoil dense beds located near the Hague Boat Launch in the Hague delta as well as concerns of invasive species transport by boats at the Norowal Marina adjacent to the Finkle Brook delta. These conditions need to be identified and analyzed as to dredging promoting increased growth of this invasive.

Response: The wording in the DSGEIS is specifically referring to the preferred substrate grain size composition, and is correct in that data on milfoil substrate preference indicates sandy substrates are not preferred. The information provided in the DSGEIS does not contradict the observation that Eurasian watermilfoil colonization may be promoted in disturbed habitats and in nutrient enriched environments. However, the shallow nature of the existing deltas and the coarse sediment grain size do not make these areas preferred habitat, and is consistent with the observation that the deltas only support a sparse population of aquatic plants. The comment indicates that watermilfoil occurs in dense beds "near" the Hague Boat Launch. This is consistent with observations reported in the DSGEIS, and may be in part due to localized nutrient enrichment from run-off as well as introduction of the invasive plants at the boat launch. In observations reported in the DSGEIS, milfoil was more prevalent in areas surrounding the deltas (areas of deeper water and finer sediments) as opposed to growing directly on the material proposed to be removed. The study cited in the comment does not appear to provide evidence that dredging promotes increased growth of this invasive.

LGW-31: §4.2.2 (page 38) - In the last paragraph, it states: "However, as discussed (Section 3.2.2), the physical properties of the sand dominated sediments that are subject to potential compaction by heavy equipment does not make them likely to significantly compact to the degree that establishment of aquatic plants and subsequent root growth are likely to be a major factor after overlying sediment and/or temporary pads or roads are removed." There does not appear to be any discussion in §3.2.2 regarding the physical properties of the sand-dominated sediments that are subject to potential compaction. Information regarding the degree of compaction that will harm the establishment of

aquatic plant and subsequent root growth should be provided and the impact of the equipment duration and weight should be factored.

Response: As noted on page 39 of the DSGEIS, Lake bottom sediments remaining in place (post dredging) will not be impacted by compaction.

LGW-32: §4.2.2 (page 39) - The first and last paragraphs under Compaction of Lake Bottom Sediments read: "There is some concern that compaction of the lake bottom as a result of heavy equipment may create an artificial environment that could contribute to degradation of the benthic environment hastening the introduction of invasives.

This compaction of the lake bottom will be limited to the top few inches of soils. Most, if not all, of the area where the access roads will be constructed and where excavation equipment will be operating directly on the lake bottom will be targeted for excavation. Therefore any compaction of lake bottom sediment will be effectively addressed with the removal of the delta sediments. This impact is temporary and therefore not significant." Then, under §4.2.3 Mitigation of Impacts, page 40, (last two full paragraphs), it reads: "*The planting of native species to promote development of native plant communities as a mitigation measure was explored in the DSEIS (See Section 7.4 and 8.4). This measure was dismissed because of cost, complexity and efficacy of and planting of aquatic species. The purpose of the planting would be to prevent invasive species such as Eurasian watermilfoil invading a newly created habitat. In general, weedy species are highly adapted for exploiting disturbed conditions. Once established, under certain conditions, exotic weeds can form large, monospecific beds and prevent subsequent establishment of native plants, regardless of propagule availability of the native plants. However, planting of native species to prevent colonization of exotic species such as milfoil has been met with mixed success. The major factors influencing the development of aquatic vegetation include: availability of propagules, physical (abiotic) disturbance and biotic disturbance. Physical disturbance (wave action and storm discharge from streams) are potentially major factors that limit the success of planting after dredging. Additionally, biotic disturbance can be a major factor that affects establishment of aquatic plant communities. In particular fish and other organisms that feed in sediments easily dislodge seedlings and can cause loss of the seedlings to predation. Under existing conditions, within most of the area proposed for dredging, field observations have documented very sparse macrophyte growth. Therefore, mitigation will include monitoring the dredge sites and invasive species management (hand removal of invasive plants). Revegetation by native species may be slow, so monitoring is recommended for a period of 2 to 4 years prior to supplementing the native plant communities by planting. If colonization by desirable native species has not met pre-set performance standards within this time-frame, supplemental planting of native species could be undertaken*." First, this DSGEIS says compaction of the lake bottom could contribute to degradation of the benthic environment hastening the introduction of invasives. Then, the DSGEIS states that compaction of the lake bottom sediment will be effectively addressed with the removal of the delta sediments. Thus, a temporary impact and therefore not significant. However, the DSGEIS, then goes on to further state: "*Revegetation by native species may be slow, so monitoring is recommended for a period of 2 to 4 years prior to supplementing the native plant communities by planting*." In essence, this DSGEIS is saying we only have a temporary impact that threatens the colonization of invasives, but it must be monitored for 2 to 4 years in order to determine if hand planting of native communities must be employed AND hand planting was rejected as a mitigation measure in the final GEIS because of "*cost, complexity and efficacy*". These statements appear to contradict each other and not provide a clear understanding of the mitigation measures to be undertaken. This section of the draft SGEIS needs much clarification and consistency in both its analysis of the potential impacts and effective mitigative measures.

Response: The statements do not contradict one another. The DSGEIS explores whether compaction could occur as a result of mobilizing excavation equipment directly on the lake bottom or through the use of in-lake access pads and whether this compaction could/would contribute to the establishment of an 'unnatural' lake bottom environment.

Section 4.2.2 describes the potential for compaction of the lake bottom concluding that up to 0.43 inches of settlement could occur and that compaction may be observed in top few inches of the deltas. Soils potentially subject to compaction would be removed during the dredging process; and no lake bottom sediments compacted as a result of construction activities would remain in place. Therefore, there will be no deleterious effects to the lake bottom related to the potential compaction of soils.

The threat of colonization by invasive species exists under the current condition and is not necessarily attributable to the action evaluated in the SGEIS. Re-colonization of the lake bed by native species can be an effective means to minimize the threat of invasive. However, as articulated in the DGEIS; based of the limited efficacy of hand planting of the lake bed, it was not selected as a mitigation measure. The discussion regarding the consideration of hand planting of native species reiterated the information provided in the Draft GEIS and was provided as context. Hand planting of the lake bottom with native species is not proposed as a mitigation measure.

LGW-33: There is concern about the continuing land use activities in the Town of Bolton that are contributing to the stormwater runoff and erosion problems in the watersheds where dredging is proposed. For example, the Town of Bolton has recently completed a road reconstruction project on Edgecomb Pond Road in the headwater portion of the Finkle Brook watershed. This project included the clearing of nearly three acres along the road to accommodate roadside swales as well as the expansion of the road surface. However, there were no stormwater management measures installed. In fact, all construction activity actually increased the stormwater runoff in the Finkle Brook watershed increasing the cumulative impacts of land use in the watershed and continuing the causes of the very problem the dredging activity is to correct. Please refer to photographs in Appendix H.

Response: As indicated in the scoping document "Stormwater management implementation measures for the reduction of sedimentation near the source. The need for stream corridor management regulations. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction" were identified as non-relevant or having been adequately addressed in a prior environmental review.

2.2 Carol D. Collins, PhD, Comments Dated August 31, 2013

CC-1: Reference 1.

1. *Storm water management implementation measures for the reduction of sedimentation near the sources. The need for stream corridor management regulation. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction.*

These topics were addressed in the GEIS, as a function of the sediment management aspect of the analysis, in the absence of any proposed project. However, the three projects under this SEQR review are for the removal of delta sediments in the lake. Dredging is not a watershed management tool - rather it

is a delta removal actions do not cause, or have potential to cause erosion, siltation and sedimentation in the watershed, and therefore is not required to be considered as a requisite for dredging. However, upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake must continue, to minimize contribution to the delta areas and maximize long-term benefits of the dredging."

Comment 1. The "Initiatives to reduce sediment and nutrient transport, must continue, to minimize contribution to the delta", have not been quantified or qualified. What are these initiatives? Are they effective? Are they enforced? Abundant information is available to disqualify these initiatives as means to minimize contribution to delta areas, for example;

a) Currently there is inadequate, outdated and minimal implementation of stormwater management methods and regulations,

b) In-stream catchment basins that have been installed are not supported by NYS DEC policy have not been proven to be effective,

c) Stream corridor regulations have not been promulgated. Most importantly, without the deltas there to diminish the impacts of stream transport and capture nutrients and sediment, future stream release of these pollutants will accelerate lake eutrophication and create new sites for colonization by invasive species.

Response: As indicated in the scoping document "Stormwater management implementation measures for the reduction of sedimentation near the source. The need for stream corridor management regulations. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction" were identified as non-relevant or having been adequately addressed in a prior environmental review.

CC-2: Reference 2.

2. Development of TMDLs for Lake George as required under the Clean Water Act.

Sediment is the only pollutant for which Lake George and its tributaries are 303(d) listed. For all intents and purposes, the water quality standard for sediment in the Lake George watershed is none in any amounts from manmade sources. Also, ECL 17-1709 prohibits point source discharges in the basin. Given these factors, a TMDL would be moot because the allocated load of sediment from controllable point and nonpoint sources would both be zero. EPA Region 2 has verbally agreed with this philosophy.

Comment 2: This philosophy of not preparing a TMDL also dismisses an important tool for lake management. We know that sediment is getting into the lake from improper development. We know it should be zero. We should develop sediment and nutrient loading models, identify of sources of sediment and nutrient loads and rates, and determine the speciation of phosphorus sources in each subwatershed. A TMDL would provide some of this information. This philosophical loophole creates a situation where Lake George is denied the restorative and protective measures available to other waters. I propose that prior to any dredging we prepare:

a) Sediment and nutrient loading models for all subwatersheds, and

b) *Develop an ANTIDEGRADATION Plan for Lake George (see NYS DEC TOG Sept. 9, 1985 and EPA ANTIDEGREDATION Policy).*

Response: As indicated in the scoping document "Development of TMDLs for Lake George as required under the Clean Water Act." was identified as non-relevant or having been adequately addressed in a prior environmental review.

CC-3: Reference 3.

The LGA vigorously supports development and implementation of comprehensive land use and development plans for the Lake George basin, as well as diligent and strict oversight and enforcement of stormwater management regulations within the basin. Comprehensive stormwater management regulations are now in place for Lake George.

Comment 3. Regrettably, stormwater regulations are outdated, very often unenforced and non-comprehensive in the basin. A review of enforcement and compliance of stormwater regulations as to its diligence and strict oversight would be informative to all parties involved. A lot can be learned here. This would a valuable first tier step. Ten years have passed since the FGEIS was released, during which time efforts could and should have been made towards diligent and strict enforcement. Every effort should and could have been made to promulgate stream corridor regulations. Diligent and strict oversight has not been initiated or achieved. How can we possibly more forward dredging streams like Finkle brook over and over again with any gains in land use controls. The Department of State has expressed concerns with the lack of land use controls and should be consulted in this regard. I would propose that prior to any dredging we:

a) *Require any subwatershed requesting dredging to institute a 95% implementation strategy for stormwater management.*

b) *Implement and validate enforcement and compliance of a stream corridor management plan mandated by the Lake George Park Commission enabling legislation (1987). A review of each towns enforcement and compliance actions would be useful.*

Response: As indicated in the scoping document "Stormwater management implementation measures for the reduction of sedimentation near the source. The need for stream corridor management regulations. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction" were identified as non-relevant or having been adequately addressed in a prior environmental review. It should be noted that the LGA is not a regulatory agency and has no authority to implement or enforce a regulatory program.

CC-4: Reference 4.

3. *Generic potential environmental impacts of dredging.*

The merits and potential environmental impact of dredging has been addressed in the GEIS. The primary scope of this review will be the comparative analysis of the different methods of dredging and the various potential environmental impacts that may result from the different methods. Moreover, there

were a number of substantive comments that were included in the response letters to the draft scope. These comments will be included in the Draft Supplemental EIS and responded to where appropriate.

Comment 4. NYS DEC staff describes the dredging process "as very messy at best, we cannot mitigate the impacts completely without sealing off the system". Nowhere is the significance of the dredging process dealt with adequately and its impact on drinking water.

> Response: As indicated in the scoping document "Generic potential environmental impacts of dredging." was identified as having been adequately addressed in a prior environmental review.

CC-5:

Reference 5.

POTENTIAL SIGNIFICANT ADVERSE IMPACTS, REQUIRED INFORMATION, INITIAL MITIGATION MEASURES AND REASONABLE ALTERNATIVES

2. *Creation of an unnatural and fertile lake bed resulting from the dredging activities and subsequent prolonged containment of the work area, adding to the increased potential for colonization by non-native aquatic nuisance species.*

7. *Provide post-remediation substrate that is less advantageous for colonization by nonnative aquatic species*

9. *Continue upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake.*

Comment 5. Continued deposition of enriched sediments from unmanaged land will in fact provide an environment that will enhance and select for invasives. We are putting the cart before the horse by not initiating stream and land use protection measures first. We can hardly afford to continue to create environments that select for invasives (Collins, et al. 1987; Collins 1990).

> Response: As indicated in the scoping document "Stormwater management implementation measures for the reduction of sedimentation near the source. The need for stream corridor management regulations. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction" were identified as non-relevant or having been adequately addressed in a prior environmental review.

CC-6: Reference 6.

Reasonable Alternatives To Be Considered

1. *Comparison/evaluation/recommendation of possible dredging methods, including operation of equipment directly on the deltas.*

2. *Sediment and nutrient source control initiatives, including clarification of the FGEIS' alleged pre-requisite to the removal of the deltas.*

3. *No-action alternative.*

Comment 6. I am not sure what an alleged pre-requisite is, but there can be no more cost effective, responsible and ecosystem mitigation action than to delay dredging until such time controls are in place legislatively, implemented on a lake-wide on a consistent scale and monitored for town and state actions. The likely colonization of dredging sites by invasives is significant and observed elsewhere when streams continue to release nutrient rich sediment. Millions have been spent to date on invasive species controls in Lake George. Can we afford the costs associated with removing new colonies while we are fighting current infestation? Would it be possible for people to drive around these navigational problems like they drive around islands, and other boats. The cursory attention given to this issue is unfortunate and the no-action alternative should be considered. In other areas of region 5, (Saratoga) dredging of ponds resulting from unmanaged lands upstream is restricted until sources are abated.

Response: As indicated in the scoping document "Stormwater management implementation measures for the reduction of sedimentation near the source. The need for stream corridor management regulations. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction" were identified as non-relevant or having been adequately addressed in a prior environmental review.

CC-7:

Comment 7. I have discussed the matter of AA SPECIAL and best uses with individuals at DEC who have made it clear that all uses must be protected, protecting one use should not impair another. Undoubtedly, dredging will impair drinking water, certainly the most important of all best uses and the turbidity standard will be violated. The implications are far-reaching. Sediment core analyses performed to date are inadequate for a generic permit according to other analyses required by DEC. Depth and distribution of contaminates in the lake vary widely and have not be characterized or analyzed (i.e. coal slags). The minimum amount of data collected is meaningless for a generic permit. The need to dredge a delta for a second time, indicates that dredging deltas is becoming a way to do business rather a means to manage and protect Lake George for each and every use.

Response: The GEIS includes provisions to protect drinking water intakes or provide alternate water source (See Section 6.3.6 of the GEIS) in the event drinking water intakes are impacted by dredging activities.

Appendix A - SEQRA Documents

Outdoor Activities
Animals, Plants, Aquatic Life
Chemical and Pollution Control
Energy and Climate
Lands and Waters
Education
Permits and Licenses
Public Involvement and News
Environmental Notice Bulletin (ENB)
ENB Current and Archives for January - December 2013
Environmental Notice Bulletin July 31, 2013
ENB - Region 5 Notices 7/31/2013
Regulations and Enforcement
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ENB - Region 5 Notices 7/31/2013

Public Notice

Extension of Public Comment Period

Warren County - The New York State Department of Environmental Conservation (NYS DEC), as lead agency, has extended the public comment period on the Draft Supplemental Generic Environmental Impact Statement (Draft SGEIS) for the proposed Lake George Deltas Sediment Management/Shoreline Restoration Project from August 1, 2013 to August 31, 2013. This Draft SGEIS is a supplement to the Final Generic Environmental Impact Statement for the Lake George Deltas Sediment Management/Shoreline Restoration Project that was previously accepted by the Lake George Park Commission, as lead agency, on April 20, 2004 (Final GEIS). Please refer to the July 3, 2013 publication of the Environmental Notice Bulletin to view the Notice of NYS DEC Regional, and sub-regional offices (Regions 5 only) or by calling (518) 623-1285. An electronic copy can also be downloaded off the NYS DEC's website at: http://www.dec.ny.gov/permits/92151.html.

Comments are welcome and will be accepted until August 31, 2013. Kindly submit your comments to the contact person listed below or to: r5dep@gw.dec.state.ny.us.

Contact for this Page

ENB
NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, NY 12233-1750
518-402-9167
Send us an email

This Page Covers

Contact: Marc S. Migliore, NYS DEC Region 5 - Warrensburg, 232 Golf Course Road, Warrensburg, NY 12885, Phone: (518) 623-1285, E-mail: r5dep@gw.dec.state.ny.us.

Adirondack Park Agency Completed Applications

County: Essex

Applicant: Treadway Carwash, LLC d/b/a Treadway Motorsports, LLC

Contact for this Project: John Silvestri
6348 State Route 9, P.O. Box 715
Chestertown, NY 12817
Phone: (518) 494-3404

Office: Adirondack Park Agency (APA)
P.O. Box 99, Route 86
Ray Brook, NY 12977
Phone: (518) 891-4050, ext. 207

APA Contact: Tracy J. Darrah

APA Project Number: 2013-0089

Project Title: Treadway Carwash, LLC d/b/a Treadway Motorsports, LLC

Location: Montcalm Street in Ticonderoga, New York.

For Adirondack Park Agency: Comment Period Ends: August 15, 2013

Project Description: The action involves a new permit to allow change in use of the previously permitted office/storage building to sales and repair of motor sports equipment and relocation of a fuel service business. No above ground or underground fuel tanks are proposed to be located on the property. Two fuel trucks will be parked on the site.

Negative Declaration

Fulton County - The Town of Mayfield Town

Board, as lead agency, has determined that the proposed Town of Mayfield Comprehensive Plan will not have a significant adverse environmental impact. The action involves the adoption of a new Comprehensive Plan for the Town of Mayfield. The vision for the Town of Mayfield stated in the Plan is that the Town, in 2033, will be a diverse yet community minded population living in a predominantly rural atmosphere and lifestyle complimented by a strong commercial tax base. Year-round tourism shall remain a vital and integral component of the Town's economy and viable agricultural land will continue to enhance the Town's landscape. The Town's diversified economy, scenic beauty, natural resources, year round outdoor recreational opportunities, affordable housing, low tax rates and educational resources will make Mayfield an attractive place to live in, visit and do business.

A key component of the Comprehensive Plan includes the creation of two (2) Resource Hub areas. One would be located along NYS Route 30 directly north of the Village of Mayfield and the second would be located around the intersection of NYS Routes 29/30 in Vail Mills. Both Resource Hub areas would provide residents and visitors access to centralized essential services, convenience and technology resources. The Comprehensive Plan attempts to balance the need to grow the Town's tax base while preserving the Town's rural agricultural character. The Plan would enhance recreational opportunities by both improving the existing recreational resources and proposing additional access to key recreational resources primarily being the Great Sacandaga Lake.

The project is located throughout the Town of Mayfield, New York.

Contact: Richard Argotsinger, Town of Mayfield, 28 North School Street, P.O. Box 308, Mayfield, NY 12117, Phone: (518) 661-5414.

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ENB - Region 5 Notices 7/3/2013

Adirondack Park Agency Completed Applications

County: Clinton and Essex

Applicant: David Lessard and Lois Murray

Contact for this Project: Dave Lessard
PO Box 567
Keeseville, NY 12944

Office: Adirondack Park Agency (APA)
P.O. Box 99, Route 86
Ray Brook, NY 12977
Phone: (518) 891-4050, ext. 207

APA Contact: Virginia Yamrick

APA Project Number: 2013-0031

Project Title: David Lessard and Lois Murray

Location: Giddings Road in the Town of Ausable, Clinton County and in the Town of Chesterfield, Essex , New York.

For Adirondack Park Agency: Comment Period Ends: July 18, 2013

Project Description: The applicants are seeking approval for a four lot subdivision involving the creation of greater than 10 lots since the May 22, 1973 enactment date of the Adirondack Park Land Use and Development Plan. The proposal will create Lot 1, a 7.77 acre lot; Lot 2, a 7.36 acre lot; Lot 3, a 6.33 acre lot; and Lot 4, a 6.24 acre lot. Access to the lots will occur from Giddings Road. Each lot is to be improved by the future construction of one new single-family dwelling with on site water and wastewater treatment systems.

Public Notice

Contact for this Page

ENB
NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, NY 12233-1750
518-402-9167
Send us an email

This Page Covers

On June 18, 2013 the County of Saratoga awarded a contract pursuant to Section 120-w of NYS General Municipal Law approving the sale of the Saratoga County Landfill Facility to Finch Paper LLC of Glens Falls New York. This award was made following: 1) the establishment of lead agency pursuant to the State Environmental Quality Review Act [SEQRA]; 2) the review by the Saratoga County Board of Supervisors of the Environmental Assessment Form which did not identify any issues requiring further review; 3) a determination by the Saratoga County Board of Supervisors that the transfer of ownership will not result in any material change in permit conditions or the scope of permitted activities and is therefore a Type II action pursuant to 6 NYCRR 617.5(c)(26L and 4) the approval by the Board of Supervisors of particularized findings with respect to the proposals received in response to the final request for proposals. The resolutions of the Board of Supervisors with respect to the SEQRA, particularized findings, and the sale of the landfill facility are posted on the Saratoga County website at: www.saratogacountyny.gov. The validity of this contract or the procedures which led to its award may be hereafter contested only by action, suit or proceeding commenced within 60 days after the date of this notice and only upon the ground or grounds that: 1) such award or procedure was not authorized pursuant to that section, or 2) any of the provisions of that section which should be complied with at the date of this publication have not been substantially complied with, or 3) a conflict of interest can be showing the manner in which the contract was awarded; or by action, suit or proceeding commenced on the grounds that such contract was awarded in violation of the Constitution.

For further information, please contact:

Pamela A. Hargrave
Saratoga County Board of Supervisors
40 McMaster Street
Ballston Spa, NY 12020
Phone: (518) 885-2240
E-mail: argrave@saratogacountyny.gov

Negative Declaration

Essex County - The Town of Essex, as lead agency, has determined that the proposed Water District No. 1 Upgrades will not have a significant adverse environmental impact. The action involves the development of subsurface production wells for domestic potable water serving approximately 180 structures in the community. Well

development and control building will replace a failing surface water and filtration supply which is currently facing New York State Department of Health (NYS DOH) tribunal orders. Two wells and a control building with a footprint of approximately 1,500 square feet are planned on 4 acres of abandoned farmland on Block House Road. These new facilities will connect to the existing water mains located on Blockhouse road. The number of residents served and the amount of water needed are the same as the existing surface water source currently supplies. The project is located at 2313 Main Street in the Town of Essex, New York.

Contact: Sharon Boisen, Town of Essex, PO Box 355, Essex, NY 12936, Phone: (518) 963-4287, E-mail: supervisorboisen@gmail.

Notice of Acceptance of Draft SGEIS

Warren County - The New York State Department of Environmental Conservation (NYS DEC), as lead agency, has accepted a Draft Supplemental Generic Environmental Impact Statement on the proposed Lake George Deltas Sediment Management/Shoreline Restoration Project. It has been prepared pursuant to the requirements of the State Environmental Quality Review Act, or SEQR (Article 8 of the Environmental Conservation Law with implementing regulations at 6 NYCRR Part 617). This Draft SGEIS is a supplement to the Final Generic Environmental Impact Statement for the Lake George Deltas Sediment Management/Shoreline Restoration Project that was previously accepted by the Lake George Park Commission, as lead agency, on April 20, 2004 (Final GEIS). The scope of the Draft SGEIS is limited to the examination of alternative methods of dredging and any potential environmental impacts, not previously discussed in the 2004 Final GEIS, in response to three applications for NYS DEC permits: the Finkle Brook delta project - DEC ID# 5-5220-00346/00001, the Hague Brook delta project - DEC ID# 5-5226-00159/00001 and the Indian Brook delta project - DEC ID# 5-5220-00035/00005. **Comments on the Draft SGEIS will be accepted by the contact person listed below until August 1, 2013.** The Draft SGEIS in hard copy or digital is available from the NYS DEC Region 5 Office and Sub Office or by calling (518) 623-1285.The Draft SGEIS is available on line at: http://www.dec.ny.gov/permits/92151.html.

The actions proposed involve the mechanical excavation of sediment by tracked excavators operating from atop access pads constructed with dredged material. The Finkle Brook delta project involves an expected sediment removal of 8,217 ± cubic

yards over 3 ± acres of delta surface area. The Hague Brook delta project involves an expected sediment removal of 27,347 ± cubic yards over 9.8 ± acres of surface area. The Indian Brook delta project involves an expected 25,000 ± cubic yards of sediment removal over 8.3 ± acres of delta surface area.

Contact: Marc S. Migliore, NYS DEC Region 5 - Warrensburg, 232 Golf Course Road, Warrensburg, NY 12885, Phone: (518) 623-1285, E-mail: r5dep@gw.dec.state.ny.us.

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FINAL SCOPE

FOR THE

DRAFT SUPPLEMENTAL GENERIC ENVIRONMENTAL IMPACT STATEMENT (DSGEIS)

FOR THE LAKE GEORGE DELTAS SEDIMENT MANAGEMENT/SHORELINE RESTORATION PROJECT

PURSUANT TO 6NYCRR PART 617.9, TITLE 6, NYCRR
August 25, 2011

Lake George Delta Dredging Proposals

Project Names and Numbers: Finkle Brook 5-5220-00346/00001
Hague Brook 5-5226-00159/00001
Indian Brook 5-5220-00035/00005

PURPOSE AND SCOPE

This document presents the scope of the issues and analyses to be included in draft Supplemental Generic Environmental Impact Statement (draft SGEIS) for the Lake George Deltas Sediment Management/Shoreline Restoration Project. It has been prepared pursuant to the requirements of the State Environmental Quality Review Act, or SEQR (Article 8 of the Environmental Conservation Law with implementing regulations at 6 NYCRR Part 617). This draft SGEIS is a supplement to the Final Generic Environmental Impact Statement for the Lake George Deltas Sediment Management/Shoreline Restoration Project that was previously accepted by the Lake George Park Commission, as lead agency, on April 20, 2004 (FGEIS).

The primary goal of scoping is to focus the DSGEIS on potentially significant impacts and to eliminate consideration of those impacts that are irrelevant or not significant.

This document reflects the findings of the DEC as lead agency with respect to the scope of relevant and significant issues to be included in the DSGEIS for the Lake George Deltas Sediment Management/Shoreline Restoration Project.

Section 2 briefly describes the proposed action.

Section 3 provides a summary of the various measures provided for notification and solicitation of public participation in the scoping process.

Section 4 provides a listing of potentially significant adverse impacts that have been identified to-date, an identification or mitigation measures, and reasonable alternatives that will be considered in this DSGEIS.

Section 5 provides an identification of information/data that will be included in an appendix rather than the body of the DSGEIS.

Section 6 identifies prominent issues that were raised during scoping and determined to not be relevant or not environmentally significant or that have been adequately addressed in a prior environmental review.

DESCRIPTION OF THE PROPOSED ACTION

Sediment deltas have formed along the shoreline of Lake George at locations where brooks discharge into the lake. The brooks carry sediments derived from human and naturally occurring forces within the watershed. As the brooks empty into the lake, the water velocity decreases, causing sediments to drop out and accumulate in the near-shore areas.

The potential environmental impacts of the delta remediation project were analyzed in the FGEIS, and findings issued on May 25, 2005. In the GEIS, the environmental review was focused on two methods for removing the sediment, “conventional mechanical removal” and “hydraulic removal” As described in DGEIS section 3.2 and the depicted on the conceptual plans, conventional removal would be carried out by excavating the delta sediments from the lake bottom, using clamshells or other excavating equipment located on barges. The sediments would then be placed in roll-off boxes located on other barges, which would then be transported to the designated upland transfer location for that project. Hydraulic removal would be carried out by pumping sediments from the lake bottom using a hydraulic dredge mounted on a barge. Sediment slurry would be pumped through flexible floating pipelines to a temporary onshore pretreatment area, where the sediments would be dewatered. The clean water would then be returned to the work site via a second line.

The scope of the proposed action is to examine alternative methods of dredging and any potential environmental impacts, not previously discussed. Particularly, mechanical dredging from access pads, in-water mechanical dredging, suction-dredging, and establishing a minimum criteria and potential environmental impact thresholds for sediment removal generally.

The specific project being contemplated as part of the proposed action is the mechanical excavation of sediment by tracked excavators operating from atop access pads constructed with dredged material. The Finkle Brook delta project involves an expected sediment removal of 8,217 +/- cubic yards over 3 +/- acres of delta surface area. The Hague Brook delta project involves an expected sediment removal of 27,347 +/- cubic yards over 9.8 +/- acres of surface area. The Indian Brook delta project involves an expected 25,000 +/- cubic yards of sediment removal over 8.3 +/- acres of delta surface area.

POTENTIAL SIGNIFICANT ADVERSE IMPACTS, REQUIRED INFORMATION, INITIAL MITIGATION MEASURES AND REASONABLE ALTERNATIVES

In reviewing the potential significant adverse impacts associated with the proposed action, the SEIS will be limited to the comparison, evaluation, and recommendation of the different dredging methods, as the dredging itself, and a majority of the impacts from dredging in general have already been considered previously in the duly adopted GEIS. Moreover, the original GEIS previously considered potential environmental impacts on the area within the "controlled work zone" and found that these areas would be impacted and focused the environmental review on impacts outside of the silt curtains and potential impacts post-dredging, once the silt curtains have been removed. To further this discussion, the SGEIS will address practices for reducing the potential for algae blooms and colonization by non-native aquatic species by avoiding the creation of unnatural bed conditions resulting from the dredging and prolonged work area containment. The SGEIS shall analyze all measures to mitigate the impacts from the physical reorganization and biological availability of suspended sediment-bound and soluble nutrients that occurs during the dredging operations, including an analysis of removing the work area containment curtains to disperse nutrients remaining in suspension.

<u>Potential Significant Adverse Impacts</u>:

1. Water quality and benthic impacts resulting from the construction of in-lake roads built with dredged materials, and from the operation of mechanized excavating and support equipment directly in the lake.
2. Creation of an unnatural and fertile lake bed resulting from the dredging activities and subsequent prolonged containment of the work area, adding to the increased potential for colonization by non-native aquatic nuisance species.

<u>Potential Mitigation Measures</u>

1. Minimize on-shore work area requirements, land disturbance
2. Restore work site to existing or improved conditions
3. Use excavated sediments for land reclamation
4. Develop/implement sediment and erosion control plan for on-shore work activities
5. Provide transition of slope to shoreline
6. Use of silt curtains – type, effectiveness, recommended extent and duration of use
7. Provide post-remediation substrate that is less advantageous for colonization by non-native aquatic species
8. Provide post-remediation plantings to lessen the opportunity for colonization by non-native aquatic species
9. Continue upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake

<u>Reasonable Alternatives To Be Considered</u>

1. Comparison/evaluation/recommendation of possible dredging methods, including operation of equipment directly on the deltas.
2. Sediment and nutrient source control initiatives, including clarification of the FGEIS' alleged pre-requisite to the removal of the deltas.
3. No-action alternative

INFORMATION / DATA FOR INCLUSION IN AN EIS APPENDIX

The following information / data will be included as an appendix to the DSGEIS rather than being included within the body of the DSGEIS.

1. Pertinent Correspondence

2. Delta Management Plans

PUBLIC NOTIFICATION AND SOLICITATION

The public comment period was established by the DEC for receipt of written public scoping comments. The public comment period ran from May 18, 2011 to June 6, 2011. Public notification of the public comment period was provided by the DEC within its notification and publication of the Positive Declaration on April 25, 2011. A copy of the Positive Declaration was provided by the DEC to the following:

- NYS Adirondack Park Agency
- NYS Office of General Services, Bureau of Land Management
- NYS Environmental Facilities Corporation, Division of Engineering, Metropolitan Project Section
- NYS Office of Parks, Recreation and Historic Preservation
- Lake George Park Commission

A notice of the Positive Declaration was published in the Environmental Notice Bulletin on May 4, 2011. A notice of the Public Scoping Meeting ran in the Environmental Notice Bulletin on May 18, 2011.

A public scoping meeting was held on May 25, 2011 to solicit public input with respect to the scope. Public notification of the Public Scoping Meeting was provided by the DEC as part of its publication and notification of the Positive Declaration of April 25, 2011.

PROMINENT NON-RELEVANT OR PRIOR-REVIEW ISSUES

The DEC, as Lead Agency, has determined that the following issues that were raised during the SEQR scoping process are not relevant or have been adequately addressed in a prior environmental review.

1. *Storm water management implementation measures for the reduction of sedimentation near the sources. The need for stream corridor management regulation. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction*

These topics were addressed in the GEIS, as a function of the sediment management aspect of the analysis, in the absence of any proposed project. However, the three projects under this SEQR review are for the removal of delta sediments in the lake. Dredging is not a watershed management tool - rather it is a delta management tool. The direct and indirect impacts from these delta removal actions do not cause, or have potential to cause erosion, siltation and sedimentation in the watershed, and therefore is not required to be considered as a requisite for dredging. However, upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake must continue, to minimize contribution to the delta areas and maximize long-term benefits of the dredging.

2. Development of TMDLs for Lake George as required under the Clean Water Act.
Sediment is the only pollutant for which Lake George and its tributaries are 303(d) listed. For all intents and purposes, the water quality standard for sediment in the Lake George watershed is none in any amounts from manmade sources. Also, ECL 17-1709 prohibits point source discharges in the basin. Given these factors, a TMDL would be moot because the allocated load of sediment from controllable point and nonpoint sources would both be zero. EPA Region 2 has verbally agreed with this philosophy.

3. *Generic potential environmental impacts of dredging.*
The merits and potential environmental impact of dredging has been addressed in the GEIS. The primary scope of this review will be the comparative analysis of the different methods of dredging and the various potential environmental impacts that may result from the different methods. Moreover, there were a number of substantive comments that were included in the response letters to the draft scope. These comments will be included in the Draft Supplemental EIS and responded to where appropriate.

Appendix B - Comment Letters

LAKE·GEORGE WATERKEEPER
2012 - 10 Years of Stewardship

PO Box 591, Lake George, NY 12845
Tel: (518) 668-5913 Fax: (518)-668-5915
Email: *info@lakegeorgewaterkeeper.org*
www.lakegeorgewaterkeeper.org

August 30, 2013

Mr. Marc Migliore
New York State Department of Environmental Conservation
Region 5 Warrensburg Sub-Office
232 Golf Course Rd.
Warrensburg, NY 12885

Re: Lake George Delta Sediment Management/Shoreline Restoration Project Draft Supplemental Generic Environmental Impact Statement (DSGEIS) Public Comments

Dear Mr. Migliore:

The Lake George Waterkeeper (Waterkeeper) and the FUND for Lake George would like to thank the New York State Department of Environmental Conservation (NYSDEC) for their extension of the comment period for the subject Draft Supplemental Generic Environmental Impact Statement (DSGEIS).

The Waterkeeper has reviewed the DSGEIS and generally finds the document to be repetitive and conclusory in favor of the access pad method without substantial data or scientific research supporting the recommendations for these damaging activities located within a Critical Environmental Area and a drinking water supply. Very little data are referenced from the proposed deltas (sediment type, chemistry, plant community) to indicate that the deltas and their materials have been studied well enough to support the conclusions. The Waterkeeper has concerns regarding the mechanical dredging method utilizing construction equipment on roads constructed in Lake George and the potential negative impacts to Lake George and its water quality, which concerns are supported through research performed for the Tahoe Regional Planning Authority and our own observations of prior dredging activities on Lake George. The Waterkeeper feels that mechanical dredging from access pads without prior, detailed watershed assessments is a poor, unreliable management approach to this activity which also fails to adequately address potentially significant adverse impacts and will lead to continued dredging. The FUND for Lake George and its Waterkeeper continue to take the position that the best protection measures for sedimentation control and delta management is a reduction of sediment at the source through improved land use practices, regulatory review, improved enforcement compliance and environmental regulation, none of which are adequately addressed in the GEIS.

The following comments on the draft supplemental GEIS are offered by the FUND for Lake George through its Waterkeeper program:

GENERAL

1. Lead Agency – NYSDEC

It is confusing to us as to why the lead agency changed from the Lake George Park Commission (LGPC) for the GEIS effort to the NYSDEC for the supplemental GEIS effort. Why wasn't a co-lead agency format established? What differing regulatory roles exist between the LGPC and NYSDEC that place each agency in an "involved agency/lead agency" capacity under SEQRA? This information/explanation could be incorporated into Section 1.0 – "Introduction" of the SGEIS.

2. Project Counsel – FitzGerald Morris Baker Firth, P.C.

At some point in time during April, 2013, attorney Matthew Fuller no longer was a principal in the firm of FitzGerald Morris Baker Firth, P.C. It is incorrect to attribute this law firm with the publication of this draft SGEIS. Upon information and belief, the Lake George Association is not represented by FitzGerald Morris Baker Firth, P.C.

SECTION 1.0 INTRODUCTION

3. §1.1 (page 2) – There has been no information provided regarding the evaluation of the cumulative impacts of the project actions on the common resources.

4. §1.3 (page 4) - In the first paragraph it states:

> "These applications, received during 2009-2010, proposed the removal of the deltas by mechanical means generally consistent with those methods identified in the GEIS."

The mechanical method with an excavator and access roads being evaluated in the DSGEIS is very different from the methods reviewed and accepted in the GEIS. First, the construction of access roads into Lake George will result in sediment being moved twice at a minimum and very possibly more times as the access road needs to be repaired due to construction activities, wave actions, etc. Therefore, the proposed methods of mechanical excavation with access roads into the lake will result in at least twice the resuspension of sediments and nutrients. A Tahoe Research Group study states that watertight clamshell buckets have been developed in which the top is enclosed and the joints are sealed, which can reduce the amount of sediment resuspension as much as 30-70%.[1] While these buckets are mentioned in the FGEIS, there is no mention of their use in this draft SGEIS.

5. §1.4 (page 6) - In the second subsection under *SEQR Process,* it states:

> "Upon completion and acceptance of the FSGEIS, the NYSDEC will prepare a findings statement. The findings statement documents that the requirements of SEQR have been met. A positive findings statement means that the project is approvable after consideration of the EIS and determines that the project will minimize or avoid environmental impacts to the maximum extent practicable."

[1] Hackey, Scott, Reuter, John & Goldman, Charles. *Impacts of Marina Dredging on lake Tahoe Water Quality.* Prepared by the Tahoe Research Group. October 1996. Page 8-3.

This is confusing. It is our understanding that if a Positive Findings Statement is issued for the SGEIS, than the new dredging alternatives, i.e., mechanical dredging from equipment operating directly on the deltas AND conveyor system on barges sent to trucks onshore (both utilizing pads directly into the lake) would be added to those alternatives already deemed acceptable in the final GEIS. In essence, the FGEIS and FSGEIS would provide a series of alternatives wherein a determination of minimizing or avoiding environmental impacts to the maximum extent practicable would only be achieved when these impact statements are applied to a site specific delta project and considered/evaluated in conjunction with the individual Delta Management Plan. This needs to be clarified.

2.0 PROJECT PURPOSE & NEED

6. §2.0 (page 8) - In the second paragraph of the quote under *SEQR Process* it states:

> "The deltas also affect the aesthetics of the affected areas of the Lake by creating a brownish shallow water look instead of the natural blue color of deeper water."

This is a very subjective statement without any supporting scientific information. In fact, according to Nancy Williams, Lake George Land Conservancy (LGLC) Executive Director, the shallow area created by the Hague Brook delta where the LGLC has a park at the mouth of Hague Brook is a nice wading and recreational area for small children to enjoy the lake. It may be that in certain delta areas, such as Hague Brook, some residents and visitors see their recreational opportunities enhanced rather than diminished.

7. §2.0 (page 8) - In the second paragraph of the quote under the subheading *SEQR Process,* it states:

> "The deltas are also believed to interfere with fish spawning in tributary brooks."

There is no scientific information or data that supports this statement regarding interference with fish spawning. In fact, according to reports prepared by the FUND for Lake George on the annual smelt run, there were high numbers of smelt observed in Finkle Brook, Hague Brook and Indian Brook in 2009[2] and 2010[3].

8. §2.0 (page 8) - In the first paragraph after the quoted language under *SEQR Process,* it states:

> "However, in determining if the risk of adverse impacts is appropriate, the positive aspects of the proposed action must be weighed. In this case, the removal of shallow, nutrient loaded sediments is believed to reduce the pool of available phosphorus to shallow sediments. As discussed in Section 4.1.1, these shallow sediments can support blooms of algae that lower water quality."

This states that the removal of the shallow, nutrient loaded sediments are believed to reduce pools of phosphorus thereby reducing algae blooms that lower water quality. However, no data or studies have been submitted to substantiate this statement. In fact, this appears to

[2] Keppler, Dawn. 2009 Rainbow Smelt Report: The annual spawning migration in streams throughout the Lake George watershed. Prepared March 2010. Page 12.
[3] Parnapy, Corrina. 2010 Rainbow Smelt Report: The annual spawning migration in streams throughout the Lake George watershed. Prepared July 2010. Page 15.

contradict a statement in §4.1.2.1 (page 18) regarding "the composition of the sediments to be removed in the deltas is predominantly coarse and medium grained sands, low in organic material" which goes on to further state:

> "Thus, the material proposed for dredging is likely to settle rapidly and not be associated with a high level of fine material or organics that would be associated with turbidity and nutrient issues found when dredging under such as the marinas studied in Lake Tahoe."

This contradiction in field conditions and impacts from dredging under these conditions must be reconciled.

4.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATION

9. §4.1.1 (page 15) - In the first paragraph under *Environmental Setting* it states:

> "More recent monitoring data from the Darrin Fresh Water Institute have reported variable conditions but no clear trend in water quality measurements."

This refers to data gathered through a joint partnership between the FUND for Lake George and Darrin Fresh Water Institute but the statement is inaccurate regarding trends in water quality measurements. Dr. Jeffery Short, special consultant to the FUND for Lake George, states "As for the EIS questions, the first seems rather broad. If this is just a general summary statement then it is indeed incorrect, as the alarming increase in salt and less alarming but still significant increase in chlorophyll attests."[4] This information was presented at the 2013 FUND for Lake George Annual Meeting held on August 17, 2013.

10. §4.1.2.1 (page 17) - Under *Impacts Common to All Alternatives*, item 3 "Introduction of fill", it states:

> "The alternative that uses temporary pads in the water may require the introduction of fill. "

Is it not a given that fill will be required with the introduction of temporary pads? This introduction of fill is <u>not</u> common to the alternatives evaluated in the final GEIS. Furthermore, are the alternatives being considered in this draft SGEIS at odds with NYSDEC's policy regarding the placement of fill into Lake George, which is designated as an impaired water body and listed on the New York State 303d-list as impaired due to sediment? This needs to be explained along with any available regulatory mechanisms which may overcome this encumbrance

11. §4.1.2.1 (page 17) - Under *Impacts Common to All Alternatives, item 4 "*Disturbance of existing contaminated sediments," it states:

> "If toxic materials reside in the sediment, the removal of this material could release toxic material to the water column. In addition, the removal of the sediments would release nutrients into the water column. As described in the previous statement, all materials would be tested. "

[4] Personal email from Dr. Jeffery Short, special consultant to the FUND for Lake George, responding to question on trends regarding water quality measurements, received August 27, 2013.

There is no information provided in the DSGEIS regarding the testing protocol for toxic materials, such as the number of tests per cubic yard (CY) of dredged material or per ac of dredged area. In addition, it must be clarified that testing will be provided on the deltas where some test results were performed more than a decade ago. According to the *Conceptual Delta Management Plan*, sediment samples were taken by Darrin Fresh Water Institute in 2000. Of these samples, the average concentrations of copper in the surficial Finkle Brook sediments at the depths specified were high enough for the sediments to be considered as moderately contaminated under the NYSDEC's interim guidance (Sediment Class B/Placement Category 2). Additionally, although the average concentrations for lead in the "shallow" water sediments fall within Class A and Category 1 thresholds, one individual sample at the 1-meter water depth and three samples at the 2-meter depth, exceeded these thresholds.[5]

The most recent sampling for the testing of the Finkle Brook delta consisted of a single sample that did not show any levels for contaminants. Based on the information contained in the *Conceptual Delta Management Plan,* the following questions should be answered:

- What is the required number of samples for a 3.5 acre dredge site? It would seem a single sample would not provide enough coverage for a delta with a tributary watershed of 4 square miles that includes an old landfill, transfer station, town highway department and urban areas.
- Plans do not indicate where the single sample test was taken.
- Some investigation into the higher levels of copper and lead that were previously discovered in the *Conceptual Delta Management Plan* but now are not indicated in the most recent single sample. It would seem these higher levels previously encountered alone would require additional sampling.

12. §4.1.2.1 (page 17) - Under *Impacts Common to All Alternatives*, at the end of the first paragraph after the numbered items, it states:

> "Unless there is a failure of a silt curtain or an accident, these impacts (previously described in Items 1-7) would be limited to the area within the work zone, *not affecting the lake water quality and would be temporary in nature.*"

This statement is inaccurate and is not supported by historical evidence of dredging operations on Lake George, where under many dredging permits there have been discharges from within the work zone into the main body of the lake including the Lodges at Cresthaven dredging permit (DEC Permit No. 5-5222-00268/00001) (Appendix A); Herrmans property in Huddle Bay (DEC Permit No. 5-5220-00102/00007) (Appendix B), Foster Brook Dredging (DEC Permit No. 5-5324-00073/00001) (Appendix C) and Hondah Cottages (on the Finkle brook delta) (Appendix D). In regards to the Cresthaven project, the two turbidity curtains installed were not adequate to contain the resuspended sediment from a very small dredging operation for the removal of 400 CY. During the second day of dredging activities, operations had to be shut down due to failure to contain turbidity, resulting in substantial, visible contrast to natural conditions and negative impacts to Lake George. Please refer to photographs in Appendix A. The turbidity levels in samples taken by the Lake George Waterkeeper 100 feet north of the exterior turbidity curtain were 10.46 NTUs, despite the use of two turbidity curtains. It should be noted that the only reason two turbidity curtains were installed was due to a condition required by the Town of Lake George

[5] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page 8.

Planning Board. It was the opinion of the NYSDEC that only one turbidity curtain was needed, which was how the permit was issued. The Herrmans project provides evidence that two turbidity curtains are not necessarily sufficient to contain turbidity and maintain natural conditions. At this project, the project manager felt it was necessary to install three turbidity curtains. These curtains remained in place four weeks after the dredging operations were stopped. In that time, turbidity within the curtains had not settled out to normal conditions but the curtains were removed due to oncoming winter conditions and freezing. Please refer to photographs in Appendix B. The Hondah Cottages permit was issued for the removal of sand to increase depth of a swimming area and replacement with pea gravel. This was permitted with a single turbidity curtain with extensive turbidity release. These projects demonstrate the problem with this method of mechanical dredging and the significant negative environmental impacts even with two or more turbidity curtains installed.

13. §4.1.2.1 (page 17-18) - Under *Impacts Common to All Alternatives*, the last paragraph on page 17 refers to a study conducted by Grimes (1980) regarding Mississippi River sediments where:

> "… water around the dredge pipe effluent had high levels of bacteria and high turbidity. The upstream water had a turbidity of 17.7 NTU and the turbidity in the river at the dredge effluent discharge was 151.4 NTU. However, 2 km downstream the turbidity and the bacterial level were down to pre-impact levels. At the mean flow rate of 0.15 m/s this represents a settling of suspended material in 222 minutes, or under 4 hours. In the controlled and isolated conditions anticipated in Lake George it is reasonable to assume that any suspended material would settle at a similar or more rapid rate within the containment zone"

It does not appear this study should be applicable to conditions on Lake George. The river condition referenced in the study fails to consider the dilution impact of upstream water on the turbidity levels.

14. §4.1.2.1 (page 18) - Under *Impacts Common to All Alternatives,* it refers to a Reuter and Miller review of the water quality issues of Lake Tahoe, stating that this review:

> "… summarized past studies on nutrients released from dredging around marinas and put those impacts in context with other inputs. They concluded that the bioavailability of phosphorus and nitrogen varied from marina to marina, but generally only 1-6% of the total phosphorus was biologically available."

The DSGEIS fails to reference the type of dredging that occurred for these studies or the mitigation techniques used, which would impact the resuspension encountered. Of greater concern is the reference to percentage of biologically available phosphorus, which is directly related to algal growth. Based on the 30 year study of the FUND for Lake George and the Darrin Fresh Water Institute, according to Dr. Jeff Short, "regarding phosphorus, about half the total is soluble and thus biologically available."[6] Therefore, the Lake Tahoe study referenced is not applicable to Lake George and significantly underestimates the impact of the resuspension of nutrients and the potential of algal growth from the biologically available phosphorus, which is a much higher percentage of the total phosphorus.

15. Table 4-1 (page 19) - *Potential Significant Adverse Impacts of All Dredging Alternatives* under "Release of Turbidity – Potential Significant Impacts – Within Work Zone" it states:

[6] Personal email from Dr. Jeffery Short, special consultant to the FUND for Lake George, responding to question on trends regarding water quality measurements, received August 27, 2013.

> "Turbidity in the work zone would not cause impacts beyond those resulted from the dredging activity."

This is a very general, broad statement and needs to be explained.

16. Table 4-1 (page 19) - *Potential Significant Adverse Impacts of All Dredging Alternatives* under "Runoff from shoreline activities – Within Work Zone" it states:

> "Plans would capture any runoff within the work zone, where sediments would settle."

This statement needs to be explained. The "plans" would not capture any runoff. Would runoff be directed into the dredged area and if so, what would the quantities of runoff be and what would the impact be for resuspension?

17. Table 4-1 (page 20) - Under *Potential Significant Adverse Impacts of All Dredging Alternatives* under "Runoff from shoreline activities – Within Work Zone – Potential Significant Impacts" it states:

> "Runoff from the shoreline might increase turbidity in the work zone, but this area would already [be] temporarily impacted."

This is non-responsive to the problem. What the potential impact would be needs to be quantified. In addition, earlier in this Table 4-1 under "Within the Work Zone – Release of turbidity – Potential significant impacts," it states: "turbidity in the work zone would not cause impacts beyond those resulted from the dredging activity." This appears to state that runoff will also cause turbidity. These two statements appear to be in contradiction of each other.

18. §4.1.2.2 (page 21) - In the first paragraph under *Mechanical Dredging from In-Lake Temporary Access Pads,* it refers to the construction of temporary access pads for dredging activities on Lake George and states:

> "This method has been used in the lake before at several sites including the Darrin Fresh Water Institute and the Sheriff's dock with success and without significant adverse impacts."

The DSGEIS provides no comparison table evaluating the DFWI and Sheriff's dock site with the proposed 7 delta dredging sites. This evaluation should include: size of area dredged, depth of water, specific access pad techniques utilized, description of water work areas, equipment used, turbidity monitoring, lake bottom removal, etc. Furthermore, it has been shown in Item 12, *supra*. that there have been other dredging operations that have resulted in impacts outside the work zone.

19. §4.1.2.2 (page 21) - Under *Mechanical Dredging from In-Lake Temporary Access Pads,* second paragraph, it states:

> "This equipment is designed to federal standards to work in wet and harsh conditions, and all fluid reservoirs are sealed."

Does this apply to all equipment that will be used and how will that be certified?

20. Table 4-2 (page 22) - *Potential Significant Adverse Impacts Specific to the Mechanical Dredging from In-Lake Pads Alternative* under "Release of turbidity – Within Work Zone – Potential significant impacts" it states:

> "Turbidity in the work zone would not cause impacts beyond those resulting from the dredging activity"

This statement is not accurate and needs clarification. The turbidity from the mechanical excavators from in-lake conditions would result in significantly higher turbidity levels that would have greater out-of-work zone impacts. From a Tahoe Research Group study (1996), "observations of the excavator dredging at Crystal Shores East indicate sediment resuspension from this type of dredging is high. Maximum turbidities with the dredge area at Crystal Shores East ranged up to 195 NTU. Factors governing sediment resuspension from the excavator bucket are similar to those for other bucket type dredges, i.e. impact, penetration and removal of the bucket from sediment and withdrawal through the water column. Additionally, the bucket typically removes a volume of turbid water overlying the sediment which may be sloshed out of the bucket."[7]

21. §4.1.2.3 (page 24) - *Mechanical Dredging From Equipment Operating Directly On the Deltas.*

There is no consideration of thermal impacts to the water from the equipment being in direct contact with the water column.

22. §4.1.3.1 (page 30) - Under *Mitigation Measures Common to All Methods:* regarding timing of the removal of curtains, it states:

> "Although specific studies documenting the use of silt curtains to retain turbidity and nutrients in conditions similar to those for this project are not commonly published, there is extensive literature on artificially increasing the nutrient content in low-nutrient lakes within small to moderate-sized enclosures (mesocosms). The data gathered over many decades since the 1970's whole lake experimentation of Schindler have provided a wealth of information …"

It should be explained how these small studies with small volumes of contained water can be compared to the large scale dredging projects covering 5-10 acres on Lake George with significant volumes of contained water (upwards of 50 ac-ft of contaminated water). Furthermore, when the draft SGEIS uses the term "are not commonly published", does that mean some "specific studies" have been published? If the answer is yes, they should be identified and analyzed against what is being proposed in the draft SGEIS. If the answer is no, than clearly say so.

23. §4.1.3.1 (page 31) - Under *Mitigation Measures Common to All Methods, first full paragraph,* it states:

> "Observations on Lake George or in other lake studies of high turbidity behind silt curtains may not be representative of the proposed delta dredging since the composition of the material to be dredged in this project is dominated by sand and gravel and not by finer sediment particles."

[7] Hackey, Scott, Reuter, John & Goldman, Charles. *Impacts of marina Dredging on lake Tahoe Water Quality.* Prepared by the Tahoe Research Group. October 1996. Page 8-3.

This statement is confusing since it appears to be referring to a single project but this actually applies to 7 different project locations and this statement is too generalized to apply to 7 different locations and project conditions. With regarding to the Finkle Brook delta, stream data that has been collected by Jim Sutherland, PhD on Finkle Brook after the installation of the Artist's Falls Instream Sedimentation Basin reflected much finer sediment in runoff during storm events than the sediment in runoff prior to the installation. This would also be the case in the Hague Brook delta, which has two instream sedimentation basins installed. These instream sediment basins have been recognized to remove sediment, the majority of which is coarse sands, leaving finer particles in the water column.[8] It is agreed that finer sediments will stay suspended longer in the water column but this generalized statement is not justified by the historical evidence of dredging projects on Lake George as evident by photographs provided in Item 12. In addition, please refer to sampling data from a Gull Bay dredging project of delta sediments (NYSDEC Permit No. 5-5346-00012/00008) from 2007. Can the applicant provide any supporting turbidity information from the various dredging projects referenced in this DSGEIS to support their statements?

24. §4.1.3.1 (page 32) - under *Mitigation Measures Common to All Methods*- Monitoring turbidity, item 2: "Failure of a silt/turbidity curtain", it states:

> "The work zones would be protected by two layers of turbidity curtains. If either curtain is breached a repair would be effected as quickly as possible. "

This has not been the history of projects on Lake George. For example, the Gull Bay dredging project (NYSDEC Permit No. 5-5346-00012/00008) had failed turbidity curtains for more than 2 weeks during the summer of 2007 and NYSDEC recognized the violation. However, dredging operations were allowed to continue despite the violations. How will future violations be handled by the NYSDEC?

25. §4.2.1 (page 36) - "Other Aquatic Plants and Animals; Aquatic Wetlands and Benthics" - *Environmental Setting – Asian clam, first paragraph,* it states:

> "No Asian clams have been observed in any of the proposed dredging sites."

This statement is erroneous. Based on recent survey information from the Lake George Park Commission, the English Brook delta is completely infested with Asian clams. Please refer to Appendix F. In addition, based on survey information from Summer 2012, the Asian clams were within 120 feet of the southern boundary of the proposed Finkle Brook dredging project. Please refer to Appendix G. Due the inability to provide treatment for the Asian clam in the Norowal area, there is the unfortunate possibility that the Asian clam may have extended into the Finkle Brook delta. It would be disastrous to the lake if dredging operations were permitted in any area infested by the Asian clam due to the high potential of suspension of the larvae and small clams into the water column and the ability of this invasive species to spread.

26. §4.2.1 (page 36) - In the first paragraph under *Environmental Setting – Asian clam,* it also states:

> "The existing shallow, sandy deltas are preferred habitat for Asian clams. The restored habitats would be deeper than the existing deltas and not characterized by coarse sand. These factors would not favor the development of this species."

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[8] Keppler, Dawn, Navitsky, Chris, & Parnapy, Corrina. *Altering Our Natural Streams: A study of the effectiveness and impact of the construction of instream sediment basins in Lake George streams for the removal of pollutants*. 2011.

No information is provided to substantiate this statement and it is contrary to available information and protocol for Asian clam treatment on Lake George. The Asian clam has been observed and treated to depths of 10 feet of water for the past three years. Therefore, the increase in water depth to six feet would not prevent the development and growth of the Asian clam. The statement that the restored habitats would not be characterized by coarse sand is contrary to a statement on page 38 of this DSGEIS, which states "These studies indicate that the high sand content of the final substrate conditions after dredging in Lake George ...". In fact, the core samples provided by the applicant indicate 98% of the materials are medium sands or larger size. Therefore, it can be assumed the entire area would be consistent and contain medium to coarse sand, which is the preferable substrate for the Asian clam. Finally, according to research performed by the Tahoe Regional Planning Authority, warmer water and high energy (i.e. nutrients) provide the best conditions to support the development of Asian clams, which will be provided by the dredging activities as noted in the DSGEIS on page 18 as well as from input from runoff of storm events.

27. §4.2.2 (page 36-37) - under *Potential Significant Adverse Impacts, fourth paragraph,* there is a reference to an Illinois study on recolonization of macroinvertebrates which states:

> "Presumably an area that was dredged in Lake George would also take more than a year to recolonize. This study area was very soft muddy sediment, quite different than the deltas of Lake George, which would likely recolonize faster."

These are conclusory statements with no explanation or supportive documentation. An impact analysis should not be using words like "presumably" and "likely". This conclusion needs supportive documentation. In fact, any disturbed areas near sites with Eurasian watermlfoil will be colonized within a very brief period of time and create yet another problem as a result of the dredging disturbance.[9]

28. §4.2.2 (page 37) - under *Potential Significant Adverse Impacts*, top partial paragraph, last sentence, there is a reference to the U.S.ACOE evaluating potential impacts of dredging Lake Erie in Toledo Harbor which concluded:

> "Recolonization of these areas by benthos from the surrounding bottom substrate typically occurs rapidly following the dredging activities. Such impacts would be minor, adverse and short-term."

There is no information provided regarding the dredging technique used and the composition of the sediments. Additional information should be provided to determine if this is a legitimate comparison.

29. §4.2.2 (page 37) - first full paragraph, it states:

> "'Recovery' of the benthic community from dredging is difficult to define, since the post dredging community may not be the same composition as the pre-impact community."

There is no information provided as to what communities are likely to develop post-dredging based on the increased water depth and sediment composition. There is a great deal of

[9] Personal observations of Jim Sutherland, PhD., retired NYSDEC hydrologist, who has extensive experience regarding the monitoring of Eurasian watermilfoil in Lake George, especially on the deltas of tributaries to Lake George sine the 1990s.

discussion regarding invasive species but there is limited information regarding potential communities that could develop and establish. What would the potential impacts be of different communities?

30. §4.2.2 (page 38) - End of the first full paragraph, it states:

> "These studies indicate that the high sand content of the final substrate conditions after dredging in Lake George will not likely provide a preferred substrate for the invasion of milfoil."

This statement is not supported by research performed on Lake George by the Darrin Fresh Water Institute, funded by the Fund for Lake George, which performed annual studies of the tributaries to Lake George for the presence of Eurasian watermifoil. The following is a statement from the opening of the study – "Streams entering Lake George, with nutrients and suspended sediments derived from the terrestrial basin and deposited at their deltas, are prime locations for the continued establishment and re-establishment of Eurasian watermilfoil (*Myriophyllum spicatum L.*). Delta areas are also disturbed habitats, as a result of sedimentation and terrestrial derived materials and scouring of existing sediments at times of accelerated runoff. The combination of sediment conditions and habitat disruption make tributary deltas prime locations for Eurasian watermilfoil infestation."[10] This statement should be eliminated from the DSGEIS. In addition, there are documented Eurasian watermilfoil dense beds located near the Hague Boat Launch in the Hague delta as well as concerns of invasive species transport by boats at the Norowal Marina adjacent to the Finkle Brook delta. These conditions need to be identified and analyzed as to dredging promoting increased growth of this invasive.

31. §4.2.2 (page 38) - In the last paragraph, it states:

> "However, as discussed (Section 3.2.2), the physical properties of the sand dominated sediments that are subject to potential compaction by heavy equipment does not make them likely to significantly compact to the degree that establishment of aquatic plants and subsequent root growth are likely to be a major factor after overlying sediment and/or temporary pads or roads are removed."

There does not appear to be any discussion in §3.2.2 regarding the physical properties of the sand-dominated sediments that are subject to potential compaction. Information regarding the degree of compaction that will harm the establishment of aquatic plant and subsequent root growth should be provided and the impact of the equipment duration and weight should be factored.

32. §4.2.2 (page 39) - The first and last paragraphs under *Compaction of Lake Bottom Sediments* read:

> "There is some concern that compaction of the lake bottom as a result of heavy equipment may create an artificial environment that could contribute to degradation of the benthic environment hastening the introduction of invasives.
>
> This compaction of the lake bottom will be limited to the top few inches of soils. Most, if not all, of the area where the access roads will be constructed and where excavation equipment will be operating directly on the lake bottom will be

[10] Eichler, Lawrence, Ahrens, Laurie, & Boyle, Charles. *A Survey of Tributaries to Lake George, NY for the Presence of Eurasian watermilfoil.* Prepared for the Fund for Lake George. 2007. Page 1.

> targeted for excavation. Therefore any compaction of lake bottom sediment will be effectively addressed with the removal of the delta sediments. This impact is temporary and therefore not significant."

Then, under §4.2.3 *Mitigation of Impacts,* page 40, (last two full paragraphs), it reads:

> "The planting of native species to promote development of native plant communities as a mitigation measure was explored in the DSEIS (See Section 7.4 and 8.4). This measure was dismissed because of cost, complexity and efficacy of and planting of aquatic species.
>
> The purpose of the planting would be to prevent invasive species such as Eurasian watermilfoil invading a newly created habitat. In general, weedy species are highly adapted for exploiting disturbed conditions. Once established, under certain conditions, exotic weeds can form large, monospecific beds and prevent subsequent establishment of native plants, regardless of propagule availability of the native plants. However, planting of native species to prevent colonization of exotic species such as milfoil has been met with mixed success. The major factors influencing the development of aquatic vegetation include: availability of propagules, physical (abiotic) disturbance and biotic disturbance. Physical disturbance (wave action and storm discharge from streams) are potentially major factors that limit the success of planting after dredging. Additionally, biotic disturbance can be a major factor that affects establishment of aquatic plant communities. In particular fish and other organisms that feed in sediments easily dislodge seedlings and can cause loss of the seedlings to predation. Under existing conditions, within most of the area proposed for dredging, field observations have documented very sparse macrophyte growth. Therefore, mitigation will include monitoring the dredge sites and invasive species management (hand removal of invasive plants). Revegetation by native species may be slow, so monitoring is recommended for a period of 2 to 4 years prior to supplementing the native plant communities by planting. If colonization by desirable native species has not met pre-set performance standards within this time-frame, supplemental planting of native species could be undertaken."

First, this DSGEIS says compaction of the lake bottom could contribute to degradation of the benthic environment hastening the introduction of invasives. Then, the DSGEIS states that compaction of the lake bottom sediment will be effectively addressed with the removal of the delta sediments. Thus, a temporary impact and therefore not significant. However, the DSGEIS, then goes on to further state: "Revegetation by native species may be slow, so monitoring is recommended for a period of 2 to 4 years prior to supplementing the native plant communities by planting." In essence, this DSGEIS is saying we only have a temporary impact that threatens the colonization of invasives, but it must be monitored for 2 to 4 years in order to determine if handplanting of native communities must be employed AND hand planting was rejected as a mitigation measure in the final GEIS because of "cost, complexity and efficacy". These statements appear to contradict each other and not provide a clear understanding of the mitigation measures to be undertaken. This section of the draft SGEIS needs much clarification and consistency in both its analysis of the potential impacts and effective mitigative measures.

33. There is concern about the continuing land use activities in the Town of Bolton that are contributing to the stormwater runoff and erosion problems in the watersheds where dredging is proposed. For example, the Town of Bolton has recently completed a road reconstruction project on Edgecomb Pond Road in the headwater portion of the Finkle Brook watershed. This project included the clearing of nearly three acres along the road

to accommodate roadside swales as well as the expansion of the road surface. However, there were no stormwater management measures installed. In fact, all construction activity actually increased the stormwater runoff in the Finkle Brook watershed increasing the cumulative impacts of land use in the watershed and continuing the causes of the very problem the dredging activity is to correct. Please refer to photographs in Appendix H.

In closing, the FUND for Lake George and the Lake George Waterkeeper thank the NYSDEC for recognizing the need for additional study and information required prior to proceeding with dredging applications. We are very concerned about the adverse environmental impacts of dredging as a watershed management approach, especially a method that maximizes the movement and resuspension of sediment and nutrients in the water column. As evident by our comments, many questions regarding dredging, especially the mechanical method proposed with access roads constructed into the lake, remain unanswered with little or no supporting information. In addition, our references to existing data regarding water quality, existing studies and invasive species specific to Lake George raises additional questions and concerns regarding potential adverse impacts. As a longstanding policy supported by the facts, water quality benefits are best achieved *and* sustained by addressing the sedimentation problem at its source. The fact is, borne out of the questions and concerns revealed in the DSGEIS, maintenance dredging can result in more problems than it is intended to solve, with long term consequences. By contrast, at-the-source solutions provide long term benefits to Lake George and its exceptional water quality, which as research now shows, is under mounting threat.

We would be open to the opportunity to discuss our comments in greater detail and provide documentation to substantiate our observations and concerns.

Thank you for the opportunity to comment. The Lake George Waterkeeper looks forward to continuing to work with the New York State Department of Environmental Conservation, the Lake George Park Commission and the Lake George Association to defend the natural resources of Lake George and its watershed.

Sincerely,

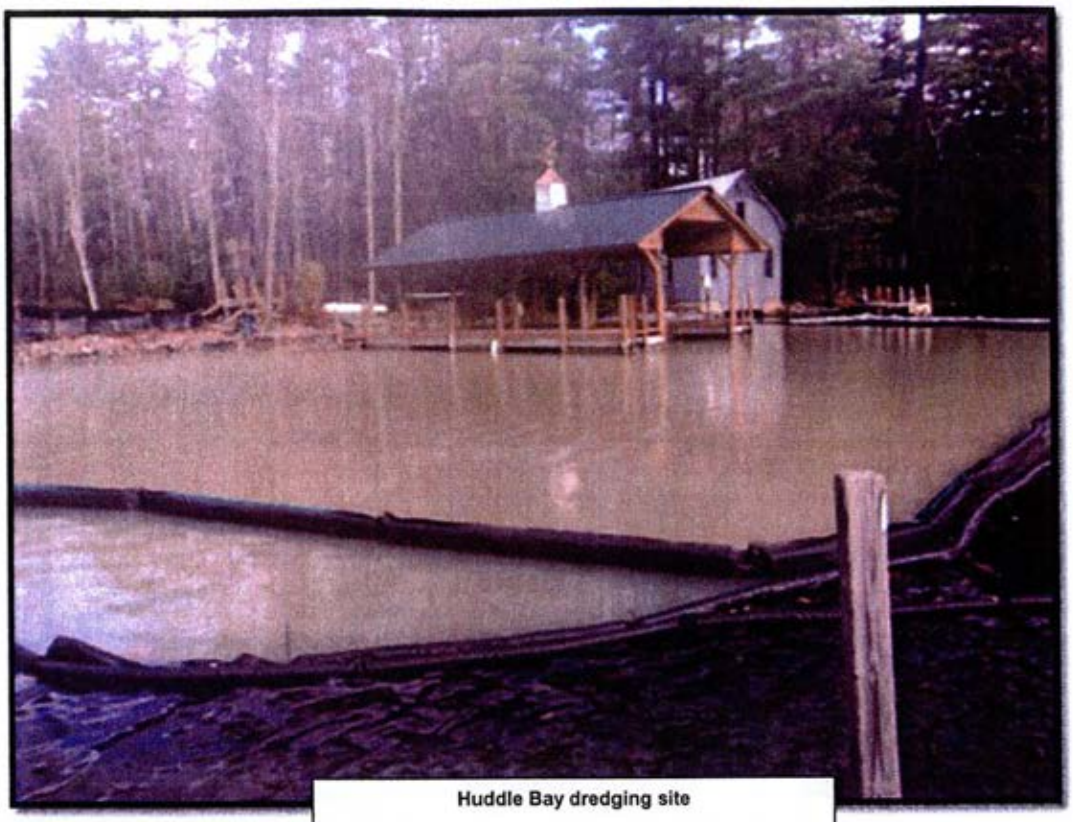
Christopher Navitsky, P.E.
Lake George Waterkeeper

cc: Robert Stegemann – NYSDEC - Region 5 Director
Scott Abrahamson, Esq. – NYSDEC Region 5 Legal Affairs
Terry Martino, Executive Director – Adirondack Park Agency
James Townsend, Esq. – Adirondack Park Agency
Bruce Young, Chairman – Lake George Park Commission
David Wick, Executive Director – Lake George Park Commission
Walt Lender – Lake George Association
Thomas A. Ulasewicz, Esq.

APPENDIX A
DOUBLE TURBIDITY CURTAIN FAILURE
DREDGING AT LODGES OF CRESTHAVEN
DEC PERMIT NO. 5-5222-00268-00001

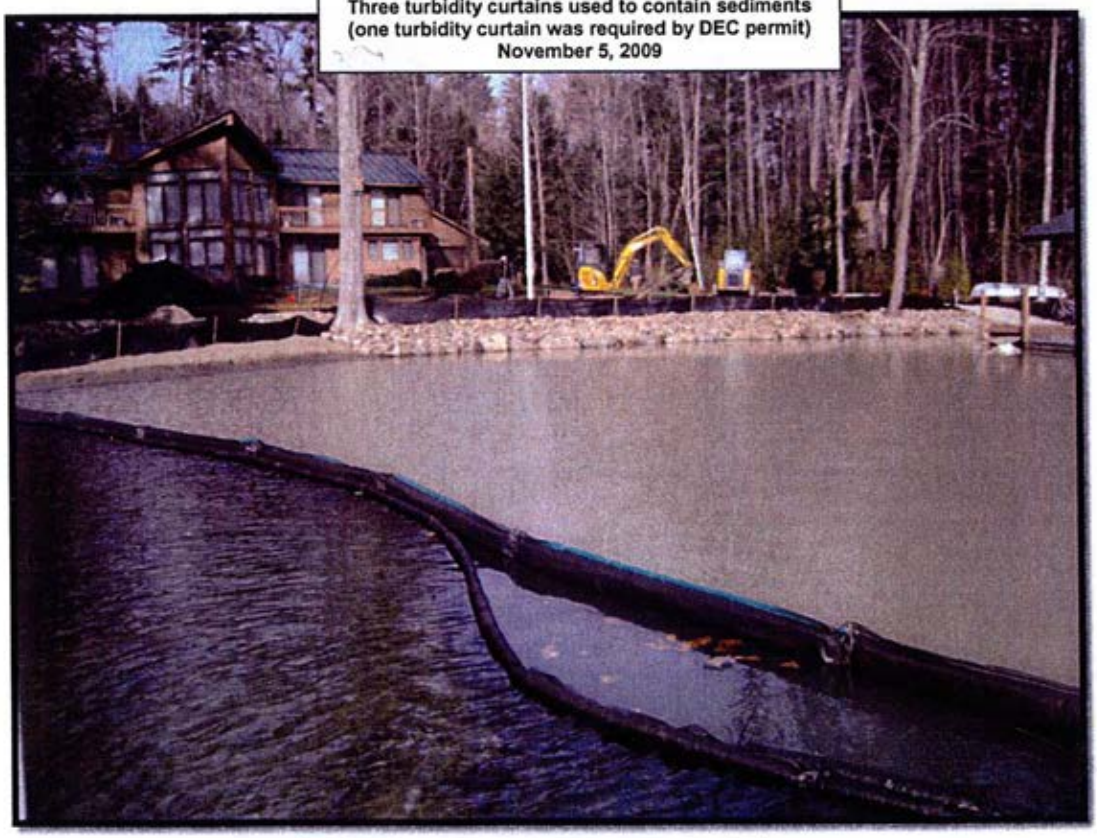
Photographs taken of the mechanical dredging operations at the Lodges of Cresthaven on May 6, 2010. The photographs depict a substantial visible contrast to natural conditions and the failure of the two turbidity curtains to adequately reduce turbidity levels. The method of mechanical dredging used in this project results in the highest levels of turbidity.

APPENDIX B
TRIPLE TURBIDITY CURTAIN INSTALLATION
DREDGING AT HERRMANS PROPERTY, HUDDLE BAY
DEC PERMIT NO. 5-5220-00102/00007



Huddle Bay dredging site

Three turbidity curtains used to contain sediments (one turbidity curtain was required by DEC permit) November 5, 2009



Huddle Bay dredging site November 12, 2009

APPENDIX C
DOUBLE TURBIDITY CURTAIN FAILURE
DREDGING AT FOSTER BROOK
DEC PERMIT NO. 5-5324-00073-00001

Levels of turbidity exceeding natural conditions outside turbidity curtains for the Foster Brook mechanical dredging project. September 2009.

APPENDIX D
TURBIDITY CURTAIN FAILURE
DREDGING/BEACH RESTORATION AT HONDAH COTTAGES
FINKLE BROOK DELTA – TOWN OF BOLTON

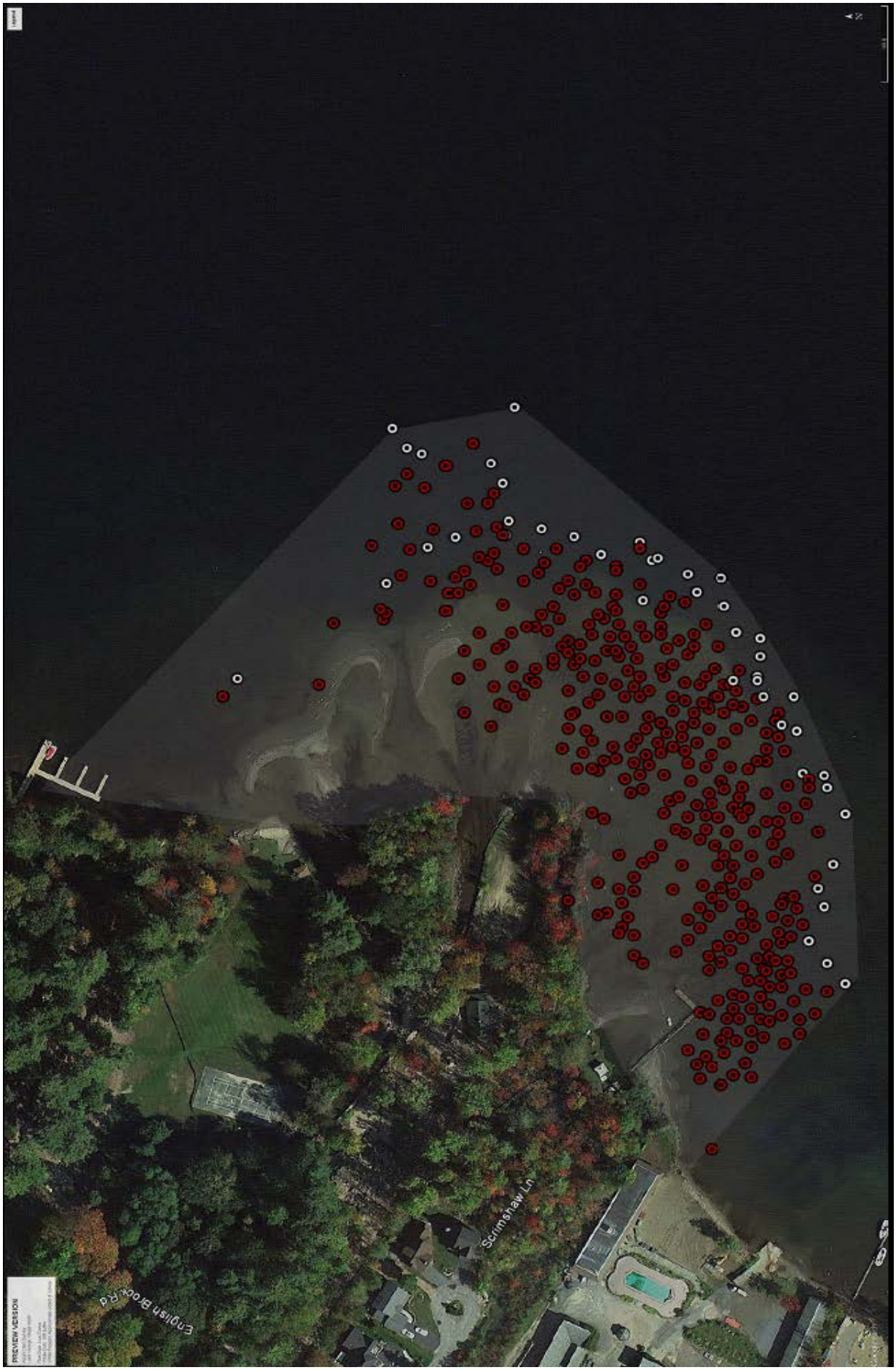
Turbidity releases from dredging/beach restoration project for Hondah Cottages in the Town of Bolton, March 2009. It should be noted these activities occurred on the Finkle Brook delta.

APPENDIX E
RESUSPENDED NUTRIENT AND TSS LEVELS
GULL BAY DREDGING

LOCATION	TP µg-P/L	TN mg-N/L	TSS mg/L
Smith Bay (6/17/08) @	4.4	0.14	
Smith Bay (7/16/08) @	2.9	0.11	
Inside Dewatering Turbidity Curtain – North (6/13/08)	64.2	0.44	40.0
Outside Dewatering Turbidity Curtain – North (6/13/08)	5.8	0.13	1.4
Inside Dewatering Turbidity Curtain – Central (6/13/08)	37.7	0.36	20.4
Outside Dewatering Turbidity Curtain – Central (6/13/08)	10.1	0.13	4.2
Inside Dewatering Turbidity Curtain – South (6/13/08)	85.9	0.25	55.6
Outside dewatering Turbidity Curtain – South (6/13/08)	12.0	0.14	4.4
Inside Dewatering Turbidity Curtain – North (7/10/08)	42.7	0.74	185
Outside Dewatering Turbidity Curtain – North (7/10/08)	6.4	0.14	3.6
Inside Dewatering Turbidity Curtain – Central (7/10/08)	3.9	0.13	3.1
Outside Dewatering Turbidity Curtain – Central (7/10/08)	3.4	0.10	0.9
Inside Dewatering Turbidity Curtain – South (7/10/08)	47.5	0.68	197
Outside Dewatering Turbidity Curtain – South (7/10/08)	8.9	0.17	15.0
Inside Dewatering Turbidity Curtain – North (8/12/08)	9.7	0.22	
Outside Dewatering Turbidity Curtain – North (8/12/08)	3.9	Lt 0.05	
Inside Dewatering Turbidity Curtain – Central (8/12/08)	4.1	0.12	
Outside Dewatering Turbidity Curtain – Central (8/12/08)	3.5	0.12	
Inside Dewatering Turbidity Curtain – South (8/12/08)	8.5	0.17	
Outside Dewatering Turbidity Curtain – South (8/12/08)	3.0	0.12	

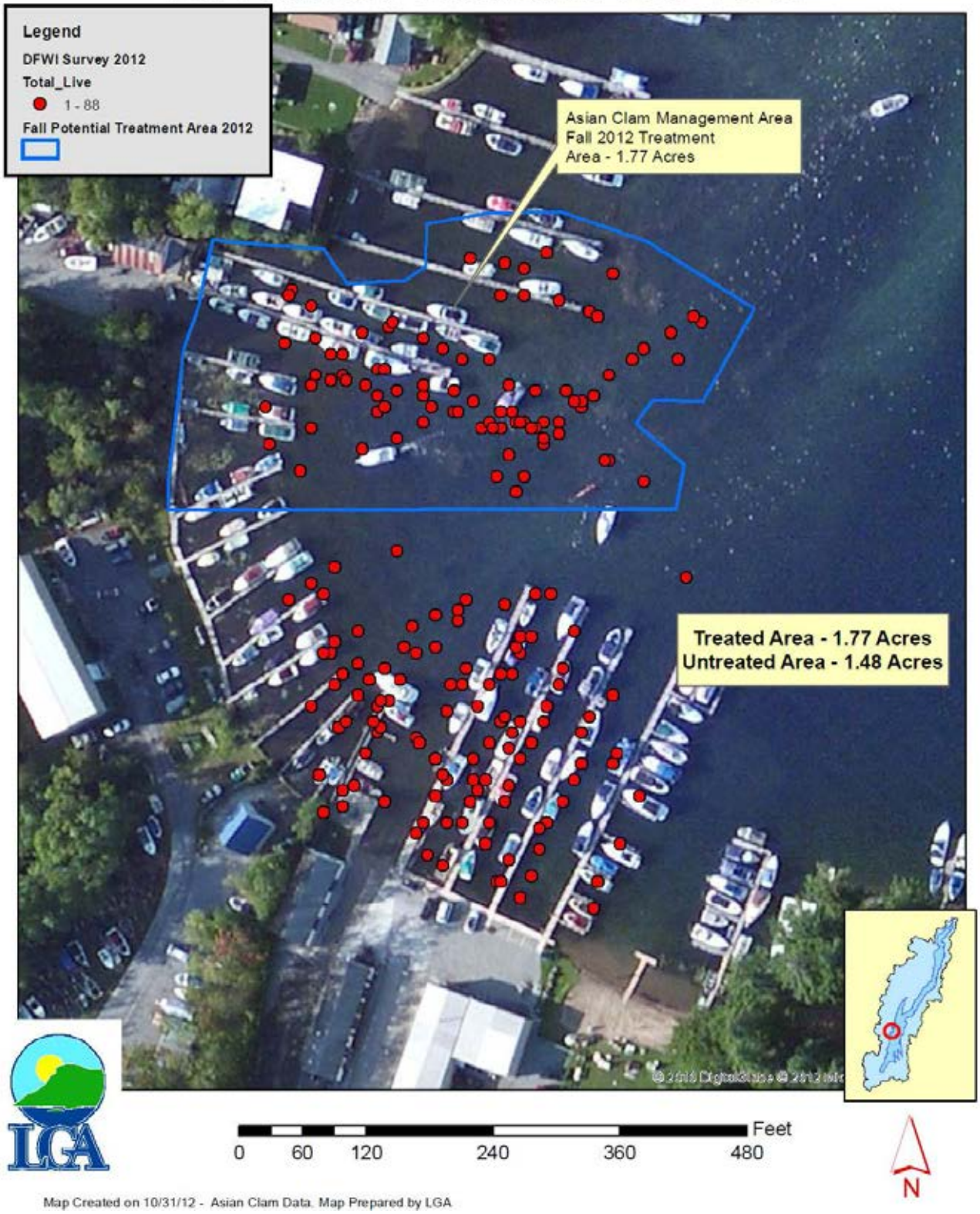
@ Bay to the south of Gull Bay, closest location for comparable lake data.

APPENDIX F
EXTENT OF ASIAN CLAM
ENGLISH BROOK DELTA
AUGUST 2013


PREVIEW VERSION
English Brook Rd
Scrimshaw Ln

APPENDIX G
EXTENT OF ASIAN CLAM INFESTATION
SAWMILL BAY/NOROWAL MARINA
SUMMER 2012

Asian Clam
Fall Potential Treatment Area - 2012



Map Created on 10/31/12 - Asian Clam Data. Map Prepared by LGA

APPENDIX H
PHOTOGRAPHS OF TOWN OF BOLTON
HIGHWAY DEPARTENT CONSTRUCTION PROJECT
EDGECOMB POND ROAD
HEADWATERS OF FINKLE BROOK WATERSHED
JULY 2013

Photographs of Edgecomb Pond Road reconstruction project in the Town of Bolton, August 2013. The project included clearing and excavation of >20' along the roadside to install roadside swale and expand the road surface. No control measures were installed to reduce stormwater runoff. Note the project directly discharges into the headwaters Finkle Brook, which is located at the bottom of the hill on the upper photograph.

Photographs of roadside swale of the Edgecomb Pond Road reconstruction project, Town of Bolton. Erosion and sedimentation is evident from the project, which is located in the headwaters of the Finkle Brook watershed. Similar projects have been undertaken in the Indian Brook watershed (New Vermont Road) in the Town of Bolton contributing to the watershed sedimentation problems. Such activities should be prevented from further contribution to the sedimentation of Lake George.

Dear Marc,

Thank you for the opportunity to review the Draft SGEIS.

My comments are as follows:

Reference 1.

1. *Storm water management implementation measures for the reduction of sedimentation near the sources. The need for stream corridor management regulation. The need to adequately mitigate watershed erosion and sedimentation and the potential for future delta reduction.*

These topics were addressed in the GEIS, as a function of the sediment management aspect of the analysis, in the absence of any proposed project. However, the three projects under this SEQR review are for the removal of delta sediments in the lake. Dredging is not a watershed management tool - rather it is a delta removal actions do not cause, or have potential to cause erosion, siltation and sedimentation in the watershed, and therefore is not required to be considered as a requisite for dredging. However, upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake **must continue,** to minimize contribution to the delta areas and maximize long-term benefits of the dredging."

Comment 1. The "Initiatives to reduce sediment and nutrient transport, must continue, to minimize contribution to the delta", have not been quantified or qualified. What are these initiatives? Are they effective? Are they enforced? Abundant information is available to disqualify these initiatives as means to minimize contribution to delta areas, for example;

a) Currently there is inadequate, outdated and minimal implementation of stormwater management methods and regulations,

b) In-stream catchment basins that have been installed are not supported by NYS DEC policy have not been proven to be effective,

c) Stream corridor regulations have not been promulgated.

Most importantly, without the deltas there to diminish the

impacts of stream transport and capture nutrients and sediment, future stream release of these pollutants will accelerate lake eutrophication and create new sites for colonization by invasive species.

Reference 2.

2. Development of TMDLs for Lake George as required under the Clean Water Act. Sediment is the only pollutant for which Lake George and its tributaries are 303(d) listed. For all intents and purposes, the water quality standard for sediment in the Lake George watershed is none in any amounts from manmade sources. Also, ECL 17-1709 prohibits point source discharges in the basin. Given these factors, a TMDL would be moot because the allocated load of sediment from controllable point and nonpoint sources would both be zero. EPA Region 2 has verbally agreed with this philosophy.

Comment 2: This philosophy of not preparing a TMDL also dismisses an important tool for lake management. We know that sediment is getting into the lake from improper development. We know it should be zero. We should develop sediment and nutrient loading models, identify of sources of sediment and nutrient loads and rates, and determine the speciation of phosphorus sources in each subwatershed. A TMDL would provide some of this information. This philosophical loophole creates a situation where Lake George is denied the restorative and protective measures available to other waters.

I propose that prior to any dredging we prepare:

a) **Sediment and nutrient loading models for all subwatersheds, and**

b) **Develop an ANTIDEGRATION Plan for Lake George (see NYS DEC TOG Sept. 9, 1985 and EPA ANTIDEGREDATION Policy).**

Reference 3.

The LGA vigorously supports development and implementation of comprehensive land

use and development plans for the Lake George basin, as well as diligent and strict oversight and enforcement of stormwater management regulations within the basin. Comprehensive stormwater management regulations are now in place for Lake George.

Comment 3.

Regrettably, stormwater regulations are outdated, very often unenforced and non-comprehensive in the basin. A review of enforcement and compliance of stormwater regulations as to its diligence and strict oversight would be informative to all parties involved. A lot can be learned here. This would a valuable first tier step. Ten years have passed since the FGEIS was released, during which time efforts could and should have been made towards diligent and strict enforcement. Every effort should and could have been made to promulgate stream corridor regulations. Diligent and strict oversight has not been initiated or achieved. How can we possibly more forward dredging streams like Finkle brook over and over again with any gains in land use controls. The Department of State has expressed concerns with the lack of land use controls and should be consulted in this regard.

I would propose that prior to any dredging we:

a) **Require any subwatershed requesting dredging to institute a 95% implementation strategy for stormwater management,**

b) **Implement and validate enforcement and compliance of a stream corridor management plan mandated by the Lake George Park Commission enabling legislation (1987). A review of each towns enforcement and compliance actions would be useful.**

Reference 4.

3. *Generic potential environmental impacts of dredging.*
The merits and potential environmental impact of dredging has been addressed in the GEIS. The primary scope of this review will be the comparative analysis of the different methods of dredging and the various potential environmental impacts that may result from the different methods. Moreover, there were a number of substantive comments that were included in the response letters to the draft scope. These comments will be included in the Draft Supplemental EIS and responded to where appropriate.

Comment 4.

NYS DEC staff describes the dredging process "as very messy at best, we can not mitigate the impacts completely without sealing off the system". No where is the significance of the dredging process dealt with adequately and its impact on drinking water.

Reference 5.

POTENTIAL SIGNIFICANT ADVERSE IMPACTS, REQUIRED INFORMATION, INITIAL MITIGATION MEASURES AND REASONABLE ALTERNATIVES
2. Creation of an unnatural and fertile lake bed resulting from the dredging activities and subsequent prolonged containment of the work area, adding to the increased potential for colonization by non-native aquatic nuisance species.
7. Provide post-remediation substrate that is less advantageous for colonization by non-native aquatic species
9. Continue upland erosion and sedimentation control initiatives to reduce the sediment and nutrient transport into the lake.

Comment 5.

Continued deposition of enriched sediments from unmanaged land will in fact provide an environment that will enhance and select for invasives. We are putting the cart before the horse by not initiating stream and land use protection measures first. We can hardly afford to continue to create environments that select for invasives Collins, et al. (1987); Collins (1990).

Reference 6.

Reasonable Alternatives To Be Considered
1. Comparison/evaluation/recommendation of possible dredging methods, including operation of equipment directly on the deltas.
2. Sediment and nutrient source control initiatives, including clarification of the FGEIS' alleged pre-requisite to the removal of the deltas.
3. No-action alternative.

Comment 6.

I am not sure what an alleged pre-requisite is, but there can be no more cost effective, responsible and ecosystem mitigation action that to delay dredging until such time controls are in place legislatively, implemented on a lake-wide on a consistent scale and monitored for town and state actions. The likely colonization of dredging sites by invasives is significant and observed elsewhere when streams continue to release nutrient rich sediment. Millions have been spent to date on invasive species controls in Lake George. Can we afford the costs associated with removing new colonies while we are fighting current infestation?

Would it be possible for people to drive around these navigational problems like they drive around islands, and other boats. The cursory attention given to this issue is unfortunate and the no-action alternative should be considered.

In other areas of region 5, (Saratoga) dredging of ponds resulting from unmanaged lands upstream is restricted until sources are abated.

Comment 7.

I have discussed the matter of AA SPECIAL and best uses with individuals at DEC who have made it clear that all uses must be protected, protecting one use should not impair another. Undoubtedly, dredging will impair drinking water, certainly the most important of all best uses and the turbidity standard will be violated. The implications are far-reaching. Sediment core analyses performed to date are inadequate for a generic permit according to other analyses required by DEC. Depth and distribution of contaminates in the lake vary widely and have not be characterized or analyzed (i.e. coal slags). The minimum amount of data collected is meaningless for a generic permit.

The need to dredge a delta for a second time, indicates that dredging deltas is becoming a way to do business rather a means to manage and protect Lake George for each and every use.

In summary, the DGEIS reads as a means to destroy the evidence of mismanagement and not as a means to protect one of America's greatest resources. Let the delta's do their job as a containment device for enriched sediment and protect the waters of Lake George.

Carol D. Collins, Ph.D.
Limnologist and Ecosystem Modeler