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April 29, 2010

Ms. Colleen Parker
Adirondack Park Agency
P.O. Box 99
Ray Brook, NY 12977

Re: Town of Bolton – Finkle Brook Dredging
APA Project No. P2009-243

Dear Ms. Parker:

The Lake George Waterkeeper has significant environmental and procedural concerns regarding the Finkle Brook dredging project proposed by the Town of Bolton. A project of this magnitude and scope will have short- and long-term impacts, much greater than the limited analysis of impacts to wetlands by the Adirondack Park Agency (Agency) review. Although the following technical comments may appear to discuss issues outside of the limited review scope of the Agency, each and every one of these comments address the concern of wetlands.

Our comments can be placed the following categories:

1. Compliance with Environmental Review;
2. Lake Degradation;
3. Source of Sediments;
4. Construction Specifications;
5. Sampling; and
6. Fisheries.

1. COMPLIANCE WITH ENVIRONMENTAL REVIEWS

Proposed dredging method was not analyzed under previous environmental review: The mechanical dredging method proposed varies significantly from the methods that were reviewed as part of the Final Generic Environmental Impact Statement (FGEIS)/Draft Generic Environmental Impact Statement (DGEIS). There were two conventional sediment removal methods specifically recommended for this Project and are summarized as "Mechanical sediment removal consists of 'excavation' of the sediments directly from the lake bottom using

clamshells, hydraulic excavators or similar soil excavation equipment mounted on barges"[1] and "Hydraulic sediment removal consists of pumping of the sediments directly from the lake bottom, using hydraulic dredge mounted on a barge."[2] These methods were also detailed and accepted in the *Findings Statement for Final Generic Environmental Impact Statement* adopted by the Lake George Park Commission adopted on May 25, 2004.[3] It is further stated that any inconsistencies that may exist between the actual proposed delta remedial measures and the DGEIS, the FGEIS and/or the Findings Statement will be the subject of a negative declaration of significance, a supplement to the Project DGEIS/FGEIS, or a modified Findings Statement, as appropriate, in accordance with the requirements of §617.10(d).[4]

The proposed method varies significantly from the analyzed and approved methods due to the construction of roads/work pads in Lake George and through the placement of excavated in-lake material to drive construction equipment on the lake. The use of "work pads" constructed of in-lake material varies significantly from the initial concept discussed in the FGEIS, which was of placing excavation equipment on barges, due to the significant disturbance of the lake bed, ecological impacts and contamination impacts. In addition, the placement of excavated sediments into the lake varies significantly from the initial concept discuss in the FGEIS of placing excavated sediments in rolloff boxes positioned on barges. These methods create a higher probability of negative water quality impacts through sediment resuspension, nutrient resuspension, algal growth, equipment fluid pollution and utilizing the lake for dewatering. None of these potential environmental impacts were adequately analyzed under the previous Environmental Impact Statement.

Proposed alternative fails to provide adequate alternative analysis: Minimal information has been provided by the applicant to substantiate the alternative method proposed, which varies significantly from the FGEIS, and has been limited to statements made during Agency meetings. No detailed analysis or technical information has been submitted as part of the application materials.

The applicant's agent stated hydraulic dredging is not a "viable option" due to cost, available space for dewatering and the time required to remove the material.[5] However, there is no information or analysis submitted to support these statements. Regarding space required for dewatering, there is adequate space based on a comparison to a recent hydraulic dredging project approved by the New York State Department of Environmental Conservation (NYSDEC Permit # 5-5222-00273/00001) and the Adirondack Park Agency (APA Permit 2008-284) in Orcutt Bay in the Town of Lake George. The permitted hydraulic dredging project proposed to remove a total of 1,000 CY and would utilize two 90 foot long geotextile dewatering tubes (Tencate Geotube® Model GT 500).[6] The proposed dewatering area would occupy an area of approximately 9,500 sf including surrounding sediment protection. Assuming several additional Geotubes would be required for the Finkle Brook dredging project, this work area could easily be accommodated in the area available in the Town of Bolton's Veterans Park. Regarding time required to remove material, a comparison to the previously referenced permitted project will also be used. Based on application material submitted by the Saratoga Associates (Appendix

[1] *Final Generic Environmental Impact Statement, The Lake George Association, Inc. – Lake George Deltas Sediment Management/Shoreline Restoration Project.* Prepared by Earth Tech, Inc., December 2003. Page 16.
[2] Ibid. Page 16.
[3] *Findings Statement for Final Generic Environmental Impact Statement for The Lake George Association, Inc.'s Lake George Deltas Sediment Management/Shoreline Restoration Project.* Adopted by the Lake George Park Commission, May 25, 2004. Page 2.
[4] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page ii.
[5] Meeting minutes from Finkle Brook Delta Management, January 27, 2010. Prepared by Warren County Soil & Water Conservation District. Page 4.
[6] Adirondack Park Agency Permit 2008-284 issued October 6, 2009. Page 2.

A), hydraulic dredging would occur at a rate of 500 gallons per minute (water and sediment slurry) for a period of 4 to 5 hours per day. At this rate, it was estimated the removal of 1,000 CY would take 5 days with a dewatering time of 30 days. It should be noted these dewatering times are based on materials that contained a higher percentage of silts and fines and the dredge material from the Finkle Brook delta is a coarser material with an anticipated lower dewatering time. Costs would be limited with hydraulic dredging due to a limited length of pumping and elevation difference. Since the distance the dredged sandy material would be pumped is less than 3,500 feet, additional pumping should not be required. Additional pumping for the hydraulic dredging should not be required since the elevation difference between the lake bottom and the dewatering area is less than 15-20 feet.[7]

The applicant's agent stated working from a barge would not work since the water depth is not available for a barge and the turbidity curtain would be in the way.[8] This problem was addressed in the *Conceptual Delta Management Plan* through the construction of temporary work pads that would be constructed to allow for onshore transfer of loaded rolloff boxes. The approximate minimum surface area for the pads was 30 feet by 20 feet, sufficient to provide a working platform for a track-mounted crane.[9]

Based on the applicant's statements, project documents, previously permitted projects and reference materials, it is apparent that the justification for the proposed method has not been adequately researched and additional analysis should be provided

Proposed method has greatest environmental impact: The proposed method appears to have been chosen based on cost factors despite the fact it has the greatest environmental impacts. It does not appear there have been any environmental considerations or analysis during the determination process of recommended methods. Unfortunately, this has resulted in a method that will have the greatest environmental impact to the lake.

Mechanical dredges (which include clamshell, dragline, excavator and backhoe types) have high sediment resuspension characteristics. Factors governing resuspension are impact, penetration and removal of bucket from sediment, withdrawal from the water column and sloshing out of the bucket. It is noted that watertight clamshell buckets can reduce the amount of sediment resuspension as much as 30-70% over conventional buckets.[10]

Hydraulic dredges (methods including cutterheads and suction) have low to moderate sediment resuspension characteristics that reduces environmental impacts. There are methods, Eddy Pump, that remove high concentrations of solids (70%) while creating very low turbidity.[11] Please refer to Appendix B for information on this method from Tornado Motion Technologies on the comparison of dredging methods.

With the exceptional water quality classification of Lake George, it would seem there would be the need to maximize the protection of this resource that has been designated a Critical Environmental Area. Therefore, the management of this resource should require that all practical measures are taken to minimize any short term degradation associated with dredging projects and the resuspension of sediments and nutrients.

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[7] *Lake Restoration Study, Nagawicka Lake, City of Delafield, Wisconsin.* Prepared by Vierbicher Associates, Inc. August 2004. Page 6.
[8] Meeting minutes from Finkle Brook Delta Management, January 27, 2010. Prepared by Warren County Soil & Water Conservation District. Page 4.
[9] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page 22.
[10] *Final Report Impacts of Marina Dredging on Lake Tahoe Water Quality.* Prepared by Tahoe Research Group, University of California-Davis. October 1996. Page 8-3.
[11] Ibid. Page 8-4 – 8-8.

2. LAKE DEGRADATION

Project fails to address re-suspension of sediments and nutrients: All dredging activities create a level of suspended sediments and the adhesion of nutrients to sediments is well documented. This impact was raised by the Lake George Waterkeeper at the initial Finkle Brook Delta Management project meeting held on July 7, 2009 and Dr. Chuck Boylen added comment. Unfortunately, the meeting minutes failed to reflect this issue and to date, the discussion on the potential environmental impacts of the project has failed to mention this issue.

Sediments will naturally contain nutrients from organic matter produced from the accumulation of phytoplankton and aquatic plants material as well as from input from streams, such as Finkle Brook, and man's activities. From a Lake Tahoe study, the loading of N (Nitrogen) and P (Phosphorous) to the lake from the release of dredge area water was estimated and found to range from less than single kg levels to tens of kg levels. These loads are comparable to other inputs produced by man's activities. For instance, the resuspension of 5 kg of TN (Total Nitrogen) and TP (Total Phosphorous) by dredging is roughly equivalent to the annual TN and TP load in urban runoff from 5 acres of medium developed residential area.[12] Studies have shown silt + clay can higher concentrations of TP (Total Phosphorous) than other size particles but there was little difference between the TN (Total Nitrogen) content of medium-coarse sand and fine to very fine sand with somewhat higher levels in silt + clay.[13] In addition, newly deposited sediments, which have not been subject to previous depletion in the lake (terrestrial-derived sediments recently transported to the lake), may potentially be more enriched in bioavailable forms of nitrogen and phosphorous.[14]

This level of increased nutrients resulting from dredging was documented by the Lake George Waterkeeper from a hydraulic dredging project sponsored by the Lake George Watershed Conference on Gull Bay in the Town of Putnam in the summer 2008. Please refer to the table documenting nutrient levels in Appendix C.

Project fails to address algal growth connected to nutrient re-suspension: The re-suspension of nutrients creates a situation conducive to increased phytoplankton and algal growth. This has been failed to be addressed or mitigated by any information or analysis provided in the application.

Studies have been performed in Lake Tahoe regarding the stimulated algal growth from nutrient resuspension. It was shown that algae has been sensitive to additions of very small amounts of nutrients (on the order of tenths of µ/l of DIN (Dissolved Inorganic Nitrogen) and BAP (Biological Available Phosphorous)) when added in concert with the dredged sediment. The small amounts of DIN and BAP released in concert with other nutrients during dredging, can potentially lead to short-term, localized areas of increased phytoplankton growth in the lake. Such increased phytoplankton growth was observed primarily in protected areas in which the dredge-impacted waters were prevented from dispersing (within silt curtains). Outside silt curtains or in the open lake, phytoplankton and nutrients may disperse so rapidly, that localized increased growth nutrients in the lake, all limiting nutrients will eventually be used to fuel algal growth. The fact that dredging may possibly release other cofactors in addition to N and P, which may enhance algal growth, underscores the importance of keeping sediment disturbance and sediment re-suspension to a minimum.[15]

[12] Ibid. Page xx.
[13] Ibid. Page 3-17.
[14] Ibid. Page 3-30.
[15] Ibid. Page 6-11.

This information was supported by observations of the Gull Bay dredging project by the Lake George Waterkeeper in the area outside of the turbidity curtain in the summer 2008. An area extending 200-300 feet outside the turbidity curtain exhibited significant algal growth over aquatic plants. The dredging site was revisited in the summer 2009 and algae growth was observed. Please refer to Appendix D for photos of the algae growth in Gull Bay during and after the hydraulic dredging project.

Dredging will expose sediments for continued nutrient release: After sediments have been removed, deeper, nutrient rich, anaerobic sediments become exposed for resuspension and release resulting in significant algae growth. In Lake Liberty, Washington, alum was used to treat the dredged area to seal freshly exposed sediments and assisted in breaking the nutrient cycle.[16] This was supported by the observations of the Lake George Waterkeeper in Gull Bay after the summer 2008 dredging.

Application has failed to address increased erosion from increased wave energy: The dredging will increase the depth of the water in shoreline areas creating areas susceptible to erosion from wave action. Currently, waves are prevented from reaching the shoreline due to limited depth of water and break at a point far from the shoreline. The *Conceptual Delta Management* Plan recommended shoreline areas that may be susceptible to increased erosion resulting from increased wave energy that may result following removal of delta sediments will be specifically identified and mapped.[17] This recommendation of the *Conceptual Management Plan* has not been discussed in any of the submitted materials. There is no shoreline buffer along the entire area to be dredged and disturbed during construction. If the permit is issued, the restoration of a shoreline buffer should be required to reduce the potential of erosion and reduce further sediment input to the lake.

3. SOURCE OF SEDIMENTS

In-stream sediment basins are not effective management devices: In the past decade, there has been an increase in the use of in-stream sediment basins as watershed management tools to reduce sediment to Lake George. One such device was installed on Finkle Brook and is referred to as Artist Falls Reservoir, constructed in 1999 by the Town of Bolton with the Warren County Soil & Water Conservation District. This basin has been cleaned five times with more than 1,600 CY of sediment removed and is stated to been an effective means of controlling the growth of the Finkle Brook delta.[18]

However, the Lake George Waterkeeper has monitored and collected data on the Artist Falls and Upper Hague Brook in-stream sediment basins over the summers of 2008-2009. We have found the devices are not effective watershed management tools as claimed. The following is a summary of the findings for Artist Falls:

- In most cases over the past two years, Total Suspended Solids (TSS), the amount of suspended material in the water column, has increased downstream of the sediment basins. It is believed the TSS levels have increased due to the formation of a substantial plunge pool at the outfall of the basin that appears to be associated with major gradient shifts in the stream. Please refer to Appendix E.

[16] Funk, William H., Gibbons, H, and Bailey, G. *Preliminary Assessment of Multiphase Restoration Efforts at Liberty Lake, Washington.* Environmental Protection Agency. December 1882. Page 5.
[17] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page 14.
[18] *Additional Information Request Project No. 2009-243.* Prepared by Warren County Soil & Water Conservation District. December 2009.

- Total Phosphorous (TP) increased downstream of the in-stream sediment basin and ranged up to 7 mg/l. Please refer to Appendix F.
- There was no noticeable difference in Total Nitrogen (TN) upstream and downstream of the in-stream sediment basin but there were more increased sampling results than decreased results. Please refer to Appendix G.
- The water temperature increased in all sample sites throughout the day, but appeared to be higher in sample sites downstream of sediment basins. The greatest difference was on days with higher ambient air temperature and lower flows. Please refer to Appendix H for typical results.
- There were blooms of green filamentous algae upstream of the sediment basin during the last two sample events of 2009 that may have influenced the readings.

These results appear to suggest that the in-stream sediment basins are likely trapping bedload and may not actually reduce the amount of sediment entering Lake George. In fact, the removal of the bedload from the stream may result in downcutting and other morphological changes to the stream, which has the effect of increasing total sediment loads.

Furthermore, there is no data or documentation regarding the growth of the Finkle Brook delta since the construction of the in-stream sediment basin. Based on this information, it cannot be determined if the in-stream sediment basin has protected Lake George.

The Town of Bolton Planning and Zoning Decisions Fail to Protect Water Quality: The applicant's agent states the Town of Bolton has strong Planning and Zoning Boards that will help reduce the rate of return of delta based on the strength of their decisions. The experiences of the Lake George Waterkeeper are contrary to this statement and offer the following as evidence:

- Since 2003, the Lake George Waterkeeper has brought two lawsuits against the Town of Bolton Planning Board for failure to properly administer their Stormwater Management Ordinance. On both occasions, settlements were reached, which mandated improved stormwater management.
- In the past six months, two subdivisions have been approved that have roads requiring significant clearing with widths of greater than 150 feet on slopes that exceed 30%, one without an approved stormwater management plan.
- From 2007-2009, the Town of Bolton Zoning Board of Appeals reviewed 202 variance applications with the following results: 186 were approved (92%); 146 were approved without any modification or conditions (72%); 35 were approved with conditions (17%); 5 were approved with plan modifications (2.5%); 2 were denied (>1%) and 3 variance were overturned by the APA (1.5%). These numbers indicate that most variance applications are approved as submitted without discussions of alternatives or reductions of the variances and with minimal recommendations for water quality improvements. In addition, the APA has reversed more variance approvals than the Town of Bolton has denied.
- The Town of Bolton Zoning Administrator has refused to respond to five requests for determination over an 18 month period regarding the failure to properly administer the Zoning Code regarding clearing limits.

It is clear through this pattern of decisions the Town of Bolton does not have Planning and Zoning Boards that make decisions to protect water quality and reduce stormwater and sediment impacts to Lake George.

The applicant has publicly resolved to oppose stream corridor protection measures: In another example of the Town of Bolton's failure to implement water protection measures, the Bolton Town Board unanimously opposed stream corridor regulations proposed the Lake George Park Commission. The regulations proposed by the Lake George Park Commission

would provide a 100-foot protective area along designated streams with the Lake George watershed and would be the most effective measure for the removal of sediment and protection of water quality.

Application material incorrectly states New York State Department of Transportation (NYSDOT) Project will decrease stormwater and sediment: The application states the current project on NYS Route 9N will reduce stormwater runoff and sediment that is transported to the Lake and streams in the vicinity.[19] Unfortunately, this statement is not accurate. The NYSDOT project proposes the installation of some catch basins that will capture approximately a wheel barrel full of sediment, very minimal compared to the amount that is transported off the area tributary to Finkle Brook during storm events. In addition, the project proposes "old school" curb and gutter drainage practices that quickly move stormwater off surfaces and discharge to receiving waters without any reduction in quantity or improvements in quality. During the design concept phase, suggestions such as installing bottomless catch basins and installing pervious concrete sidewalk with stone subbase storage areas were offered by the Lake George Waterkeeper, but not implemented into the design. In fact, the project has resulted in impacts to Lake George through poor erosion and sedimentation practices that resulted in the contractor receiving a violation from the NYSDEC for the discharge of sediment to the lake.

Applicant makes unsubstantiated statement regarding sediment source: During a meeting with Agency staff regarding the application, it was stated that the applicant has made claims the sediment of the Finkle Brook delta is primarily the result of a single event – the washout of the Town of Bolton Landfill in the 1990s. This claim is unsubstantiated and there is no evidence to support this. Upon conversation with Tom Jarrett, engineer involved with the landfill capping project, he states the Finkle Brook delta is not the result of a single event. He states there was minimal impact to Lake George from the washout and that the washout was not into a stream that flowed directly to the lake. He stated the majority of the sediment was captured in marshy, upland wetlands adjacent to the landfill.[20]

4. CONSTRUCTION SPECIFICATIONS AND DETAILS

Additional analysis should be provided regarding construction equipment and sequencing for road construction in the lake: The example offered to justify the proposed road to be constructed in Lake George was the recent dredging of Foster Brook. Upon review of the magnitude of that project scope, it does appear this would not provide a valid comparison. The road constructed for Foster Brook project did not have level of traffic trips or vehicular weights that are anticipated for the Finkle Brook project. The applicant should provide a comparison between the two projects to determine the increased magnitude of the Finkle Brook project. This information should be provided to determine the stability of the road. For example, each road will be used to excavate approximately 2,000 CY of material. Although truck sizes have not been specified, it would appear that approximately 130 trips would be required, assuming 15 CY loads. Additionally, there will be turning maneuvers proposed for the Finkle Brook project that will place significant stress on the surface of the road. This stress could result in failure of the road creating a catastrophic situation. The Lake George Waterkeeper requests additional consideration for alternative methods instead of constructing roads into Lake George placing heavy construction equipment over the waters of Lake George and the significant potential of contamination to the lake, a drinking water source to many.

Discharge from dewatering piles should be prevented from entering Lake George: The dewatering piles are proposed on a sandy beach 40 feet from the shoreline of Lake George. To minimize the potential impacts associated with dewatering and input of soluble nutrients into the

[19] *Additional Information Request Project No. 2009-243.* Prepared by Warren County Soil & Water Conservation District. December 2009.
[20] Personal telephone conversation with Tom Jarrett, PE on March 23, 2010.

lake, dewatering sediments on porous beach adjacent to the open lake is not recommended. Ideally, a dewatering area will provide for complete capture and removal of the spoils water prior to reaching the lake. In Lake Tahoe, sampling done on a dewatering operation done on a sandy beach adjacent to the lake indicated high nutrient levels in shallow lake water.[21] For maximum water quality protection, discharge from spoils dewatering should be prevented from entering the lake.

In addition, the applicant should detail the need for the dewatering piles if dredged materials are to be placed in sealed trucks for transport from the project site.

Plan should determine conditions that will prohibit dredging under adverse conditions: Finkle Brook dredging project is located on a position on the lake that can be exposed to windy conditions, especially north winds, and wave chop as well as in high boat traffic area. Conditions that will result in the high probability for turbidity release should be determined and put into the operations plan to prevent negative water quality impacts. According to a Lake Tahoe study, it is likely under the roughest lake conditions even strong commercially constructed turbidity curtains may be subject to failure. For example, failure of a turbidity curtain during strong wind and wave activity occurred on one project as a result of problems with anchorage to the breakwater. It would be useful to consult with the manufacturer of the turbidity curtain to be sure of the strongest anchorage possible for the turbidity curtain for use in rough lake conditions.[22] Although the project is partially located within a "5 mph No Wake Zone," boating traffic will create wakes due to the "hockey stops," sudden decelerations, as they approach the zone. This would be further justification for strong turbidity curtains and design recommendations from the manufacturer.

Additional information on the turbidity curtain specifications and design should be provided: The detail provided in the *Additional Information Request Project No. 2009-243* dated December 2009 lacks specificity and details to guarantee water quality protection.

- There are different grades and types of curtains depending on site conditions. This should be specified on the plans.
- In situations where there is significant wind or wave action, the weighted end of the curtain should not extend to the bottom of the water body. Wind/wave action on the floatation system can cause movement of the lower end of the curtain, causing it to rub against the bottom, stirring up additional sediment.[23] The applicant comment on this design standard and whether it should be implemented.
- What is the recommended height of the turbidity curtain and will there be flexibility with the curtain in anticipation of adverse conditions?

The turbidity curtain will be the most important measure to protect Lake George from the negative impacts of re-suspended solids and nutrients of these activities and the specifications of the turbidity curtain should be detailed.

Project fails to adequately detail "restoration to pre-project conditions:" The *Finkle Brook Delta Dredging – Phased Construction Plan* states any disturbance to the shoreline will be restored to pre-project conditions following the completion of this project. There will be two significant impacts to the shoreline that are filed to be addressed: soil compaction and shoreline erosion due to increased wave action.

[21] *Final Report Impacts of Marina Dredging on Lake Tahoe Water Quality.* Prepared by Tahoe Research Group, University of California-Davis. October 1996. Pages 5-13 - 5-14.
[22] Ibid. Page 4-6 – 4-8.
[23] *Statewide Urban Design and Specifications Design Manual – Iowa.* Page 7E-24-2.

- **Soil Compaction:** Soils become very compacted and their structure altered by the activity of heavy construction equipment. Hazards associated with urban development include soil compaction by heavy equipment which can reduce the water intake of soils as much as 90 percent of the original rate and altering the groundwater regime may adversely affect the drainage systems, slope stability, survival of existing vegetation and establishment of new plants.[24] The soils along the shoreline will become very compact from the hundreds of heavy equipment trips, removing all porosity and will probably completely restrict the groundwater flow to the lake. Compacted soils will also have less oxygen, an impoverished soil microbe community, and higher temperatures and the vegetation will be less healthy, require increased fertilizers and other inputs.[25] The work plan must include a detailed soil compaction detection plan and a plan to alleviate post-construction soil compaction.
- **Shoreline Buffering:** The increased water depth along the shoreline will allow wave action to hit the shoreline with greater energy creating a higher potential for shoreline erosion. The potential for shoreline erosion will further increase due to the lack of substantial vegetative planting and the compaction of the soil. The work plan must include a detailed shoreline buffering and restoration plan that should include a four tiered canopy consisting of trees, shrubs, perennial plants and groundcover. It should be noted that the Agency under APA No. 2008-284 required complete shoreline buffering for a dredging project on Orcutt Bay in the Town of Lake George. The Agency should take the opportunity to make this a standard requirement on dredging applications to obtain some environmental benefits associated with the projects.

5. SAMPLING

Sampling of delta in 2000 indicated moderately contaminated levels of copper and lead:
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.[26]

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.

[24] *New York Guidelines for Urban Erosion and Sediment Control.* Page 1.1.
[25] *Urban Soils: A new focus in watershed protection.* State of North Carolina Department of Environmental and Natural Resources. Vol. 7 No. 3. July 2000.
[26] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page 8.

Pre-dredging analysis sampling should also be required to test for nutrients: Testing for nutrient levels should be required for the pre-dredging to determine the potential for nutrient re-suspension and the recommended method for proposed dredging to minimize environmental impact to the lake. Upon discussion with Jason Ramos, Senior Planner with the Tahoe Regional Planning Agency, nutrient testing is required for all dredging permit applications to determine the best environmental alternative and is necessary to make the environmental findings for the application.[27]

6. FISHERIES

Dredging impacts on landlocked salmon should be determined: The Finkle Brook mouth is known as a spawning area for landlocked salmon. This is evident from a video from November 2009 taken in the vicinity of the docks of the Darrin Fresh Water Institute. Please refer to Appendix I for copies of the videos. The applicant has failed to provide any documentation from the NYSDEC regarding the potential impacts to fisheries. The *Conceptual Delta Management Plan* stated a determination will be made regarding whether landlocked salmon utilize the tributary brook deltas for spawning. Available documentation and data will be reviewed; if insufficient data exists for a conclusive determination, appropriate in-water investigation(s) will be conducted during the fall spawning season.[28] As evident by the enclosed videos, the Finkle Brook delta is used by the landlocked salmon for spawning. The proposal to permit dredging from just after Labor Day until the end of December will significantly impact the landlocked salmon spawning habitat and should not be permitted.

As evident by the magnitude of the comments provided, there are significant negative impacts associated with all aspects and components of this project to the exceptional water quality of Lake George. Most importantly is the need for compliance with the SEQRA and the previous Environmental Impact Statement. The proposal for the construction of roads into the pristine waters of Lake George is unacceptable and shows disrespect for one of the most treasured resources of New York State. When the proposed method was discussed with the Tahoe Regional Planning Authority, it was stated that this method would not be entertained and would never be authorized. It is hard to believe that the agencies responsible for protecting the resources and water quality of New York State's highest quality water would permit it.

The Lake George Waterkeeper requests the application be deemed insufficient and be tabled to address the significant deficiencies, especially the environmental analysis, and adequately address the multiple significant environmental impacts associated with the actions. Additionally, a scoping meeting should be held by reviewing agencies with interested parties to discuss the concerns which need to be adequately addressed for such a potentially damaging project to occur.

The Lake George Waterkeeper Program looks forward to working with the Adirondack Park Agency to defend the natural resources of Lake George and its watershed. Thank you for your consideration.

Sincerely,

Christopher Navitsky, P.E.
Lake George Waterkeeper

[27] Personal telephone conversation. April 29, 2010.
[28] *Conceptual Delta Management Plan Finkle Brook & Indian Brook Deltas Town of Bolton, New York.* Prepared by Earth Tech, Inc. June 2001. Page 17.

cc: Terry Martino, Executive Director - Adirondack Park Agency
John Banta, General Counsel – Adirondack Park Agency
Curt Stiles – Adirondack Park Agency
Kevin Bruce – United Stated Army Corps of Engineers
Betsy Lowe – New York State Department of Environmental Conservation
Marc Migliore – New York State Department of Environmental Conservation
Michael White, Executive Director – Lake George Park Commission
John Connell – United Stated Army Corps of Engineers
Jim Tierney – New York State Department of Environmental Conservation
Hon. Ronald Conover – Town of Bolton Supervisor