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Assessment of Public Comment (APC)

Lake George Park Commission Proposed Stream Corridor Regulations
(6NYCRR Sections 646-5)

Public comment period: October 28, 2020 through January 18, 2021

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This document is divided into two parts for clarity:

1. **Written comments submitted by the public**
2. **The full transcript of the Stream Corridor Public Hearing on 1/12/2021**

The public comment period for the Lake George Park Commission (hereafter LGPC) stream corridor management regulations was open from October 28, 2020 through January 18, 2021. This document includes all comments and questions submitted to date, responses to those questions, and the official transcript of the 1/12/2021 public hearing on the proposed stormwater regulations.

Part 1: Written comments submitted by the public

The full text of formally submitted written comments is included herein. The LGPC worked to address the substantive points in the submitted narrative (responses are in red font). Each comment is numbered for ease of reference.

Formal comments were submitted by:

1. The Lake Stewardship Group of Cleverdale
2. Empire State Forest Products Association
3. James Sutherland
4. Lorraine Ruffing
5. Mary Helen and Dan O'Keeffe

6. The Stroud Center
7. American Rivers
8. The Lake George Waterkeeper
9. Carol Collins
10. Lorraine Carbognin
11. Sarah Brown
12. Tim Bechard

LGPC Responses

Most of the comments submitted formally to the LGPC (included below) center around two key assertions, as follows:

1. The currently proposed 35' buffer width is too narrow to be effective
2. Using the DEC's regulatory stream dataset does not capture all of the streams within the Lake George Basin and the LGPC should create a new, more comprehensive stream dataset

As such, responses to these two topics are addressed below. Other comments not falling into these categories will be answered within the comments themselves.

General Comment #1: 35' stream buffers are inadequate to protect Lake George and should be increased in width.

#1 LGPC Response: *The Lake George Park Commission is a NYS regulatory agency charged with the protection of Lake George and its many users, to the best of its ability and with the resources available. To better safeguard Lake George's excellent water quality, the LGPC is currently considering the implementation of protective vegetative buffers on private properties on regulated streams in the Lake George Park. These regulations would significantly restrict vegetation cutting and development within these corridors.*

With the enactment of any regulations which affect the public's use of their property, a balance must be sought between the public gain of such regulations and subsequent impact to property owners. This review is inherent in the SEQRA and SAPA processes for all NYS regulatory initiatives.

The LGPC has experience with researching and working to implement stream corridor regulations in an earlier initiative. Between 2007 and 2010, the LGPC conducted a process to implement stream corridor regulations of 100' on both sides of each regulated stream. This followed an extensive process that included public information sessions and public hearings. The record of that regulatory initiative shows extensive public opposition to the enactment of those proposed regulations, primarily because of the impact that these restrictions would have on the use and enjoyment of the affected properties. This opposition also extended to all nine municipalities surrounding Lake George, who uniformly opposed the restrictions as being excessive and a regulatory over-reach. The resulting outcome was that the LGPC did not enact those regulations, instead choosing to table that discussion for a future time.

At the current time, the LGPC is once again considering stream buffer regulations within the Lake George Park. In doing so, the LGPC is cognizant of the requisite balance between lake protection and property rights. The agency has looked very closely at the established science regarding the topic, reviewing dozens of studies from across the US and Northeast. Studies primarily show that the wider the stream buffer, the better the overall protection of that stream and receiving waterbody. Importantly however, this research also shows that the relationship between pollutant removal and buffer width is not linear. Rather, what is found in the literature is a diminishing return curve in the relationship between buffer width and effectiveness of filtering pollutants. Specifically, there is a great benefit within the first 15-30 feet of stream buffer, followed by a 'flattening of the curve' and diminished pollutant removal effectiveness thereafter. Analysis of 80 studies from Liu et al. 2008 predicts 10-12m buffers with 5-15% slopes have a sediment removal efficiency of 84-98.3%. A study by Zhang et al. 2010 reports similar findings as well as nutrient and pesticide removal efficiencies on par with sediment removal for 10m buffers with moderate slopes. The LGPC outlined and highlighted several of the studies that it utilized to make its determination on recommended regulatory buffer width of 35 feet during the January 12 public hearing. These studies are highlighted on the LGPC website and several were noted in the public hearing presentation.

It is also noted that the Lake George Park currently maintains some of the strictest stormwater management regulations in the nation for land disturbances and development. This inherently reduces the volume and pollutants of any stormwater runoff reaching the buffer zone, thus only increasing the efficacy of the buffer zone. This is a key point in the discussion. Many of the studies regarding buffer effectiveness were conducted in areas including agriculture, which has significantly higher levels of nutrient runoff associated with it. The vast majority of the Lake George watershed is in a forested condition, with the resultant buffers being primarily forested as well. The combination of inherently cleaner stormwater runoff going into forested buffers translates into better removal efficiencies and lesser pollutants reaching streams.

Lastly, the 35 foot buffer for vegetative cutting restrictions along regulated streams reflects similar restrictions to the 35 foot vegetative cutting restrictions on the shoreline of Lake George as set by the Adirondack Park Agency. Early discussions noted that the benefits of existing shoreline cutting restrictions offered not only viewshed protection, but water quality protection as well. There is logic in both sets of restrictions being uniform from both resource protection and public education perspectives.

As noted in the public hearing presentation, and for clarity of the public, only two of the nine municipalities in the Lake George Park (Queensbury and Bolton) currently administer stream corridor cutting restrictions and development limitations within those corridors. It has been falsely suggested that APA vegetative cutting restrictions are applicable and administered to all NYS DEC regulated streams in the Adirondack portion of the Lake George Park. This is not accurate.

All of these considerations were factored into the currently proposed 35 foot stream buffer, and the LGPC believes that this proposal will greatly enhance protections of streams around Lake George, and the lake itself. This proposal also reduces the regulatory burden on landowners as compared to the previously sought 100 foot stream buffer initiative. This balance is not only supported by the LGPC, but by the municipalities surrounding Lake George, all of which were consulted during the development of these regulations.

General Comment # 2: Using the DEC's regulatory stream dataset does not capture all of the streams within the Lake George Basin and the Commission should create a new, more comprehensive stream dataset.

#2 LGPC Response: *The question of what constitutes a stream was central to the early discussions in this regulatory initiative and in the earlier regulatory effort in 2007. In the 2007 effort, the LGPC developed a stream dataset that included more segments of streams than what is identified in by the NYS Department of*

Environmental Conservation. The DEC is the designated water quality protection agency in New York State, including its NYS ECL Article 15 Protection of Waters regulations which define streams through both narrative and mapping. The discrepancies between the LGPC's comprehensive 2007 stream dataset and the DEC's established dataset caused significant public concern and opposition during the 2007 effort. Landowners were concerned that there would be two sets of standards, one for 'DEC Streams' and one for 'LGPC Streams', leading to confusion and compliance issues among the regulated public.

To eliminate this concern, the LGPC and DEC agreed that this regulatory initiative will utilize the established NYS DEC dataset for establishing what constitutes a regulated stream. The DEC dataset is readily available to the public online, offering immediate knowledge regarding whether a property owner had a regulated stream on their property. The DEC does acknowledge that their dataset may not include all segments of perennially running water bodies in the Lake George Park (or elsewhere), but there exists a system for inclusion of new streams or segments within the DEC streams program.

The proposed LGPC stream corridor regulations are tied to NYS DEC regulated streams, and as such, any changes to the DEC dataset would instantly be recognized within the LGPC authority. As the DEC dataset is updated for accuracy through time, the LGPC stream corridor protections will be inclusive of those changes.

Comment 1: Lake Stewardship Group of Cleverdale:

The Lake Stewardship Group of Cleverdale applauds the Park Commission for moving forward with Stream Regs. We appreciate the time and effort that created this draft. Our Steering Committee has reviewed the draft on your website. We have a few concerns, and we appreciate this opportunity to present our thoughts on the draft Stream Regs.

1. **35 feet is not 100 feet:** We believe 35 foot stream buffers are too little, too late. The Harmful Algal Bloom of this past fall occurred in our neighborhood, along our shorelines in Harris Bay, Sandy Bay, and Warner Bay, and many of our Lake Stewardship Group of Cleverdale members feel an urgency to mitigate what causes HABs. Nutrient loading is said to be the only factor among the several conditions resulting in HABs that humans can control. 100 foot stream buffers were agreed upon by the Park Commission, approved in Albany some years ago, and never implemented by the Park Commission.

   LGPC: *(please see #1 Response)*

2. **Climate resilience:** 100 year storms are coming more than once a century. In the past decade, climate resiliency has become more accepted in planning and design. The language in the draft regs does not seem to reflect current scientific and regulatory thinking on the urgency of protecting the watershed and lake by requiring engineered culverts, structures and so on to withstand greater than a 50 year storm. We all saw what Irene did in our watershed.

   #3 LGPC Response: *The LGPC and engineering design entities currently utilize the latest hydrology datasets which incorporate the increased intensity of storms, as standard practice. The proposed set of standards related to flow capacities well-exceeds the standards in the industry, as a means to address these increased flow conditions in the Lake George basin.*

3. **A concern about unregulated temporary stream crossings**: We do not see language in the draft regs to preclude driving directly through a stream on a temporary basis. It seems to us that the logger or developer should be required to install an adequate structure/ pipe/ culvert that meets the regs; when the

project is complete, the developer or logger should be required to remove the "temporary" crossing and return that section of the stream to its original configuration.

#4 LGPC Response: *All temporary crossings of DEC regulated streams require an Article 15 Protection of Waters permit. Any activity which puts vehicles in a regulated stream without specific written permit authorization from the NYS DEC would be unlawful.*

4. **Which streams are included:** You are relying on DEC designation of streams to determine which flows are streams. In the years of working groups and stakeholder participation leading to the approved but never implemented Stream Regs, there was significant discussion about DEC maps missing some perennial streams, and about whether a few seasonal streams are substantial enough for regulation. Has there been a recent comprehensive survey of watershed streams to ensure that each and every stream is on the referenced DEC list, and a determination of whether there are significant seasonal flows worth including?

   LGPC: *(please see #1 Response)*

Thank you for the opportunity to comment.
Rosemary Pusateri, Chair, Steering Committee of the Lake Stewardship Group of Cleverdale

Comment 2: Empire State Forest Products Association:

Chairman Young, Commissioners, good afternoon, my name is John Bartow, and I am the Executive Director of the Empire State Forest Products Association (ESFPA) [1] representing over 400 member businesses, industries and landowners engaged in forest resource production and stewardship of New York's 19 million acres of forest. In total, $22.9 billion dollars in annual industry production and nearly 100,000 jobs are attributable to operations of various industries within the forest related sectors.

ESFPA welcomes the opportunity to present our comments and we have worked with the Commissioners and staff of the Lake George Park Commission over the past 2+ years in trying to reach a balance between protecting the terrestrial and aquatic ecosystem of the of Lake George while ensuring the access to timber and fiber within the privately owned forests of the Basin. Regarding the proposed Stream Corridor Management Regulations under new 6 NYCRR Subpart 646-5, we appreciate the discussion and changes that we have worked on with the Commission staff, staff at the Department of Environmental Conservation (DEC) and with ESFPA staff and our members. I believe the changes that we have agreed to present a workable framework that benefits all parties.

We have not yet seen, however, those changes in a formal published redraft of the regulations but earlier this afternoon Dave Wick did share a revised proposal reflecting the draft language shared with us in a meeting with Dave Wick and Joe Thouin on December 18, 2020. We have not completed our review of this latest draft (received at 2 p.m. today) but will address any comments in our written submission. In addition, we have a couple of other suggestions.

I would like to first provide the context of ESFPAs position on managing the forests of the Lake George Basin and what may or may not work in achieving mutually acceptable objectives then go into greater detail on the proposed regulations from the October 28th State Register.

It is a natural reaction for public agencies, environmental groups, and the public to want to "do something" even where there is little likelihood that the intervention or action will succeed. Well intentioned efforts may inadvertently amplify environmental impacts or lead to unintended consequences. "First, do no harm" – the timeless principle of medical professionals applies here.

The forests of the Lake George Basin, which cover 64% of the land in the Basin are the solar powered living filter of Lake George. The periodic harvest of wood from private forest lands is a renewable natural resource for local and regional firms and a direct contributor to economic vitality to the 12 communities in the basin and beyond. Immediately to the north International Paper in Ticonderoga, and to the south Finch Paper in Glens Falls, source tons of fiber from properties within the Basin which support over 1,200 mill-based jobs (the largest private sector employers in Warren or Essex Counties) and an equal number of supply chain jobs from foresters to loggers to haulers to equipment dealers and contribute billions of dollars to the regional economy and millions in taxes to New York State and localities. Lyme Adirondack, a forest management group based in Queensbury is the largest private landowner in the Lake George Basin and sustainably manages thousands of acres of certified forest lands.

Nothing, not grey infrastructure nor regulations nor enforcement will protect the water quality of Lake George more than the forest. 75% of the forest in the basin is Constitutionally protected by New York State as "Forest Preserve". 25% is privately owned forest. Some of the largest parcels are owned by forest products or investment firms, other smaller parcels by family woodlot owners. As a consequence, influencing the decisions of hundreds of private forest landowners in ways that respect their private property rights and financial prerogatives while protecting water quality and other ecosystem services is the central challenge of watershed protection in Lake George or any watershed.

It is important to ESFPA and our members that silviculture and forest management is not classified or defined as land development, land conversion or land disturbance. More importantly that forests and their sustainable management are a preferred landscape and land activity as compared to development. As such, we continue to desire that the LGPC regulations acknowledge the benefits of the forest landscape, silviculture, and forest management (including occasional timber harvesting) for the water quality benefits of the Basin and the economic vitality of the region.

ESFPA believes that an adaptive management philosophy that recognizes the role of reliable markets for pulp & paper mills, wood manufacturing and products together with voluntary operational methods of best management practices offers the greatest means of ensuring the long-term conservation of forests as a preferred land cover and economic resource. Paradoxically, regulations that impede quality forest management, impact property rights, or diminish financial prerogatives of forest landowners will lead to land conversion that has a much greater threat to water quality and ecosystem benefits that private forest land provides.

Turning now to detailed comments on the proposed on the proposed stream corridor regulations, we want to highlight the following language to be included in the revised regulations as we have discussed.

646-5.2 Definitions

In our December 18th meeting it was clarified by Joe Thouin and Dave Wick that existing gravel (year around) and winter (frozen) **"logging roads"** and **"log landings"** would be included as **Existing Development** under **Section 646-5.2 (2)**. We would look to see these added to (2). For your clarification Logging Road and Log Landing definitions are included below: **Logging Road** means a non-public road "used by trucks going to and from landings to transport logs, etc." Logging Road means any new or existing road that is mechanically shaped where the road will be specifically used to facilitate the management or harvesting of timber.

Log Landing means a place where trees and logs are gathered and sorted in or near the forest during a logging operation for further processing and transport to a mill or log yard facility.

Section 646-5.4 Exemptions
We appreciated the addition of silviculture to (a) (7).

646-5.5 Provisions Relating to Silviculture Activity
The conditions under which the permit requirements of Section 646-5.3 shall not apply to silviculture; specifically:
• The Notice of Intent is filed with the Commission.
• The project complies with standards under 646-5.7 Stream Corridors.
• Stream crossing has a DEC General Permit for Temporary Bridges/Culverts for Logging Activities.
• Except for stream crossings, no wood roads (we would say Log Road as noted above), skid trails or log landings within designated stream corridors. Note our suggested language under 646-5.2 for "Existing Development" related to log roads and landings.
• The number of crossings per site shall not exceed one per 1,000 feet of stream. We would like this to reflect some variance that DEC may use in the General Permit. There are instances when it may be preferrable to have another crossing closer to avoid some other impact.
• The project is in accord with NYS BMPs for water quality. You may not want to date this (i.e., 2018) as we update this periodically and this reference could become troublesome later.

The language under 646-5.5 (a) (3) referencing back to 646-5.5 seems circuitous in referencing the subsection. It also does not make it clear that to our understanding the DEC General Permit supersedes the standards in 646-5.8.22 Note that on 1/13/21 we received a revised proposed regulation that amended the reference of 646-5.5 to 646-5.8 which we believe clarifies this comment and ensures that the DEC General Permit supersedes standards in 646-5.8.

Local Delegation
It is our understanding that while the Stream Corridor Management Regulations are new under Part 646 (specifically Subpart 646-5) this does not change the delegation of jurisdiction to those municipalities within the Basin where the Commission has already delegated. In essence, the municipalities that currently administer the stormwater jurisdiction will administer the new stormwater and stream corridor jurisdictions. No NOI's need be submitted to the Commission for logging in municipalities with delegated stormwater programs. The Commission will administer stormwater and stream authorities in the remaining five towns.

Notice of Intent
The Notice of Intent as required under 646-4.6 and 646-5.5 would be modified to reflect the exemption for stream crossings and corridors management. Specifically, questions 10, 11 and 12 would be removed or modified to reflect the changes outlined.

Again, thank you for the opportunity to provide our comments today and I am happy to answer any questions you may have.

#5 LGPC Response: *The assertions above regarding delegation of authority, NOI, and existing log roads being noted as impervious are all correct.*

Comment 3: James Sutherland:

Dear Executive Director Wick and Commissioners,

This letter is written to express my deep concern for the current set of stream regulations currently proposed for the Lake George drainage basin. As a water quality scientist, I have spent the past 40+ years actively working on Lake George streams, which, I believe, gives me the necessary background for making informed decisions and for assessing these proposed regulations.

I find that the current review process is beset with problems that will lead to continued degradation of stream water quality which ultimately will affect the water quality of Lake George in a negative manner. Please bear with me as I provide some basic material for the following evaluation.

Having worked with other scientists in the Division of Water at the New York State Department of Environmental Conservation (NYS DEC) for almost 30 years, I am quite familiar with the concept and inventory of DEC-recognized streams in the basin. For those individuals less familiar with this topic, the DEC system starts at the outlet at the north end of the lake (the La Chute River) and moves clockwise around the lake, starting at number "1" and assigning a consecutive number to each major tributary until going around the entire shoreline of the lake and arriving back at the La Chute River. According to this current system which was implemented by the DEC decades ago, there are approximately 86 streams recognized within the Lake George drainage basin.

However, based upon my own experience with Lake George streams, there actually are about 140 streams that flow into Lake George from the surrounding drainage basin. I know this number to be correct based upon a year 2000 study where my colleagues and I conducted a detailed sampling of all streams, storm sewers, etc. that flow into Lake George (Sutherland et al. 2000). As a result of the year 2000 study, we learned the following details concerning the overall concept of 'streams' in the Lake George drainage basin:

(1). About two-thirds (67 percent) of the total base-flow that occurs within the Lake George drainage basin is from seven (7) major streams including East Brook, West Brook, English Brook, Finkle Brook, Indian Brook, Northwest Bay Brook and Hague Brook. Furthermore, and even more startling, was the finding from the year 2000 study that the flow from West Brook and Northwest Bay Brook comprised about 50 percent of the total annual flow.

(2). Twenty-five (25) percent of the 140+ streams (35) identified in the Lake George drainage basin are intermittent and only exhibit flow during 'wet' periods. Another 40 percent (70) exhibit low flows during dry periods of the year and, collectively, contribute about 30 percent of the total annual base-flow that enters Lake George from the drainage basin.

Furthermore, it was found during an earlier study at the south end of Lake George that about two- thirds (67 percent) of the total annual flow into Lake George occurs during the period from January through May of each year (Sutherland et al. 1983; Lake George Urban Runoff Study) as a result of the accumulation of snow-pack and the spring snow-melt which, unfortunately, has become more erratic and infrequent during recent years. It has not been my intention, herein, to overwhelm you with data and facts but to merely demonstrate with reference to actual data that Lake George is a unique drainage basin with a diversity of streams, ranging from small to large and from less important to more important.

And now, with a clear understanding of this diversity of streams within the basin, it seems totally unrealistic to assign a standard level of regulatory control to each stream channel that flows into the lake. Would it not make more sense to focus more stringent control over the group of streams that contribute most of the annual base-flow to Lake George? With regard to this concept, would it not be more appropriate to assign a 50-foot corridor of protection to streams like West Brook and Finkle Brook, where steep slopes exist between the top of the watershed and the lake surface? And, perhaps, assign a lesser corridor of protection for the smaller, less important channels that flow into the lake? I can assure you that the scientific literature from which you have selected your proposed "35-foot buffer zone" was not based upon streams and watersheds similar to the Lake George steep slopes that exist within this basin.

These steep slopes are the mechanism that drives the velocity of flow in each stream channel and which affect not only material in the channel but also material on the land adjacent to the stream channel.

As a scientist who has studied water quality and streams within the Lake George drainage basin for the past 40+ years, I can honestly state that with regard to stream corridor regulations, this is not, nor should it be, an example of "one size fits all". You, as individuals, are responsible for implementing the long term protection of Lake George to the greatest extent possible instead of applying a less than sufficient stream corridor buffer that currently is moving through the regulatory process and giving false hope of long term protection which will not be possible, probably even in the short term.

And finally, there is the more basic problem that I have acknowledged in the material presented above but have yet to specifically raise to the Commission. That problem is the basic disconnect between what DEC recognizes as streams in the basin and the actual number of streams that exist and have study data associated with them. It is clear to me that the DEC system of recognized streams needs to be re-investigated and updated so that all of us are working with the same set of data, which in this case means the same streams. The current DEC-recognized system is sorely outdated and needs drastic revision before any of us can be certain that we are doing our very best to protect the water quality of Lake George both now and into the future.

Sincerely,

James W. Sutherland, Ph.D.

#6 LGPC Response: *Please see #1 and #2 Responses regarding the final proposed buffer width and the utilization of New York State's existing stream dataset in the Lake George Park as the streams to be regulated under this program. With regard to higher volume streams being more important for protection than smaller streams, the concept of varying buffer widths based on a stream's characteristics was discussed in the earlier stream corridor effort in 2007. The LGPC contracted with Warren County Soil and Water Conservation District to create a GIS mapping initiative that would base buffer widths on the slope surrounding the stream, and also on historical stream volumes. The outcomes of these analyses were provided to the LGPC, and those concepts were then discussed with local municipal officials. It was determined at the time that the implementation of variable width stream buffers would be extremely difficult for the public to understand and comply with, and even more difficult to enforce. Similar conversations occurred early in this current stream corridor regulatory initiative. Ultimately, non-uniform buffer width approaches to the implementation of basin-wide stream buffers were rejected for the aforementioned reasons. With the LGPC's new stormwater regulations coupled with these stream corridor protections, Lake George will quantitatively be one of the most well protected waterbodies in the country.*

Comment 4: Robert Charbognin and Lorraine Ruffing:

Dear Chairman Young and Park Commissioners,

The mandate of the Lake George Park Commission (LGPC) under Article 43 is "the preservation and conservation of pure water supplies and other natural resources." The LGPC has the mandate to "protect" – yet it is on the verge of issuing stream corridor regulations that will further degrade the Park's natural resources and, in particular, the drinking water of thousands of residents.

This is not the time to dismiss or ignore science or use it selectively as the Park Commission did on January 12, 2021. The bulk of scientific literature (Wenger, Castelle, Knutsen, Fischer et al) and evidence from the Lake George Waterkeeper show that the buffer width that you are choosing is the least effective in preventing pollutants from entering the Lake and protecting habitat. The LGPC's own summary of the efficacy of various buffer standards shows that the proposed standard of 35 ft. width is the **least effective**.

How then did we arrive at this weak proposal? During the LGPC's public hearings on Sept. 22, 2020 and January 12, 2021, it was explained that a series of consultations were held with the local community, that is, municipalities and *some* stakeholders. Notably absent from these consultations were various lake associations in Assembly Point, Cleverdale/Rockhurst, Hague, Huletts Landing and Pilot Knob which represent residents who draw their drinking water from the Lake. Those consulted advocated for the 35-foot buffer. It seems their arguments for preserving economic assets won the day over the economic and health costs of impaired drinking water being imposed on the community at large. In the LGPC's own words, "while 35 feet is too narrow to achieve every nutrient reduction goal, this width balances natural resource protection and landowners' property use."

How can one balance the loss of safe drinking water for residents against proprietary rights? It should be noted that an effective stream corridor buffer does not preclude the use of a property, it merely promotes good stewardship and is a step toward achieving climate resiliency. In most national and international settings, safe drinking water is considered a human right because it is necessary for human health. It is the United Nations Sustainable Development Goal 6 Clean Water. One in three people in the world do not have access to safe drinking water. Are the residents of Lake George next in line? We know that our drinking water is being degraded; we have the HABs event as evidence that all is not well with Lake George. From the public hearing on January 12, 2021, it was obvious that some Commissioners have already made up their minds to accept an ineffective buffer width. The basis for this decision was unclear. If you approve this substandard regulation, you will be the Commission that failed to do its homework and thus failed in your duty to conserve clean water supplies.

I urge you all to reconsider this substandard regulation and do what is best for the Lake and the community at large especially those who draw their drinking water from the Lake and to use and not abuse existing science as your basis.

Respectfully yours,
Robert Carbognin, Chair, Board of Directors
Lorraine Ruffing, Co-Director
On behalf of the Assembly Point Water Quality Coalition
551-404-5752 (Carbognin)
518-656-9440 (Ruffing)

LGPC: *(please see #1 Response)*

Comment 5: Mary Helen and Dan O'Keefe:

Dear LGPC and Dave Wick and Bruce Young,

In the LGPC web site you state "the commission BELIEVES that a standard 35' setback for all residential infiltration devices will dovetail better with existing shoreline setbacks and allow for greater stormwater treatments to be designed and constructed thus protecting the quality of Lake George and its tributaries…..

My question is where is the EVIDENCE that decreasing the setback will not harm the lake water???
Having had a home on beautiful Lake George for over 70 years. I have witnessed drastic changes in the water quality. Each year I call in about more and ,more milfoil sites and now we have more green algae on the shoreline and HAB has been found by Assembly Point. Our poor lake is over worked and the water is murky and not clear as it was once was.. Lake George is one of the 10 most beautiful and clean water LAKES in the United States and we need to keep that title.

Respectfully,
Mary Helen OKeeffe and Dan Okeeffe
Member of the ASSEMBLY POINT WATER QUALITY COALITION

LGPC: *(please see #1 Response)*

Comment 6: The Stroud Center:

To: NYS Lake George Park Commission,

We would like to commend the NYS Lake George Park Commission for considering measures to manage and treat potential non-point source pollutants in the Lake George watershed by proposing Stream Corridor Regulations. While the science has clearly demonstrated that riparian buffers adjacent to stream, river, lake, and wetland water bodies help to treat and ultimately reduce non-point source pollutants discharged from upland areas of a watershed, it is less clear regarding how wide buffers must be to provide adequate protection and generate the ecosystem services that maximize their function, the return on investment to society for protecting these areas, and thus on the ultimate benefits for water quality protection.

We understand that the Lake George Park Commission proposes a streamside riparian buffer protection of its perennial streams extending a distance of 35 feet from the high water mark, and that the distance of 35 feet represents a reduction from a 100-foot width previously proposed. We agree that the 35-foot width will afford some protection, but here present evidence that the protection is much less than could be realized by a substantially wider buffer width, and <u>we recommend restoring the previously proposed width of 100 feet.</u>

Stroud Water Research Center and its staff have a long history of research, education, and outreach on the ecological function, water quality benefits, and restoration of riparian buffers. Our history stems to nearly the beginning of the Stroud Center (est. 1967) and led to the landmark publication of the River Continuum Concept (Vannote et al. 1980). Nearly 35 yrs later, Stroud Center staff produced a comprehensive review and meta-analysis of riparian zone research (Sweeney and Newbold 2014) that summarizes the state of research findings on buffer width effectiveness in reducing sediment and nitrogen loading from uplands to stream

networks and on the question of variability of stream width and in-stream ecological functions. Further, in 2014 the Stroud Center launched a Watershed Restoration program that assists landowners in their understanding, planning and implementation of forested riparian zones as a best management tool designed to protect and improve stream and river health. Our submission here and our perspective and scientific understanding in this domain is informed by this long and thorough history of research (e.g., Sweeney 1993, Sweeney et al. 2002, Sweeney et al. 2004, Bott et al. 2006, Newbold et al. 2010, Sweeney & Newbold 2014) and outreach (see https://stroudcenter.org/restoration/) on the science of forested riparian zones.

As noted by the Commission's Regulatory Impact Statement (RIS 2020) its Draft and Final Generic Environmental Impact Statements of 2009, as well as by a number of published scientific reviews (e.g., Sweeney and Newbold 2014), the buffer protection has multiple benefits for both lake water quality as well as to the physical and biological characteristics of the streams themselves. Most, if not all, of these benefits would be considerably enhanced by increasing the buffer width. As the rationale for the 35-foot buffer appears primarily to be based on reduction of sediment and phosphorus, we first address those issues.

The inference presented in the RIS (2020) that a 35-foot buffer can be expected to reduce suspended sediments and phosphorus by 75% appears to be based on older literature reviewed prior to 2009, and on more recent studies by Yuan et al. (2009) (sediments) and Zhang et al. 2010 (sediments, phosphorus, nitrogen, and pesticides). (The latter, more recent studies predict even higher sediment removal efficiencies of 85 and 90%, respectively). Most of the studies reviewed by this literature were conducted in agricultural settings, and most were conducted on experimental plots rather than riparian zones. As reviewed by Sweeney and Newbold (2014), there are several reasons to suspect that experimental plot studies yield higher sediment and nutrient removal efficiencies, and thus narrower recommended buffer widths, than are applicable to natural riparian zones, especially those with steeper slopes than typically found in upland agricultural areas. These are: (1) the plots are typically designed to assure uniform flow and so lack the concentrated flow pathways through buffers that can reduce buffer effectiveness; (2) they do not account for long-term accumulation of sediment within the buffer; (3) infiltration is typically greater than can be expected in more moist riparian soils; and (4) they are typically small in scale, preventing adequate simulation of the hydraulic and pollutant loadings of large natural storms.

Recognizing these limitations, Sweeney and Newbold (2014) compiled 22 sediment removal studies of which 15 were conducted in streamside buffers under natural field conditions, two in grassed waterways, and the remaining five were plot studies selected to meet stringent criteria. The model fitted to these data estimates that a 35-foot (11-m) buffer can be expected to remove 65% of the sediments. This is far lower than the 90% removal predicted by Zhang et al. (2010), that study having been based on a predominance of plot experiments. Sweeney and Newbold's (2014) results predict that a 100-foot (30-m) buffer would remove 84%, i.e., 30% more than a 35-foot buffer.

We are aware of only two studies that have assessed buffer effectiveness as measured by sediment accumulation in streambeds. Davies and Nelson (1994) found higher silt cover in streams with buffers narrower than 100 feet in comparison with those wider than 100 feet. Jones et al. (2006) found more fine sediments in the riffles of streams where the average upstream buffer width was 50 feet than where buffer width was 100 feet.

The benefit of a wider buffer is likely much greater for phosphorus than for sediments. Although sediment deposition accounts for most of the removal of phosphorus within a buffer (Hoffmann 2009), phosphorus is preferentially associated with finer particles (Owens et al. 2007), which are less effectively trapped by the buffer (Gharabaghi et al. 2006). As a result, buffers remove phosphorus less efficiently than sediment.

Zhang et al. (2010) predict that a 35-foot buffer removes phosphorus at 73% efficiency, or 20% less than for sediment. Applying this differential to the sediment removal inferred by Sweeney and Newbold (2014) suggests that in natural streamside buffers, a 35-foot buffer would remove 53% of the phosphorus, whereas nearly 70% removal could be achieved by a 100-foot buffer. This function may be highly critical in a harmful algal bloom management and protection plan that is focused on reducing sediment and phosphorus loadings (and potentially other nutrients) to a lake or receiving water body.

The selection of an appropriate buffer width should take into account that steep slopes are prevalent in the Lake George Watersheds (RIS 2020). We find that slopes within the watersheds average 16% (ModelMW 2021). Zhang et al. (2010) reported that sediment removal efficiency declined by approximately 25% as slopes increased from 10% to 16%. In a direct experimental comparison, Dillaha (1989) observed that buffer effectiveness was 30 to 40% lower for a slope of 16% relative to a slope of 11%. These results further suggest that a 35-foot buffer will not provide adequate protection from excessive inputs of sediments and phosphorus to Lake George.

Riparian buffers have clear and well documented benefits for treating the load of materials traveling through the riparian zone to the stream, but they also have benefits that protect and enhance the in-stream ecological function and overall ecosystem health, e.g., water temperature and the physical habitat necessary for healthy stream biota. Control of stream temperatures is a major function of the riparian forest. Based on a review of 23 studies, Sweeney and Newbold (2014) concluded that between 10 m (33-feet) and 30 m (100 feet) of streamside forest are necessary to fully protect streams from increases in summer daily maximum temperatures of 2 ^{O}C or more. Many factors, such as the aspect and slope of the stream and the type and density of the forest contribute to this range. A 100-foot buffer would assure virtually full protection from temperature increases and would therefore be critically important for the protection of cold and cool water aquatic species (e.g., trout).

Further, it has been well established that the input of large woody debris (stems, branches, tree trunks, and root wads) enhances stream habitat in a variety of ways (Maser and Sedell 1994). For example, healthy and mature streamside forests protect against stream bank erosion, create more complex geomorphic conditions within the channel, provide “roughness” elements that help reduce hydraulic energy conveyed through the stream reach, slow the rate of change of the channel over time, provide critical structural elements in the channel for stream biota, and limit sunlight that can drive excessive and sometimes nuisance algal growth. Given that the height of mature trees can easily exceed 35 feet, we recommend a forest buffer width greater than 35 feet to assure that adequate inputs of woody debris are maintained.

The various ways in which the riparian forest influences stream habitat, such as temperature, light, nutrients, and leaf and woody debris inputs, translate into the biological health of the stream as measured by the diversity and robustness of populations of benthic macroinvertebrates and fish. Reviewing many studies of both macroinvertebrates and fish, Sweeney and Newbold (2014) concluded that a streamside forest of at least 100 feet is needed to protect and maintain these communities in a natural or near-natural state.

In summary, we commend the NYS Lake George Park Commission for considering the adoption of stream corridor regulations to protect the streamside riparian buffer zone. However, we urge the Park Commission to consider protecting 100 ft on each side of the stream for the reasons presented above. This greater width will provide a much greater return on the investment to manage and protect water quality in the streams and rivers that deliver water and dissolved and particulate loads to Lake George, the ultimate beneficiary of such regulations.

Prepared and submitted by:

David B. Arscott, Ph.D., Executive Director and Research Scientist, Stroud Water Research Center

LGPC: *(please see #1 Response)*

Comment 7: American Rivers:

Dear Mr. Wick and Commissioners:

American Rivers has long recognized and advocated for the importance of riparian buffers to protect water quality and drinking water sources. I am writing to urge the Commission to implement a proposed corridor width informed by science. While we commend the Lake George Park Commission for proposing to implement Stream Corridor regulations, science does not support that the proposed 35-foot width buffer will adequately protect this important resource and drinking water source. We strongly urge the Commission to implement a 100-foot wide stream corridor requirement on all streams, including headwater and intermittent streams, to provide meaningful water quality protection to the resource that is Lake George.

American Rivers is a national organization whose mission is to protect and restore rivers and conserve clean water for people and nature. We are headquartered in Washington, D.C. with offices around the country and over 200,000 members, supporters, and volunteers. Riparian buffer protection as well as the protection of drinking water sources are two important components of American Rivers' work. Our published research has documented strong public support for the protection of drinking water sources.

The Commission is proposing a 35-foot corridor along any NY DEC designated stream, requiring a property owner to maintain the 35-foot buffer along 70% of their frontage and allowing the property owner to remove 30% of the protective buffer. Land disturbances in headwater and urbanizing areas are known to contribute to water quality degradation and poor stream health and habitat. Science demonstrates that forested buffers of at least 100 feet excel at restoring and protecting streams[i]. We urge the Commission to provide a corridor of at least 100-feet.

Of additional concern, the regulations as currently proposed will only apply to approximately 50% of the 150 streams that drain to Lake George. Many stream segments, including critically important headwater and intermittent streams will receive no buffer protection at all. Because of their small size and intimate connections with surrounding landscape, headwaters and their inhabitants are easily influenced by human activities in watersheds and riparian zones. Changes to riparian vegetation or hydrology, water pollution, or the introduction of exotic species can have profound effects on biota living in headwaters. Because small streams and wetlands are the source of the nation's fresh waters, changes that degrade these headwater systems affect streams and lakes downstream.[ii] Land-use changes in the vicinity of small streams can impair the natural functions of such headwater streams.[iii] To provide the ecosystem services that sustain the health of our nation's waters, the hydrological, geological, and biological characteristics of small streams require protection. We strongly urge the Commission to extend the buffer regulations to all streams in the Lake George watershed, including small headwater and intermittent streams.

Lake George and its clear, clean waters are treasured by both residents and the 3.8 million visitors who come to the Lake every year. This tourism is the economic engine to a $2B economy in the region. Lake George is also the drinking water source for thousands of people. Over forty years of water quality monitoring has shown that water quality in the Lake is declining and chlorophyll-a levels are increasing. The southern portion of the Lake has already transitioned from oligotrophic to mesotrophic levels, and in 2020 the Lake experienced its first Harmful Algal Bloom. Studies have demonstrated that the public has a willingness to pay for the restorative qualities associated with riparian buffers. The residents and visitors to Lake George treasure and rely on the water quality of the Lake, and this water quality is directly linked to the extent of forested buffers along the many streams that enter the Lake. A thirty-five foot buffer falsely implies to the public that the resource is being protected by the buffer regulation.

Please reference the enclosed reports on buffers and headwaters that support the information in this letter. And please consider the implementation of a 100-foot stream corridor requirement on all streams. Thank you for your time and consideration.

Sincerely,
Gary Belan
Senior Director, Clean Water Supply Program
American Rivers

LGPC: *(please see #1 Response)*

Comment 8: The Lake George Waterkeeper:

Dear Mr. Wick:

The above referenced proposed regulations were personally reviewed in my capacity as a licensed professional engineer and submitted for the Lake George Waterkeeper and The FUND for Lake George ("Waterkeeper/FUND"). The Waterkeeper is a program of The FUND for Lake George and is dedicated to defending the natural resources of Lake George and it watershed for the common good of the community. The FUND for Lake George is a science guided advocacy organization dedicated to the protection of Lake George. The Waterkeeper/FUND would like to thank the Lake George Park Commission ("Commission") for the opportunity to submit public comment on this very important issue that will have tremendous bearing on the long-term protection of the water quality of Lake George

The need for stream corridor management within the Lake George Basin has been known for a long time dating back to the Lake George Urban Runoff Study in 1983. This study states "tributaries draining developed catchments exhibited considerably different water quality than tributaries in undeveloped catchments." It further stated "Unless certain controls are implemented, phosphorus loading will

increase as development continues in the watershed. It would appear, therefore that any water quality management program for Lake George should address the issue of runoff from developed areas."[1]

The Lake George Park Commission was officially charged with the developing stream corridor management standards, in response to Article 43-0112.5 of the Environmental Conservation Law, as follows:

> *"The Commission shall, after consultation with the department, the department of health, the Adirondack Park Agency and each municipality located in whole or in part within the Park, further promulgate regulations relative to stream corridor management which shall include standards for the location of roads, stream channelization, the frequency of stream crossings, and timber harvesting and vegetative cutting restrictions within designated stream corridors."*

In the Draft Generic Environmental Impact Statement ("DGEIS") prepared by the Commission in 2009 for the adoption of Stream Corridor Management Regulations for the Lake George Park, it was stated:

> *"In addition to the legal mandate for stream buffers, many other reasons have been found to warrant vegetated stream buffer requirements in the case of the Lake George watershed. These include the superior quality of the Lake and its contributing streams, the potential impacts of land development to the Lake and its stream systems, and the opportunity to improve on current regulations to protect these sensitive streams."*

When science of Lake George water quality is reviewed (much of which is supported by The FUND from the continued Lake Monitoring Program by the Darrin Fresh Water Institute to The Jefferson Project), the long-term trends of important water quality measures have not improved. In fact, these trends are continuing in a negative direction as documented in the summary of 37 years of data published by the Jefferson Project that states there is a 32% increase in epilimnetic chlorophyll-a and a 70% increase in orthophosphate.[2] It further states:

> *"Deterioration in water quality was associated with large percentage changes but relatively small absolute changes. However, these trends might signal areas of concern and a need for regulatory or management protections for Lake George and other lakes in the Adirondack Park"*[3]

As stated, these trends are concerning for the long-term health of Lake George. In fact, these trends led to the first ever Harmful Algal Bloom on Lake George last year. This unfortunate occurrence demonstrates the immediate need to implement protective measures to the greatest extent practicable that will reduce the negative effects from non-point source pollution such as septic disposal systems and unabated stormwater runoff, which can have significant environmental and economic impacts.

For these reasons, the Waterkeeper/FUND strongly support the Commission's action to finally adopted stream corridor management regulations. It is imperative for the Commission as the State Agency with the statutory obligation for the preservation and conservation of pure water supplies and other natural resources to protect the exceptional water quality of Lake George by reversing these troubling trends.

But the proposed regulations fail to meet this obligation and the extensive scientific evidence is clear that the proposed regulations will fail protect many important functions of a stream that protect the natural beauty, scenic quality, water quality, fish and wildlife habitat, historic significance, recreational resources and ecological sensitivity of the lake.

The Commission fails to meet the requirements of the State Environmental Quality Review Act (SEQRA) of preparing a Supplemental Environmental Impact Statement due to proposed changes and new information that the revised recommended alternatives are based upon.

The Commission prepared a Draft Generic Environmental Impact Statement (DGEIS) and Final Generic Environmental Impact Statement (FGEIS) in 2009 during the first attempt of adopting stream corridor management regulations. In the DGEIS Section 8.1, the Commission evaluates three alternatives for Buffer Width – 100' Buffer Width, Buffer widths of 35' to 75' and Buffer widths greater than 100'. After substantial evaluation, the following recommended alternative was selected:

The DGEIS did evaluate buffers with reduced widths but reached the following conclusion:

> *"While many communities utilize buffers in the range of 50' to 100', these smaller buffer widths are typically considered insufficient for high quality or sensitive water resources (Wenger, 1999; EOR, 2001), …"*

Now the Commission has revised their recommended alternatives to a 35' buffer width and limiting the coverage of streams, which are substantial changes that were not supported by the evaluation research and data in the DGEIS. According to *The SEQR Handbook*, it would appear that the DGEIS would need to be amended with a Supplemental EIS to reach the revised alternatives that are not consistent with the original findings. A Supplemental EIS *"provides an analysis of one or more significant adverse environmental impacts that were not addressed or were inadequately addressed in a draft or final EIS. A supplemental EIS may also be required to analyze the site-specific effects of an action previously discussed in a generic EIS."*

It goes on to say that a supplemental EIS may be required if the project sponsor proposes project changes that may result in one or more significant adverse environmental impacts not addressed in the original EIS or the lead agency discovers new information, not previously available, concerning significant adverse impacts. It is further stated a "change in circumstances" means "any change in the … regulatory standards applicable to the proposed project".

When reviewing the proposed 35' stream corridor standard and/or the change in stream coverage, this are clearly substantial changes from the originally recommended 100' buffer width and intermittent stream coverage that were selected *"Considering the high quality and sensitive nature of the streams contributing to Lake George, and the characteristic steep slopes,"* But there has been no information or evaluation in the DGEIS that reaches conclusions to support the change in regulations. In fact, Stream Corridor Scientific Literature posted on the Lake George Park Commission website reference the same studies (Sweeney, 1999, etc.) that were referenced for the original recommendation. There is also new information that was not previously available that has not been

evaluated as documented in the Regulatory Impact Statement prepared by the Lake George Park Commission under the State Administration Procedure Act ("SAPA"). In that document, it is stated *"Based on community objection over the proposed buffer width (100 feet), the Commission ultimately did not progress the regulations. Significant research was conducted regarding the nutrient and sediment removal capabilities of various buffer widths lesser than the originally proposed 100 feet. Meetings were held with the leadership of all municipalities and many stakeholders around Lake George to discuss this topic in 2017 and 2018. Ultimately, the Commission decided to advance a new stream buffer as part of its regulatory update."* It would seem with the references to the "significant research conducted" and the fact that the recommended width appears to be based solely on nutrient and sediment removal while not considering the other important functions of a stream originally considered, the Commission should have prepared a Supplemental EIS evaluating the changes and supporting information or at the very least, made a determination why a Supplement EIS under the SEQRA was not warranted.

The Waterkeeper/FUND request the Commission comply with the requirements of the State Environmental Quality Review Act ("SEQRA") and prepare a Supplemental EIS to evaluate the significant changes in regulations and support the proposed alternatives with the referenced research.

#7 LGPC Response: The LGPC has taken and will continue to take a hard look and reviewed the proper SEQR procedures for the proposed regulations, including but not limited to the proposed changes in these regulations as they differ from the 2009 proposed regulations. In reviewing the prior DGEIS and FGEIS, it was determined that the changes in the current proposed regulations were specifically identified, researched, analyzed, and discussed through the public comment process at that time. The LGPC prepared a Short Environmental Assessment Form utilizing the information from the DGEIS and FGEIS. This was presented to the LGPC at its meeting in June 2020, where the LGPC declared itself Lead Agency and sent the EAF and proposed regulations to the APA and DEC as interested agencies. The Commission thereafter conducted the Public Hearing under SAPA, and intends to finalize SEQR at its February 23, 2021 meeting, taking into account all of the public comment raised throughout the public hearing and public comment period. It has not yet rendered a final SEQR determination as of the date of these comments.

The proposed stream corridor width of 35 feet is insufficient and will not provide the necessary protection to meet the Commission's statutory requirement.

The Commission's proposed buffer width is not supported by the extensive research that is contained in the DGEIS prepared for the regulatory process. The DGEIS evaluated widths between 35 to 200 feet and determined that the smaller widths of 50 feet to 100 feet were insufficient for high quality or sensitive water resources. In fact, a study cited by the Commission on their website states *"Long-term studies suggest the need for much wider buffers. It appears that a 30m (100 ft) buffer is sufficiently wide to trap sediments under most circumstances, although buffers should be extended for steeper slopes. An absolute minimum width would be 9m (30ft)"*

From the recent presentation by the Commission supporting the proposed regulation, it appeared the sole function for selecting the proposed width was the removal of sediment and nutrients. The primary study for the basis of the recommended width was Zhang, *et al.* 2010. Upon discussion with David

Arscott, Ph.D., Executive Director of the Stroud Water Research Center, an organization who seeks to advance knowledge and stewardship of fresh water systems through global research, education and watershed restoration, he cited the Zhang paper had limitations with the meta-analysis and was incredibly conservative. He stated the paper focused on studies that laid out plots and simulated rainfalls and did not mimic real hydrologic processes; the studies were less representative of actual tributary areas to streams and were field plots; the hydrologic loadings were low and exhibited less energy than typical streams because it was based more on a more uniform landscape condition; and did not represent actual field conditions which exhibit more preferential flow paths and the development of actual concentrated flow conditions, which justify the need for wider buffer widths. In fact, the Stroud Water Research Center concluded in a 2014 study focusing on riparian forest corridors that streamside forest buffers ≥30m wide are needed to protect the physical, chemical, and biological integrity of small streams (5^{th} order or less) when considering subsurface nitrate removal, sediment trapping, stream channel width, channel meandering and bank erosion, temperature, large woody debris and macroinvertebrate and fish communities. The study further states "*that buffers 10m wide can be expected to trap about 65% of sediments delivered by overland flow, while 30m buffers can be expected to trap about 85% of sediments. The increased removal attained by wider buffers represents a small fraction of the total sediments (by mass) but probably a large fraction of the finer silts and clays, which are typically released from narrow buffers in concentrations high enough to impair water quality."* This is because the finer particles tend to transport phosphorus.

The Lake George Waterkeeper studied streams as part of the Stream Assessment Program in the Lake George basin between 2007-2009, which included the physical assessment of stream corridors by applying the United States Environmental Protection Agency Habitat Assessment. In 2009, a study of 62 stream sites found 85% were poor or suboptimal for instream habitat, 81% were poor or suboptimal for streamside habitat and 44% were poor or suboptimal for canopy cover. This demonstrates the physical condition of stream corridors in the Lake George watershed and the level that the corridors have been impacted by human actions. This further demonstrates the need for wider buffers to provide protection for the high-quality water resources in the Lake George watershed, which are used by many as a drinking water supply.

The Waterkeeper/FUND request that the Commission increase the proposed buffer to a minimum of 75 feet and reduce the proposed 30% allowable clearing in the stream corridor.

LGPC: (please see #1 Response)

The total number of streams and coverage of intermittent and headwater streams needs to be increased for the Commission to meet their statutory requirement.

A total of 141 streams have been located along the shoreline of Lake George. 25% of the 141 streams identified in the Lake George drainage basin are intermittent and only flow during "wet" periods. Another 40 percent exhibit low flows during dry periods of the year and, collectively, contribute about 30 percent of the total flow that enters Lake George from the drainage basin.[15]

The Lake George Park Commission cites in its *Regulatory Impact Statement* prepared as part of the SAPA process that Lake George is fed by more than 150 streams (Shuster *et al.* 1994)[16]

The Commission is proposing to have the stream corridor regulations apply to all perennial streams within the Lake George Basin that are designated or mapped as AA-Special by the NYSDEC. This totals 69 streams according to the NYSDEC Environmental Mapper. Therefore, the proposed regulations will cover less than half of the total streams in the Lake George Basin. Additionally, of the NYSDEC designated streams, the important headwater and intermittent stretches of the streams that are vital for water quality will not be protected by the proposed regulations. For example, this is estimated to be approximately 40% of the total stream length in the West Brook subwatershed.

The Waterkeeper/FUND have been monitoring many of these streams that NYSDEC fails to designate as streams but remain as important high-quality water resources that if not protected will significantly impact the water quality of Lake George. For example, the Waterkeeper/FUND have been monitoring tributary T-36A along Sand Pebble Cove Road for the past 2-1/2 years as part of our NYSDOT Road Salt Pilot Program. The average daily flow in this stream over the past year was 57,000 gallons per day. But this is not recognized by NYSDEC as a stream and would not be protected.

In fact, the Commission's proposed regulations are again in conflict with the recommended alternative of their own DGEIS that states:

> *"The proposed regulation would apply equally to intermittent and perennial streams. This option was selected for several reasons. First, intermittent streams convey a significant percentage of the Lake's source water. To exclude them from the definition of aa stream would reduce the effectiveness of the stream buffer program to filter nutrients and pollutants from areas being developed. Second, this approach allows for easier administration because the presence of perennial streams does not have to be determined. Variations in rainfall from year-to-year can limit the ability to identify perennial streams, particularly during dry years."*[17]

This is further justification for the need for a Supplemental EIS that the Commission has failed to prepare to comply with SEQRA.

The importance of the protection of headwater, intermittent and small streams is well documented in scientific research. Headwater streams are important sites for nutrient processing (Peterson *et al.*, 2001) and are strongly influenced by their surrounding catchment, which is their primary source of organic material, nutrients, and sediment (Hynes, 1975; Vannote, *et al.*, 1980). Small streams and wetlands are the source of the nation's fresh waters, changes that degrade these headwater systems affect streams, lakes, and rivers downstream. The natural processes that occur in small streams and wetlands provide a host of benefits, including flood control, adequate high-quality water, and habitat for a variety of plants and animals. Scientific research shows that healthy headwater systems are critical to the healthy functioning of downstream streams, rivers, lakes and estuaries. To provide the ecosystem services that sustain the health of our nation's waters, the hydrological, geological, and biological characteristics of small streams and wetlands require protection.

The Waterkeeper/FUND request the Commission increase the coverage of streams that the proposed stream corridor regulations will protect to include all 141 streams as well as important headwater and lower order streams. An example of defining where regulations can apply would be all second order streams and above. If the Commission does anything less, it will be failing to meet its statutory requirement.

LGPC: *(please see #1 and #2 Responses)*

The Commission should restrict any impervious cover within the stream corridor to protect the high-quality water resources in the Lake George Park and prevent compromising the importance of a continuous stream corridor.

#8 LGPC Response: *The LGPC does currently propose significant development restrictions of 100 square feet of impervious space or 400 square feet of pervious space. These restrictions allow for a small patio or sitting area within the corridor, which is felt to have minimal impact on the associated stream.*

The Commission should limit the width of driveways for stream crossings to 12 feet. The proposed width of 20 feet is excessive and approaches the width of secondary roadways, which is too much and will increase water quality impacts, especially in locations where stormwater management controls will be ineffective.

#9 LGPC Response: *It is impractical to limit land clearing for a stream crossing to twelve feet in width. However, with the typical culvert section being twenty feet in length, most stream crossings for driveways are inherently less width than the culvert as the side slopes must be stabilized, resulting in a pavement width of 12-16 feet. This is felt by the LGPC to be the minimum reasonable standard for construction and long-term stability of the crossing.*

The Commission should restrict the number of stream crossing allowed for timber harvest operations to one.

#10 LGPC Response: *There currently are no regulations related to the number of timber harvest stream crossings, and the LGPC's proposed 'one crossing per 1,000 feet' is felt to be a strong improvement, allowing reasonable access without undue stream impacts. All crossings must be permitted via DEC Article 15 permit and must be temporary in nature.*

Given the irreplaceable value of Lake George and recognizing the mounting threats of Harmful Algae Blooms and other water quality challenges, it is imperative that the Commission strengthen the proposed stream corridor management regulations and fulfill is statutory responsibility to protect the lake as science and New York State law demand.

We still have a choice and recognizing documented long-term trends and recent Harmful Algae Blooms, the Commission has an obligation to do what is necessary to protect Lake George to the greatest extent possible. When we protect streams, we are protecting the Lake, our economy and our communities.

To do the absolute minimum would be an absolute mistake if we are serious about protecting Lake George.

The FUND and Waterkeeper looks forward to continuing to work with the Commission to defend the natural resources of Lake George and its watershed. Thank you for your consideration.

Sincerely,
Christopher Navitsky, PE
Lake George Waterkeeper

Comment 9: Carol Collins:

Dear Chairman Young and Park Commissioners,

We would like to express our opposition to the revised stream corridor regulations that the Lake George Park Commission (LGPC) is proposing. In this letter, we will lay out our objections and recommendations which are backed by well-documented science.

Executive Summary

The revised stream corridor regulations currently being considered do not protect the Class AA-Special status of Lake George. The regulations completely disregard the intent for protection authorized by the NYS legislature. The regulations are not aligned with the overwhelming scientific literature on buffers and the need to protect headwater streams, which was the focus of the 2009 Draft Generic Impact Statement (DGEIS). The justification was advanced with no quantification or even qualification of the impact the revised regulations will have on Lake George water quality. After 15 years, the LGPC is preparing to vote on standards that are guaranteed to accelerate the decline in water quality at a time when Harmful Algal Blooms (HABs) have become a threat to Lake George and our drinking water.

History

In 1987, the NYS legislature gave statutory authority to the LGPC to establish permit requirements and standards for the protection of stream corridors within the Lake George Park. The intent is to preserve the water quality of Lake George and its tributaries; to protect the riparian and aquatic ecosystems of streams within the Lake George Park; and to provide for the environmentally sound use of the Lake George Park's land resources.

The comprehensive Draft Environmental Impact Statement (DGEIS), prepared by the Center for Watershed Protection, was formally accepted by the LGPC on January 27, 2009 and approved by the Governor's Office in 2010. Regrettably, the LGPC never enacted the recommendations into law.

LGPC Rational for Proposed-Revised Regulations

The regulatory impact statement asserts - in misleading terms – that the selected regulated stream selection and the selected buffer (35') fall "within the range" of the DGEIS recommendations. This is incorrect. They lie at the very bottom of the least protective category.

LGPC Justification for Proposed-Revised Regulations

The selected standards are based on consideration of and the expressed need not to burden the LGPC. The LGPC concluded that implementation and enforcement of NYS DEC and USEPA three-zone buffer system would be an administrative burden and would be administratively difficult to implement. It is hard to believe that protecting Lake George could be a burden as it is the region's economic engine.

Weakness in Proposed-Revised Regulations

1. The group of protected streams has been limited to perennial streams regulated by the NYS Department of Environmental Conservation (DEC).
2. The definition of a stream corridor has been changed, reducing the previously proposed 100-foot buffer for streams to a 35-foot buffer.
3. Building in the buffers would be allowed. This is only a 6-foot setback!!
4. A thirty percent clearing of the vegetative buffer would effectively reduce the buffer to 24.5 feet.
5. Protection of headwater streams is wholly disregarded.

Lake and Watershed Status

• The major stream corridors in Lake George are in poor shape. As a result of stream corridor degradation and associated land-use activities, Lake George is listed as impaired on the New York State DEC 303(d) list.
• A 2001 Stearns and Wheler study indicates that streams are a primary source of the phosphorus loading to Lake George fueling water quality decline, as evidenced by increasing levels of orthophosphorus, chlorophyll *a*, dissolved oxygen depletion zones and nearshore algal blooms.
• Harmful Algal Blooms now threaten Lake George.

Proof of Failure of Proposed-Revised Regulations

• For decades, municipalities around Lake George operated with 30–50-foot setbacks for the DEC-regulated streams (Table 2, Final GEIS summary of "Local Zoning Provisions Relative to Lake George"). Municipalities that share similar regulations as the proposed LGPC regulations each have impaired streams. This is evidence of the inadequacy of the proposed buffer standards. These existing minimum setback requirements have failed to protect the lake and has cost millions of dollars in remedial efforts.

• The impact is profound and largely not addressed in the FGEIS.

Unfulfilled Actions

• The LGPC vowed to complete a full inventory of perennial and intermittent streams by October 2009 as a resource for administration of the stream corridor program. Action has not been taken on this inventory which leaves the Lake George Watershed in a very unfavorable position.

Legal Impact

1. It is not reasonable or lawful to intentionally pollute a Class AA-S waterbody. The LGPC, by proposing substandard buffers, is permitting excessive pollutant loading to the lake that can result in excessive algal growth and decline. This threatens Lake George's Class AA-S status.

2. The TMDL so called 'moot' status, is overridden by these regulations. According to DEC, EPA and LGPC, a TMDL is not allowed because it would permit a loading of pollutants into a Class AA-S water which is forbidden by law. How are these revised regulations any different? Using minimum standards intentionally permits contributes excessive pollutants into the lake.

3. This process does not comply with SEQR. An impact statement should be prepared based upon the proposed-revised standards.

Cost of Impacts on Lake George

A cost assessment would confirm that these regulations are unsustainable and unresponsive to the problem. Costs will continue to soar without suitable regulations. Funding from NYS DEC and NYS DOS to patch up damages generated from stream corridor mismanagement is a never-ending loop.

• Millions of dollars have been spent on remediation projects over the past decades.

• Over $65 million dollars is requested going forward (Lake Champlain Non-Point Source Subwatershed Assessment and Management Plan 2018).

• Numerous delta formations around the lake are a potent symbol of inappropriate stream-corridor-related land use activities. The typical cost to dredge a delta is $1.5 million and is a short-term fix without robust stream corridor regulations. Dredging is a delta management tool, not a watershed management tool and not a solution. Dredging of in-stream sediment basins is also widely used in the Lake George Basin. These "tools" or fixes destroy streams and are not supported by NYS DEC in other regions and better addressed with appropriate stream buffers.

• To date, the costs of these temporary remedies (in-stream sediment basins, delta dredging, etc.) have already eclipsed the potential cost of a long-term, sustainable solution that scientifically-based stream corridor regulations would deliver.

Recommendations:

1. Increase buffer width to 75 feet.

LGPC: *(please see #1 Response)*

2. Expand buffers on steep slopes.
LGPC: *(please see #1 Response)*

3. Do NOT allow any imperious surfaces within buffer.
LGPC: *(please see #8 Response)*

4. Include Fish and Wildlife (USGS) stream and wetland inventory in the inventory of regulated streams and wetlands. (This already is available in Warren County GIS website.)
LGPC: *(please see #2 Response)*

5. Immediately inventory of watershed streams (vowed in 2009), to include and regulated intermittent and headwater streams.
LGPC: *(please see #2 Response)*

6. Provide protection of belt width (meander zone) for the stream corridor: The waterbody and the width of adjacent land that supports a distinct ecosystem with abundant and diverse plant and animal communities (as compared with upland communities). For streams, this includes the belt width required for channel stability.
LGPC: *(please see #1 Response)*

7. Revise Stream Definition: The full length and width, including the bed and banks, of any watercourse. A stream has a channel that periodically or continuously contains moving water, has a defined bed, and has banks that serve to confine water at low to moderate flows. Streams include intermittent streams that have a defined channel and evidence of sediment transport, even if such streams does not have surface water flow throughout the year and/or throughout the channel.
LGPC: *(please see #2 Response)*

8. Increase staffing of the LGPC.
LGPC: *(Thank you)*

9. The following activities and structures are not appropriate within a riparian buffer:
• Impervious surfaces • Logging roads • Land-disturbing activities, including construction
• Septic tank drain fields • Application of pesticides and fertilizer
• Waste disposal sites • Livestock
LGPC: *(please see #8 Response)*

Supporting Data Analyses

Please refer to 1. Scientific Review of Impacts and 2. Data Risk Assessment of Metadata Analysis and Outliers that follow for details on scientific findings, recommendations and data applicability.

Conclusion

We believe the LGPC is devoted to the protection of Lake George and fully understand that these revised regulations would be ineffective. The LGPC regulations as written will cause further and irreparable harm to the Lake George Watershed. The LGPC has a clear choice: It can uphold its mandate to protect the natural resources of the watershed or it can promulgate regulations that will continue to accelerate the decline in water quality of Lake George. Now is the time for science-driven decision-making. How can we reduce the potential for Harmful Algal Blooms in Lake George with substandard stormwater and even less protective Stream Corridor regulations? Is the LGPC willing to subject Lake George to further water quality decline and imperil drinking water safety for the next 10-20 years when these matters are taken up again? The LGPC is now advocating for stream corridor regulations that are inadequate to protect a Class AA Special Lake. The delisting of Lake George as a Class AA Special waterbody – as many fear –will be destined to become a reality. We would like to thank you for the opportunity to comment on these proposed regulations. We appreciate all the effort that went into the process by the Commissioners and Staff of the Lake George Park Commission.

Scientific Review of Impacts and Data

Scientific studies show that the proposed regulations do **no**t fall "in the range" of the DGEIS that was accepted by the LGPC as we discuss for all 4 categories.

1. Regulated Streams

The FGEIS expressly concludes that:

- • "the water quality impacts of limiting the revised regulations to NYS DEC-regulated streams will be extreme"
- • "The streams of the Lake George Watershed are primarily first and second order, or "headwater" streams. These small intermittent and perennial streams are highly vulnerable to development. In Lake George, the highly erodible nature of the soils, combined with the steep slopes throughout the watershed, increase the potential for erosion throughout the network of small streams."
- • "An initial analysis of mapped DEC streams in the Lake George Basin, suggests that approximately 90% of the stream segments are headwaters (i.e., first or second order). These small, often steep, streams are critical to the riparian and lake ecosystems. A significant fraction of this small stream network may be buried, piped, moved or filled during construction, despite their collective importance to higher order streams and other downstream waters."

By limiting regulations to DEC regulated stream, the FGEIS fails to provide uniform and effective protection for the headwater streams that are so important to watershed health. Protection for perennial streams is not much better. Without headwater protection, the upper watershed will suffer the same fate as the lower watershed. The revised regulations offer no protection for the most sensitive and critical part of the watershed and will further destroy any lower watershed stream corridors. Most importantly, they will increase sediment and phosphorus loading from these fundamentally critical headwater streams.

The LGPC responded to public comments in 2009 stating, "The eight larger streams represent simply the confluence of many smaller stream segments, and their protection is not possible unless these tributaries are also protected." As mentioned above, even small streams can convey pollution in runoff to the Lake or to their receiving stream.

The group of protected streams has been limited to perennial streams regulated by the NYS Department of Environmental Conservation (DEC). Knutson and Naef cited by FGEIS, recommends a 150-225' buffer for headwater, intermittent and perennial streams and 78-138 ft to protect water quality.

2. Thirty-five foot buffer

The LGPC's Regulatory Impact Statement wrongly leads readers to believe that widths of 30-50 feet can provide "reasonable" and adequate removal of up to 75% of phosphorus in runoff flowing through them." This is not scientifically correct and not what the studies cited report – as shown in Table 1 below, adapted from Wenger (1999). The examination of these reports tells a story that is just the opposite of this misleading statement. Wenger (1999) summarizes the impact of individual pollutant removal as follows: 6

Table 1. Adapted from Wenger (1999)

Sediment Long-term studies suggest the need for much wider buffers. It appears that a **30 m (100 ft) buff**er is sufficiently wide to trap sediments under most circumstances, although buffers should be extended for steeper slopes. An absolute minimum width would be 9 m (30 ft). To be most effective, buffers must extend along all streams, including intermittent and ephemeral channels."	**Nitrogen** "The widths necessary for reducing nitrate concentrations vary, based on local hydrology, soil factors, slope and other variables. In most cases **30 m (100 ft)** buffers should provide good control**,** and 15 m (50 ft) buffers should be sufficient under many conditions. It is especially important to preserve wetlands, which are sites of high denitrification activity."
Phosphorus "Buffers are short-term sinks for phosphorus, but over the long term their effectiveness is limited. In many cases phosphorus is attached to sediment or organic matter, so buffers sufficiently wide to control sediment should also provide adequate short-term phosphorus control."	**Aquatic Habitat** "To maintain aquatic habitat, the literature indicates that 10-30 m (35-100 ft) native-forested riparian buffers should be preserved or restored along all streams."

Sincerely,
Carol D. Collins, Ph.D.
Limnologist
Co-Director
Assembly Point Water Quality Coalition

Comment 10: Lorraine Carbognin:

To Chairman Young, Mr. Wick and LGPC Commissioners,

As a resident of Assembly Point, Lake George, I am puzzled by the decision of the Park Commission to so significantly decrease the size of the stream corridor buffers in the park. I appreciate the presentations made of the complete scientific studies and subsequent conclusions during the Jan 12 meeting, which clearly delineate a 35 ft buffer as inadequate for application here. For many of our towns, this is a move backwards at a time when the quality of our lake water & our drinking water, is severely threatened. With the amount of development occurring in the southern basin in fairly concentrated areas and often on smaller lots, adequate buffers of our many streams and tributaries is key to protecting what is flowing into our lake, and one of the few factors that we are able to control.

Writing this 35 ft buffer into the Park Commission's 2021 Regulations, by the commission's own words requires that you can certify that this measure will not adversely effect downstream waters or properties. Clearly, the scientific data presented at the Jan 12 meeting must prevent you from doing so. As one of thousands of residents for whom the lake water is also our drinking water, please do not accept a minimal, least effective alternative for protecting our health.

Sincerely
Lorraine Carbognin

LGPC: *(please see #1 Response)*

Comment 11: Sarah Brown:

I have been a lifelong summer resident of Assembly Point since 1952 & a year round resident for the past 3 years. I remember when we drank the water from the lake without any need for filtration.

The water quality has changed dramatically in the south basin since my early years. Most recently we received a wake up call with the first ever discovery of HABs on Harris Bay & other locations. Property owners must work together with the LGPC, the LGA, the Fund & the LG Waterkeeper to ensure the future of our lake.

I am writing to ask you to reconsider your proposed new Stream Corridor Regulations which will not protect Lake George for us & future generations.

As Lake George Waterkeeper Chris Navitsky stated in his recent article in the January 2021 Lake George Mirror: "We encourage the Park Commission to require a streamside protective corridor of 75 feet, which matches the regulations proactively and admirably put in place by the Town of Queensbury in 2019 to give Lake George and its tributaries the protection needed."

Sincerely,
Sarah Shires Brown

LGPC: *(please see #1 Response)*

Comment 12: Tim Bechard:

Dear Chairman,

While the proposed Stream Corridor Regulations will provide a standard that perhaps all towns can adopt for their residents, the buffer zone is a little too broad for long term development. On an individual basis, the 35 feet buffer zone may be theoretically feasible, however long term, smaller lots with low buffer zones will lead, over time, to over development along these streams. The result will be more stress on the lake and essentially negate other conservation efforts. Please consider increasing the buffer zone to 100 feet to protect the future of Lake George.

Sincerely,
Timothy Bechard
Property Owner on Assembly Point Lake George

LGPC: *(please see #1 Response)*

Comment 13: Lake George Association:

As always, thank you and the Lake George Park Commission for the ability to comment on these new regulations.

The Lake George Association believes that protecting streams and stream corridors in the Lake George watershed is a critical component to protecting the Lake's water quality, which has been the LGA's focus for 135 years.

About 57 percent of the Lake's water comes from streams. As we all continually work on holistic approaches to water quality protection, the streams and stream corridors throughout the watershed need greater protection to ensure the water quality continues to be excellent.

It is in that vein that the Lake George Association wants to confirm our support of the Lake George Park Commission in its efforts to enact these proposed stream corridor regulations.

We welcome the new stream corridor protections as we welcomed the proposed stormwater regulations – as an important next step to keeping Lake George clean and its water quality protected now and for the future.

During the public comment period, there were a variety of concerns raised about specific aspects of the proposed regulations; concerns that were raised with the protection of water quality first and foremost.

We agree that a number of those proposals need to be more thoroughly discussed, including the potential of larger buffers on streams that provide larger volumes of water to the Lake (cited by Dr. Jim Sutherland). But that discussion should not preclude the adoption of the current proposals.

The LGA supports the current proposals – a watershed-wide 35 foot stream buffer; stricter criteria for stream crossings and stream bed disturbances; allow minimal amounts of new impervious surfaces in the stream corridor; and the requirements for limiting land clearing along the DEC-regulated stream.

These new regulations in the watershed will provide a uniform, base level of water quality protection for our streams.

Baseline watershed-wide regulations are important because although the watershed is composed of 11 towns and a village, we are all one Lake that needs protection.

We also propose that in four years, rather than the usual 10 years, the regulations be reviewed for effectiveness. And during that time, the concerns raised by Dr. Sutherland and others be reviewed scientifically, with an eye toward updating some of the regulations as needed or warranted.

The proposed regulations support the efforts of the LGA to encourage residents to live "Lake Friendly," one of our core outreach programs. We want people to enjoy Lake George, we want people to protect Lake George's water quality, and we want future generations to be able to enjoy the Lake in perpetuity.

These regulations will provide a baseline for future protection.

11. LGPC Response: *The LGPC would welcome a discussion regarding the best means to evaluate the effectiveness of these new regulations following an appropriate period of time post-implementation.*

Part 2: Official transcript of the LGPC Stream Corridor Public Hearing on 1/12/2021

*** Official Transcript included below ***

In the Matter of the Lake George Park Commission

Public Hearing in Re:

Stream Corridor Regulations

Location, Date, and Time of Hearing

Via Zoom Videoconferencing

Tuesday, January 12, 2021

4:01 p.m. - 5:13 p.m.

Members and Staff Present:

Bruce Young, Chairman

Kenneth Parker, Vice Chairman

Joe Stanek, Commissioner

Catherine LaBombard, Commissioner

William Mason, Commissioner

David Floyd, Commissioner

Dave Wick, Executive Director

Justin Luyk, Trades Generalist

Joe Thouin, Environmental Analyst

Karla Buettner, Esq., Commission Counsel

Erin Burns, NYSDEC Commission Representative

Also Present:

Members of the General Public

Tara M. Drake, RPR, Court Reporter

SPEAKERS:

CHAIRMAN YOUNG: Okay. This is a special meeting of the Lake George Park Commission for the express purpose of adhering on the stream corridor, and I have very little to say on it.

We have a good program by Dave Wick and Ken Parker, as chair- -- chairman of the ad hoc committee. Will make a few introductory remarks. And we'll get on with the hearing.

So, Ken, would you like to say a few introductory remarks as the chairman of the ad hoc committee?

COMMISSIONER PARKER: Sure will. Thanks, Chairman.

Stream corridor regulations was originally lumped together with the -- the stream buffers, et cetera. The Albany -- folks in Albany wanted us to separate it out, the stream corridor and the buffer protection standards, into a separate regulatory package, which then I believe they will be rejoined after we get through the necessary legal processes.

The reason for the split out was the --

to comply with the intent of NYS ECL Article 43, which we also refer to as the Lake George Law. That's what enables the park commission to exist.

The benefits of stream buffers and the science behind these protections were discussed at length during the stormwater reg process prior to the regulations being separated from each other.

The total regulation, the draft corridor -- the draft regulations are available and have been available on the Lake George Park Commission website. Anybody's welcome to go there, and the written public comment period regarding these stream corridor regs continues open until January 18th, I believe.

Is that correct, Dave?

EXECUTIVE DIRECTOR WICK: That's correct.

COMMISSIONER PARKER: Okay. So today is a public hearing for that benefit. It's one of the statutory processes that we're required to go through. And from that, I give

it to you, Dave, for presentation on what we're going to be talking about.

EXECUTIVE DIRECTOR WICK: Okay. Thank you, Ken.

So I'll start by saying thanks to everybody for showing up today and being a part of the process. Most of the people on the call are well-known to the commission; you guys have been interacting with us for many years, and we appreciate that.

I also want to provide a thanks to Erin Burns from DEC. She's really been very helpful in making sure that the program that we're trying to put in place is as seamless as possible. So Erin's kind of headed up that team which has been excellent.

So with that, I can start. I have about a 15-minute presentation just on some highlights and overviews.

So, Justin, do you want me to share my screen?

MR. LUYK: Hold on there a second, Dave. I'd like to just, you know, second what you said and welcome everybody here. But --

this is a public hearing, and I imagine many of you would like to make a public comment.

And just for ease of procedure, when we get to the public comment, if you wish to make a comment, would you, please, send me your name in the chat, and I will make a list, and I will then call on you when we get to that portion of the meeting. That way we don't miss anybody and we don't have two people talking on top of each other.

And, also, I see one user here, their -- the name just reads "iPad," and I need to know who that is.

MR. MORRIS: It could be Wayne Morris.

MR. LUYK: No, I see "Wayne's iPad." Wayne, what's your last name? Morris?

MR. MORRIS: Morris, M-o-r-r-i-s.

MR. LUYK: Okay.

MR. MORRIS: I'm a homeowner on 6107 Bayview Road, Huletts Landing.

MR. LUYK: Okay. Got that.

And there's one more user, "iPad." Is that Jim Kneeshaw by chance?

MR. KNEESHAW: I think I'm still here.

MR. LUYK: Yep. That's Jim. Okay. I've got you, Jim. I'm just going to rename you here so everyone knows who you are.

And I think -- I think that's it for me, Dave. So you go right ahead.

EXECUTIVE DIRECTOR WICK: Okay. These Zoom things are a little tricky. Hopefully, we'll pull it off as seamlessly as possible.

So, Justin, I will hit the "Share Screen" button. Right there. And...

MR. LUYK: There we go.

EXECUTIVE DIRECTOR WICK: All right. Let me -- let me get this started up. Okay.

Okay. Again, thanks for everyone for coming today. We're just going to talk for about 15 minutes or so to give you the highlights of our -- the proposed stream corridor regulations on Lake George.

This is a very familiar picture to most of the people on the call today. This is English Brook delta in the town/village of Lake George area. A delta that's been growing for several decades due to several different practices, but the issue of stream management

in the Lake George Park has been one that's been around really since the 1980s when it showed up in the 1987 Article 43 law, basically, the Lake George Law that I kind of was kind of alluding to, to take a closer look at stream corridors and how they can help protect Lake George.

So stream buffers, what are they? A buffer is essentially pretty straightforward. It's a vegetated area along a stream where development is restricted or prohibited.

And what's its function? It's pretty straightforward again, self-explanatory. The graphic at the bottom shows you the general essence of what a buffer is. You have your stream and then your nearshore floodplain, and then the idea is to keep a vegetated buffer between the stream and any development so that buffer will act to filter out any potential pollutants or nutrients that might be reaching that stream.

Why are they important? For many reasons. There's a lot of reasons. Stream buffers are a critical part of protecting the

water resource. According to many studies, the -- the majority of water that goes to Lake George comes from tributary streams -- about 57 percent according to the Stearns and Wheeler study, and there's not a whole lot of protection for the streams currently in Lake George Park.

I'll talk briefly about the Town of Queensbury a little bit later, but the scene on the left is the type of thing that we really hope to avoid with some better protections for streams on Lake George.

And just a couple quick examples. Smith Brook here in Diamond Point. Clearly a channelization of the stream and encroachment on the bed and banks, and, really, there's no room for this stream to go, and it's just an unhealthy ecosystem for that brook.

Newer development, you know, continues to occur in the Lake George Park. Without a law, it's hard sometimes for how close those impacts can be to streams. The goal today is to bring forth our ideas on saying here's what we think is a reasonable level of protection

for streams in the watershed, and, coupled with our stormwater protections, we think we'll have a pretty sound program to protect Lake George for the future.

So, you know, this is a great aerial shot. I thank Pat and Randy from the Lake George Association. This is a drone shot of the Indian Brook delta. This is a removal project done actually by private homeowners. This is kind of a result of excessive sedimentation going into Lake George.

There's several major tributaries -- tributary streams that go into Lake George that have experienced excessive sedimentation to the point where they've reached the New York State's -- what's called a 303(d) List. I know some people on the call are familiar with that.

The 303(d) List is essentially a list of impaired water bodies in New York State, and the streams in Lake George have been listed for a couple of decades now as impaired from silt and sediment caused by stormwater runoff and erosion, and we're trying to

minimize these impacts for the future.

Everybody, I guarantee, on this call is very aware of Lake George's first harmful algae bloom. It happened on November 7th of this past year. Fairly unexpected for those of us that have been paying attention, not only because Lake George is extremely high-water quality, low nutrient, but also the fact that it showed up in November, which was a little bit concerning with water temperatures, and, you know, it's still undetermined exactly what all the factors were within this consideration.

In speaking with Dr. Rick Relyea at a recent commission meeting, he and the group of scientists focused on this mentioned it was exceptionally still, and this, you know, could have risen to the top in terms of this bloom, but the fact that it actually occurred in the first place is concerning.

And one of the primary causes for harmful algae blooms or any algae growth is -- can be excessive nutrients. Not saying that's what caused this bloom, but it's certainly a

possibility that needs to be looked at.

Some background on the park commission and what the mandate is. This isn't something that the commission came up with two years ago.

UNIDENTIFIED SPEAKER: It brought me right in when I hit the link.

EXECUTIVE DIRECTOR WICK: Back in 1987 when the Lake George Law essentially came out. Part of Article 43 says the following: "The commission shall ... promulgate regulations relative to stream corridor management which shall include standards for the location of roads, stream channelization, the frequency of stream crossings, and timber harvesting and vegetative cutting restrictions within designated stream corridors."

So this has been a part of the Environmental Conservation Law for about 33 years, and it's also been a part of the commission regs, but it's been essentially held in advance. The commission had a first run, most people will know, at this effort in the -- the 2000s; so 2007 to 2009 ballpark.

And that effort was not ultimately successful. And the commission continued to move forward with various environmental programs.

We rolled in, too, of course, an evasive species prevention program which took considerable effort and then our stormwater efforts, and the commission decided we really need to get back to the table on stream corridors and stream buffers as well.

Again, so what are the benefits of some of, you know, the stream buffering ideas? Primary that we're looking at is filtering pollutants from runoff through capture and infiltration.

Cooling and shading, food for the stream's ecology is pretty straightforward and self-explanatory. And reducing flooding and property damage.

MR. MORRIS: What's the name of that creek?

EXECUTIVE DIRECTOR WICK: The brook right here you can see is highly channelized, very little room for it to move.

I believe this is Foster Brook up in

Huletts Landing.

So this wasn't something that the commission embarked upon easily. We spent considerable time, really since 2017, taking a look at the state of the science both for stormwater management and for stream buffers and stream corridor management. And if you were on our previous efforts regarding stormwater, you're well aware of the many groups that we've met with, some of them repeatedly, to talk about the best ideas that were out there and how any new regulations would mesh with the current municipal environment because we have multiple entities within the park, of course, controlling different types of development and -- and land disturbance activities within -- within the Lake George Park.

So our job as a commission is to make sure that we're working directly with not only the municipalities but also the other folks that really have a stake in the game, and that's what we tried to do over the last three years.

The first step in understanding the issue is to take a look at the science, the people that have been studying this their whole lives, and see what's out there, what is an appropriate stream buffer, stream corridor level activities. You can go on our website and look at -- we posted, I think, maybe six or seven of the studies that we used as kind of base guideline documents.

We have many more, but these are just kind of a sampling of a few of the studies that we looked at to get a general idea of can we get a -- a good gain for a lesser buffer or do we really need to consider something broader; what's the effect of topography, slope, soils, all those types of things. And I think we came down on a fairly -- a fairly good recommendation right now. That will be disputed, I'm sure, on both sides, but all we can go back to is what we know, and what we know is from the science and the studies.

So this is a graph that shows -- it's called a -- kind of a meta-analysis of several studies. Not to bore everybody with the

slide, but it's kind of important. Hopefully, you can see my arrow right here.

Each of the dots on each of these graphs actually represents one individual study, a year's worth of work for each dot, to take a look at what is the removal efficiency of certain pollutants based on buffer widths.

And so taking a look from the top left, the red line that goes vertical is a -- represents what a 35-foot buffer would represent for the streams in Lake George and how would that do with pollutant removal efficiencies on the streams for the Lake George basin.

And so if you take a look, you'll see that horizontal line that goes over to the removal efficiency, and when we look at each of these four parameters with sediment -- whoops -- sediment, pesticides, and nitrogen and phosphorus.

Sediment is critically important for us here in Lake George because sediment phosphorus is a limiting nutrient that can cause algae growth and problems in

the lake. Phosphorus is often absorbed through sediment particles; so they can be fairly similar in terms of their reactions.

So at a 35-foot buffer, what we're seeing right here is we're able to capture ballpark 90 percent of the sediment that's coming into a buffer, and it's important to note that a lot of these studies are conducted in more agricultural areas that have a much higher sediment load and a much higher nutrient load than we would have here in the Lake George Park with our current stormwater regulations and lack of agriculture in the park. So take that into consideration as well.

So in taking a look -- and this was all done years ago -- in saying what makes sense in terms of a buffer width that's reasonable, that isn't seen as a private lands taking, but still has the benefits that we're talking about for stream corridor and lake protection.

So sediment, clearly, we're getting a fairly robust removal of sediment within 35 feet. Pesticides, we're up above

80 percent. Nitrogen, which is important, we're -- we're right around 80 percent, and then phosphorus, the all-critical one that we're all concerned with, at a 35-foot buffer, we're ballpark 80-percent removal, which is fairly important in our commissioners' determination that this was a reasonable buffer width to take a look at.

So I'm going to read a few statements because I think they're important, and they summarize some of the conclusions of these studies.

First, since most phosphorus is readily absorbed to mineral and organic soil particles, meaning phosphorus is stuck to the soil particle, its removal and buffers tends to follow the same patterns as sediment. It's very important.

And a Liu, et al. study, analysis of 80 studies -- this was another meta study that looked at all these studies in congregation -- 10- to 12-meter buffers with 5- to 15-percent slopes, which is not uncommon for something like the Lake George watershed -- they had a

sediment removal efficiency of 84 to 98 percent, and Liu also summarizes -- it was also shown that sediment trapping efficacy would not improve significantly when buffer width was increased beyond 10 meters or 33 feet.

Lastly, a study by Zhang, et al. This is another meta study, a study of studies, reports similar findings to Liu as well as nutrient and pesticide removal efficiencies on par with sediment removal for 10-meter or 33-foot buffers of moderate slopes.

So you can find science on all sides of the spectrum, but what we tried to do is take a look at the mainstream, take a look at the compilation of studies. These are people that have taken a look and said out of the studies that are out there, let's analyze their data and see what makes sense. And those are the primary sources that the commission used to develop its current findings.

So what does that result in? We'll go through this in a little bit of detail. Stream corridor protections. So what are we

looking at doing? Really, two things very specifically. One more focused on overall stream protection and filtering, and the other one is stream crossings, the standards for doing culverts and bridges and whatnot, and we're going to talk about those in a little bit of detail.

First, we're going to focus on the buffer provisions. If you have been at our presentations over the last several years, originally our stream buffers were proposed in our stormwater package; so nothing you're going to hear right now is significantly new to you or should not be real new to you. Again, I'm going to read this because I want to make sure to get the language right.

So within 6 feet of shore, no vegetation may be removed, except that a contiguous clear-cut opening may be created. You can see the graphic at the right. The opening shall not exceed 30 percent of the stream length on a site or a maximum of 75 linear feet, whichever is less.

So the idea being maintain that 35-foot

buffer, but this provision allows people to have access to the stream for enjoyment of that stream.

Secondarily, between 6 feet and 35 feet of the high-water mark, no woody vegetation greater than 1 inch in diameter -- essentially, the beginnings of woody vegetation -- may be removed, except that a contiguous clear-cut opening may be created as noted above.

So the graphic on the right kind of describes on what the allowable would be if you had an uncut buffer forest adjacent to a stream. Here's what you could do with a permit from the commission.

And we're going to talk about the fact this program that we're talking about is only applicable to DEC-regulated streams.

Okay. Secondarily, here is a property that already has a preexisting buffer that has been cut. We'll talk about that in a second, but what can you have within that buffer in terms of development? That is important.

The commission's goal was to minimize any real level of development within that buffer but still allow people to have a structure that they can sit on, like a patio or a porch, to enjoy that stream, and the following guidelines were provided -- or, the recommendations were provided and put forth in our draft regulations, which is a hundred square feet of impervious structure or 10 by 10 or 400 square feet of a pervious hardscape, such as permeable pavers, lawn deck, things like that, which would really minimize any kind of development within that 35-foot corridor.

And, now, this is -- goes to the point of if an individual has property on a stream and their preexisting condition exceeds that 30-percent max development -- I'll read this.

So where development exists within a designated stream corridor prior to the effective date of this article, these areas are to be considered in aggregate with any proposed development or land clearing such that the total development within a designated

corridor complies with the standards above.

So if you already have 10 percent of that corridor cut, you're allowed an additional 20 percent of that corridor cut not to exceed 75 feet.

However, if your stream corridor has already been completely developed, then that may be maintained in perpetuity; the commission is not requiring anybody to go reforest an open buffer from the current condition that they have today.

So we're going to kick over here to what represents a stream in Lake George Park. I was around, as many of you folks were, back in 2008 to 2010 where there was considerable discussion about what constitutes a stream in terms of the regulatory program for the earlier proposed stream corridor program.

And what the commission did this time was, after much discussion with communities and the stakeholders, was that, you know, the DEC is the arbiter of what streams are in New York State. And perhaps our first cut should be taking a look at the DEC mapped streams

within the Lake George Park. If DEC regulates it, it should fall within the commission's stream corridor program.

Does that constitute the full environment of streams within the Lake George Park? It absolutely does not. It doesn't catch many first and second order streams or the tributary streams, but it does catch the vast majority of what the average person, you or I, would really consider a stream, perennial streams that are running all year long.

And the benefit of using the environmental resource mapper is it is publicly available at any given time within 30 seconds of going on a web browser, and you can zoom in and find out whether your property actually has a designated stream on it.

Okay. So permit requirements. If you wanted to do some activity within 35 feet of a designated stream within the Lake George Park, what do you need to do? We've developed a draft permit application for stream corridor modification. I believe it is simply a

one-page form, plus we'd be looking for a tax map parcel or an aerial image identifying the area that the individual would want to be working within. So a pretty straightforward process, and we foresee a very quick turnaround time for these types of activities. The idea being that we would like to know what's happening within stream corridors. The permits can be, again, turned around fairly quickly, particularly if the cutting guidelines adhere to what the standards are in the new regulations.

If there's going to be cutting that is looking to exceed the current standards, that would require a variance from the park commission and the town that we administer or from the -- one of the communities that administers our current jurisdiction for stormwater, which is the Town of Bolton, the Town of Lake George, the Village of Lake George, and the Town of Queensbury.

So the commission, again, is administering the five towns primarily on the east side and north side of Ticonderoga and

Hague, and then the other towns -- the four towns will be administering this program themselves.

So is this program reasonable? And I've had this slide in previous -- previous discussions. Is 35 foot overreach? Is it underreach? Does it make sense? And I believe in many conversations with all parties that our commissioners, communities, stakeholders, 35 feet really seems to have a very good bang for the buck because over 35 feet there is a fairly significant diminishing return and, yet, that additional land would be held away from people actually doing what they'd want to do with their private property. We find it is a very good middle ground. We see it has a great benefit to streams without undo impact on private property owners.

Currently, the Town of Bolton administers this 35-foot standard. It has for many years. And the Town of Queensbury has administered 35-foot stream buffers for more than a decade. Within the last couple of years, they have upped that buffer to a

75-foot buffer, and we've spoken with the Town of Queensbury leadership, and that program has been moving forward, and we were looking to see if it seems to have imposed extremely difficult challenges that they haven't been able to overcome, and we did not get feedback that it was a significant problem.

So at 75 feet, if Queensbury is moving forward, we think 35 feet really makes sense for a good first place to start at the commission.

What we also need to take into effect is what I mentioned earlier, which is the combined effect of the commission's stormwater program, which is one of the most stringent in the northeast of the country, along with these additional stream corridor protection regulations.

Currently, any new development in the Lake George Park, the stormwater needs to go to an infiltration device and be treated. Anything else that would happen to either not been treated by that new development but perhaps been preexisting would go into this

new forest and buffer and then go into the stream.

So when you take into consideration both of these programs working together, we really see this as a very positive step towards the protection of Lake George without undo impact on the residents that live around the lake.

So that is the stream cutting portion of this and development within the buffers portion.

Next, we're going to kick over to stream crossings. This will be a little bit shorter. What we're looking at here on this page are the standards that New York State has been working for many years now to implement on a statewide scale, either in regulation or in guidance or guidelines, to do better for stream crossings.

We've had hundreds and hundreds of failures with our culverts and bridges in New York State essentially based on the fact that our storm events are getting more flashy; we're seeing more water come down all at once,

and culverts -- many back in the day -- I did culverts for 20 years with soil and water -- talking to some old-timer highway guys, it was whatever they had in the yard they put in the stream, and that would last them until it blew out and they put another one in.

So in an effort to do better in the planning stage, the DEC, about five or six years ago, came up with these standards working with a group called InterACT down in Albany, which was all the people working on stream crossings with the DOT, the DEC, Department of -- Department of State Soil and Water Conservation Districts, and came up with these standards and said if we try to follow these guidelines, we're going to have a lot longer lived stream crossings with a lot less damage and a lot less cost ultimately to those municipalities in the state that have to replace these systems that are underdesigned.

So, in doing so, we've been working with DEC -- and this is where we thank Erin Burns and Don Boyajian from DEC Region 5. They've been very helpful, because we've been

trying to develop a program that is seamless for the public.

Currently, DEC very effectively administers Article 15, Protection of Waters. If you've ever gotten a stream crossing permit before, you've gotten a permit from DEC, Article 15. Within the last ten years, if you're doing a stream crossing permit or doing any work on a stream, you most likely worked with your local soil and water conservation district, because DEC delegated out a general permit to conservation districts to do that work, and that has been extremely effective to anybody that's trying to do stream work.

These conservation districts are trained to do exactly this with survey, design, and construction oversight, and conservation districts are out there on every job with a permit working with those folks to make sure it's right.

So DEC gets to protect, and they're looking for soil and water to make sure that the local resources are protected, and the permit process literally takes a day or two,

which has been very effective. The commission did not want to step on that in any way and wanted to work with DEC and soil and water districts to make sure that the current process, which works very well, is going to continue into the future.

One benefit that the commission has is currently the DEC only has guidelines for those standards; they're not codified into their program. With the park commission approval of these stream corridor regulations, under Article 43, all of those standards will be codified into our regulation. So what we've been working on with DEC was essentially to take the commission authority, delegate that over to DEC so the DEC can continue to administer their current program, and that will have the new Lake George Park Commission standards. That seems to find the perfect middle ground.

I believe -- and Erin Burns can speak to this as the commission -- as the DEC representative to the commission, but I believe we're at a place right now where this

really works pretty well.

Lastly, we have logging activities and streams. We've been working with John Bartow of the Empire State Forest Products Association. John's been very helpful in pointing out areas that we wanted to make sure weren't going to impinge upon the traditional activities of logging within the forests of Lake George, however, still had the protection for the resource that we wanted to have.

So DEC currently has a temporary -- it's a permit for temporary crossings. That seems to work very well with the programs that we have in place. We've been working with DEC to ensure that permit system will continue without impact from the park commission.

What we do have in place for logging within the Lake George Park is any logging activities still have to adhere to the current cutting restrictions within the stream corridors. So that's important.

As a part of this, it's the commissions job and requirement, of course, by the governor's office, to make sure we get the

word out on this to as many people as possible. We've identified every landowner that lies adjacent to a regulated stream, and we're going to be sending out informational materials to them, reaching out and making sure that anybody that might be affected by this is fully aware of the new regulations, because we're always seeking compliance, and we're not looking for enforcement actions on anyone; we just want to make sure people understand the purpose and the benefit of this, and we want to work with them to make sure that jobs that they may want to do within that corridor meet the standards that are going to be put in place.

So what are the next steps in the process? We're currently accepting public comment until January 18th -- that is next Monday -- at 4 o'clock. Once we're all squared away, of course, we have to receive all questions and answer those questions and comments. And then we propose to draft any final regulatory language based on any comments that we've received. That has to go

down to the governor's office, again, for kind of review, comment, and approval ultimately.

And the anticipated date for the commission taking this up as a vote is February 23rd. That is the fourth Tuesday. The commission meets every fourth Tuesday of every month. And if those are approved by our board of commissioners, then we'd be formally submitting those to the Department of State for those regulations to go in place on April 1 of this year.

Following that process -- or, actually, concurrent with that process -- we've already met with those towns that administer our jurisdiction for stormwater and will also be administering our stream corridor jurisdiction, and we've drafted the language for them that they can incorporate into their local laws, and we'll be working with them on a regular basis to make sure those are taken care of, you know, for those municipalities.

So that is a high-level overview of what we're looking at. And with that, Justin, I would turn it back to you to -- to go into

the question and comment phase of the program. And thank you very much.

MR. LUYK: So at this point, I've only gotten two messages from everybody -- oh, maybe three here. I just got one from John Bartow and Walt Lender.

All right. So first thing's first. Carol Collins, you were the first one to send me a message; so you're up first.

You're on mute.

Carol, you're still muted.

MS. COLLINS: Thought you'd like it better that way.

Okay. Chairman Young and commissioners, we would like to express our opposition to the revised stream corridor regulations that the park commission is proposing. We will lay out our objectives, which are well-backed by documented science.

The revised stream corridor regulations currently being considered do not protect the double-A status of Lake George. The regulations completely disregard the intent for protection authorized by the New York

State Legislature. The regulations are not aligned with the overwhelming scientific literature on buffers and the need to protect headwater streams, which was the focus of the 2009 draft.

The justification was advanced with no quantification or qualification of the actual impact it will have on Lake George water quality.

After 15 years, the park commission is preparing to vote on standards that are stated and guaranteed to accelerate the decline in water quality at a time when harmful algal blooms have become a threat to our drinking water.

We know that the New York State gave authority to the park commission to establish permit requirements for the protection of stream with the intent to preserve the water quality of Lake George and its tributaries, protect the riparian and aquatic systems of the streams, and provide environmentally sound use of the land's resources.

Here, we will lay out the weaknesses of

the revised regulations in -- in four categories. The four categories are, of course, one, regulated streams; two, 35-foot buffer; three, no setback; and, four, 30-percent clearing or 75 linear feet.

The revised regulations has been limited to DEC-recommended -- DEC-regulated streams. The stream definition was redefined and changed from 100 feet to 35 and buildings are allowed in the setback and not prohibited.

The rationale and justification of these revised regulations are, one, for the regulated and 35-foot streams. The regulatory impact statement asserts, in -- in very misleading terms, that the selected regulations and stream selection, collected buffers fall within the range of the draft impact statement. This is incorrect; they do not fall within the protective category. They are distinctly in the least protective category. The rationale for the other two parameters was not specified.

If we look at the justification for the revisions, the selected standards are based on

the consideration of the express need not to burden the park commission. The park commission concluded that implantation and enforcement of DEC and US EPA 3 zone hundred-foot buffer would be a demonstrative burden and would be difficult to implant.

We find it hard to believe that protecting Lake George could be a burden as it is the region's economic engine and grant funding is available to accomplish these tasks.

Now let me move on to some major scientific studies. Dave, I -- I saw your presentation, of course, but I think the majority of these studies we're looking at show a different story, that they do not fall in the range of the DGIS. I will present a full analysis in written comments.

But let's look at stream type. Your cited -- your cited regulation -- your cited study by Knutsen and Naif recommends a hundred and fifty to 225-foot buffer for headwater, intermittent, and perennial streams. For a 35-foot buffer, Wenger, in that large study,

says that a 35-foot buffer is the least protective, and a 50-foot expandable buffer is described as a risky option.

Sediment requirement, sediment removal is -- 100 feet is sufficiently wide. Nitrogen, 100 feet. Phosphorous must be sufficiently wide to control sediment. US EPA, New York State DEC all recommend a 3 zone 100-foot buffer.

Setbacks, it's -- it's incongruous that we can have buildings built in a setback, in these buffer zones.

Clearing standards. 30 feet, 75 linear feet. Fischer and Fischenich and Wenger, all the major studies promote a continuous buffer. Any clearing in a buffer weakens the protective gains of that buffer. Breaks in vegetation channel runoff into the stream and negate the fact of the surrounding buffer.

I'd like to move now to lake status and proof of failure.

So we need -- we need strong stream corridor regulations because we know Lake George is in decline. Harmful algal blooms

now threaten Lake George.

The 35-foot buffer generally in use -- see Table 2 of the draft EIS -- has been around for decades. The impacts of the status quo are clear. The major stream corridors in Lake George are in poor shape and listed as impaired. Delta formation and dredging our streams are a potent sign of the failure of the 35-foot buffer.

Lake George now bows [sic] to complete -- Lake George vow to complete a full inventory of perennial and intermittent streams by October 2009 as a resource for administrating the stream corridor program. Action has not been taken and now is at a very unfavorable position. GIS expressly concludes that water quality impacts of limiting the revised regulations to only DEC streams will be extreme, unquote.

Without headwater protection, the upper watershed will suffer the same fate as the lower watershed. Even in their public response, in 2009, the park commission stated the eight larger streams represent simply the

confluence of many smaller segments and their protection is not possible unless these tributaries are also protected.

Legally, it is not reasonable or lawful to intentionally pollute a double-A -- double-A stream body -- stream -- special water body.

The Lake George Park Commission by these regulations is allowing excessive pollutant load to the lake which threatens it's double-A status. Confusing as it is, the TMDL so-called moot status is being overwritten by these regulations. According to DEC, EPA, and the park commission, a TMDL is not allowed because it would permit a loading of pollutants into a double-A special water which is forbidden. How are these revised regulations any different?

Cost. A cost assessment would confirm these regs are unsustainable and unresponsive. Costs will continue to soar without suitable regulations. DEC and DOS have provided funds to patch up damages generated from stream corridor mismanagement. To date, the costs of

these temporary remedies, such as in-stream sediment basin and delta drudging, have eclipsed the potential cost of a long-term sustainable solution that's scientifically based and that stream -- better stream corridor regulations would deliver.

Without headwater protections, the upper watershed will suffer the same fate as lower.

The -- millions of dollars have been spent on these projects in an effort to unsuccessfully protect problems over the past decade. In 2001, over $65 million in projects has been requested to continue these efforts without addressing the real problem.

We believe the Lake George Park -- Park Commission is devoted to Lake George and fully understands that these revised regulations are ineffective and harmful to Lake George.

The park commission has a clear choice. It can uphold its mandate to protect the natural resource of the lake or it can promulgate regulations that will continue to accelerate its decline. It is time for

science-driven decision-making. How can we reduce the potential for harmful algal blooms with substandard stormwater and even less protective stream corridor regulations?

Is the park commission willing to subject Lake George to further water decline and imperil drinking water safety for the next 20 to 30 years when these matters might come up again? These are not rhetorical questions.

Please do not advocate for stream corridor regulations that are inadequate to protect class double-A special lake [sic]. The delisting of Lake George as a class A double water special body [sic], as many fear, will be destined to become a reality.

Just as an ancillary remark, I've called many of the people who were involved in these studies because that's what I do. And one in particular -- one of the ones that you -- you represent here, I called and -- it's the dean of Kansas State University. And when asked about 35 feet being a suitable reduction for some pollutants, as their study did in 2007, she replied the setback was taken out of

context; the results are from old research and dissolved phosphorous was not a focus of the investigation.

She said 35 feet is quite small, not the right standard to use, and we are now using 300 feet as a guideline.

Further, she said the smaller the stream the larger the buffer is needed because they are the most important.

I thank you all for listening to my comments. Pray we all do the right thing. Thank you very much.

MR. LUYK: Thank you, Carol.

Next, Chris Navitsky, you're up.

MR. NAVITSKY: Good afternoon, Chairman Young and commissioners.

I would like to thank the commission for the opportunity to provide public comment on this very important issue that will have a tremendous bearing on the long-term protection, water quality of Lake George.

The commission has a statutory responsibility to enact the stream corridor regulations. As an echo of what was just

said, quote, preserve the water quality of Lake George and its tributaries and protect the riparian and aquatic ecosystems of streams within the Lake George Park.

This section has long been blank in the regulations, and it is time to protect our watersheds and our lake. Streams are highly evolved ecosystems with a variety of important biological, chemical, and physical processes. All three of those are vital.

And water quality protection. Stream buffers are the most efficient mechanism and most economically viable for protecting stream corridors, ecological health, and for protecting the lake. Undisturbed, forested corridors provide the best buffer.

The commission is proposing a 35-foot corridor along any DEC-designated stream requiring a property owner to maintain the 35-foot buffer along 70 percent of their frontage but allowing them to remove 30 percent of the entire protective buffer.

We are pleased that the commission is revisiting this overdue action and their

intentions are right, but the extensive science evidence is clear the proposed approach falls short of what is needed. The 35-foot protective corridor will not provide long-term protection for the vital functions of stream networks although studies do show corridor widths of 30 to a hundred feet can be effective at sediment removal; however, the 35-foot corridor is considered an absolute minimum according to one of the commission's cited studies, and this width falls short on long-term removals, and all studies referred to that you need a wider buffer for long-term protection.

By contrast, the Straff- -- the Stroud Water Research Center, the leading fresh water research institute, concluded in a 2014 study focusing on repairing and forest that stream protective corridors should be at least a hundred feet to adequately protect freshwater ecosystems for chemical, physical, and biological aspects from human activity and that wider corridors do a better job at removing the finer silts and clays which tend

to carry the phosphorous.

Other studies found vegetated corridors of a minimum of a hundred feet provide better long-term sediment control. Corridors of a minimum of a hundred feet are necessary to protect streams and measurable increases in water temperature and to provide adequate habitat for food -- for food for fish.

One thing I saw, there is no information in the presentation on the protection of the biological activities in the stream, nothing referencing the thermal protection of the streams; it was only focused on the sediment, which, again, is minimum.

Our own studies from the Waterkeeper Stream Assessment Project found that of our 62 stream sites that we studied, 85 percent were poor or suboptimal for in-stream habitat, 81 were poor or suboptimal for stream habitat, and 44 percent were poor or suboptimal for canopy cover, and these are based on EPA Habitat Assessment Protocols.

So, again, the existing 35 feet is not protecting. We encourage the commission to

require a stream protective corridor of 75 feet which matches the proactive action by the Town of Queensbury to give Lake George and its tributaries the protection needed.

The proposed regulations ignore too many streams. The commission states in their regulatory impact statement that Lake George is fed by more than a hundred and fifty streams, yet the proposed regulations will only protect less than 50 percent of those streams.

Left unprotected are the -- are a number of perennial streams, some of which the Waterkeeper and the FUND have been monitoring for years, as well as the smaller headwater and intermittent streams.

For example, our GIS work that we've been doing found that 40 percent of the second order streams or above will not be protected within the West Brook watershed. So if you take a look at the DEC streams, overlay actual mapping from GIS from the second order, third order, and above, 40 percent of those streams will not be protected.

A 1973 study found corridor protection of small streams where most land and water interaction occurs may offer the greatest benefit for stream network as whole. There is no reason for compromise here. All streams flowing into Lake George impact the lake's water quality and all should be protected. We recommend that second order streams and greater be protected by the regulations.

Couple other points. We agree there should be no oncurvious [sic] coverage within a stream corridor. We're losing protection capacity. Driveway widths of 20 feet, much too wide. Driveways should be much narrower, less impervious cover.

A question also would be logging. Will there be -- logging activities be limited to a single stream crossing to follow the regulations for stream crossings?

In closing, given the irreplaceable value of Lake George and the recognized mapping threats from the harmful algal blooms that we've experienced and other water quality challenges, it is imperative that the

commission strengthen the proposed stream corridor regulations and fulfill its statutory responsibility to protect the lake as science and New York State law demand.

We still have a choice in recognizing documented long-term trends. The commission has an obligation to do what is necessary to protect Lake George to the greatest extent possible. When we protect our streams, we are protecting the lake and we're protecting our communities. To do the absolute minimum would be an absolute mistake. We are serious about protecting Lake George. Thank you.

MR. LUYK: Thanks, Chris.

Mr. Bartow, you were next if you're ready to go.

MR. BARTOW: Yeah. Thank you.

Chairman Young and commissioners, I appreciate the opportunity to present our comments.

We've worked with the commissioners and staff of Lake George Park Commission over the past two years in trying to reach a balance between correct -- protecting the terrestrial

and aquatic ecosystems of Lake George while ensuring the access to timber and fiber -- fiber within the privately-owned forests of the basin.

Regarding the proposed stream corridor management regulations under 6 NYCRR, part 646-5, we appreciate the discussions and changes that we've worked with the commission staff, staff at the Department of Environmental Conservation, and with the SFPA staff and our members. I believe the changes that we have agreed to present a workable framework that benefits all parties.

What we have seen now, however, some slight changes to those just in the past couple hours, which I have not had a full chance to read and take in some of the language and share with our members; so I'll do that over the next couple days. But I'll give you the comments that I have based on the information we had with us on December 18th when we met with Dave Wick and Joe Thouin regarding some of our suggestions; so I'll go right into the specific regulations

themselves.

Regarding the 646-5.2 definitions in our December 18th meeting, it was clarified by Joe and Dave that the existing gravel year-round and winter frozen logging roads and log landings would be included in existing development under 646-5.2, item two. We'd like to see that added into that definition there. They're preexisting circumstances and should be grandfathered like other existing developments.

Under Exemptions for 646-5.4, we were pleased to see the addition of silviculture into the language on (a)(7) involving agriculture and silviculture.

And then under 646-5.5 for Provisions Relating Specifically to Agriculture -- or, Silviculture Activity, I just want to highlight that we believe were the agreed-upon language that was there. The first that a notice of intent would be filed with the commission, that the project complies with the standards under 646-5.7, Stream Corridors, and I'll have some of that after I finish this

list.

Stream crossings have a DEC general permit for temporary bridge -- bridges and culverts for logging activities. Except for stream crossings, no wood roads, skid trails, or log trails within the designated stream corridors. Note our suggested language under 646-5.2 for those existing log landings and -- and roads.

The number of crossings per site shall not exceed one per thousand feet of stream. We'd like to reflect that some variance that DEC may use in the general permit. There are instances when it may be preferable to have another crossing closer to avoid other extenuating impacts that could happen; so the -- that's built into the DEC permit. We just want to make sure that if DEC decides to go that way, admit to mitigate other impacts, that that flexibility would be written -- reflected in the decisions.

And, lastly, that the project's in accord with the New York State BMPs for water quality. What I did notice was there was some

new language that they shared with me a couple hours ago that said that we would be subject to the standards under 646-5.8, which specifically deal with the streambeds and the stream crossings themselves, and it was our understanding the DEC permit would govern under those circumstances.

I -- I think Dave clarified some of it in his presentation where he said that your standards for here would be incorporated and considered in DEC's review of the permit. If that's the case, that's fine. I just didn't -- wasn't sure what that means. And I'll probably have to get you something more on that.

Lastly, we agree with the local delegation. It's been clarified that those municipalities that currently are delegated authority would retain that delegated authority even with the stream crossing provisions.

And, finally, that the notice of intent, as we saw back in September, would be amended specifically to deal with questions

10, 11, and 12 to reflect this agreed-upon language.

Again, I thank you for the opportunity of provide our comments today, and I'm happy to answer any questions that you may have.

MR. LUYK: All right. Thank you, John.

Walt Lender, I have you as next.

MR. LENDER: Okay. Thank you, Justin.

Just wanted to agree with many of the comments that we heard along the way here. There have been very good points made, but I just want to point out that we currently have no watershed-wide protections at all for streams. Nothing that's consistent along the entire watershed.

The LGA's already on record stating that we are in support of stream corridor protections being put into place. And as Chris said, if we are not protecting our streams, we're not protecting the lake. So do support the park commission in enacting these regulations. They have been many, many years in development, and they're needed more than ever as we see stronger and stronger storm

events every year.

We encourage these regulations to be adopted in the watershed to provide a base level of water quality protection for our streams and for Lake George. And we see the -- the results of lots of these -- these flash storms, these intense storms that we're getting as we work throughout the watershed to do mitigation problem [sic] -- mitigation projects to help protect the lake from more sediment getting in. So it would be good to -- to have these regulations in place so that many of the things that we're finding ourselves having to mitigate later don't occur to begin with.

So we thank you very much for the opportunity to comment, and we hope we can move these regulations through. Thank you.

MR. LUYK: Thank you, Walt.

Lorraine Ruffing, I have you as next.

Hold on, Lorraine; you're muted.

MS. RUFFING: Okay. I think that should do it.

MR. LUYK: Sounds good.

MS. RUFFING: Good evening, Chairman Young and park commissioners.

As many have said, the mandate of the park commission under Article 15 provides for conservation of pure water supplies and other natural resources.

The park commission has the mandate to protect, yet it is on the verge of issuing stream corridor regulations that could further degrade the park's natural resources and, in particular, the drinking water of thousands of residents. It is not the time to dismiss science or use it selectively.

The scientific literature that has been mentioned during this public hearing -- Wenger, Pastel, Plutes, and Fischer, et al. -- show that the buffer width that you are choosing is the least effective in preventing pollutants from entering the lake, and the park commission's own summary of the efficacy of various buffer standards shows that the proposed standard of -- of 35-foot width is the least effective.

So how did we arrive at this weak

proposed regulation? During the park commission's public hearing in September -- and during this one too -- it was explained that a series of consultations were held with the local community, that is the municipalities and some stakeholders.

Some advocated for the 35-foot buffer. It seems that their arguments for short-term economic gain won the day while the long-term penalty in terms of impaired drinking water imposed on the community at large is being ignored.

In the park commission's own words, while 35 feet is too narrow to achieve every nutrient reduction goal, this width balances natural resource protection and landowners' property use.

How can one balance the loss of safe drinking water for residents against proprietary rights? It should be noted that an effective stream corridor buffer does not preclude the use of a property. It merely promotes good stewardship.

In most national and international

settings, safe drinking water is considered a human right because it is necessary for human health. It is the United Nations' Sustainable Development Goal No. 6. One in three people in the world do not have access to safe drinking water. Are the residents of Lake George next in line?

We know that our drinking water is being degraded. We have the HABs event as evidence that all is not well with Lake George.

If you approve this substandard regulation, you will be the commission that failed to do its homework and thus failed in your duty to conserve clean water supplies.

I urge you to table this weak regulation and reconsider what is best for the lake and the community at large, especially those who draw their drinking water from the lake, and to use all existing science as your basis. Thank you.

MR. LUYK: Thank you, Lorraine.

Rosemary, you're up.

MS. PUSATERI: Thank you.

And -- and the Lake Stewardship Group of Cleverdale applauds you, Chairman Young and park commissioners, for moving forward with the stream regs. It's important to do this before Lake George goes to HAB in a hell -- handcart. I'm sorry; I added that.

We appreciate the time and effort that created this draft and the people who are involved in working on it. We've reviewed the draft on your website, and we do have a few concerns.

One, 35 feet is not a hundred feet; two, climate resilience; three, a concern about unregulated temporary stream crossings, which I learned a little about at this Zoom meeting; and, four, which streams are included.

Let me start with we believe 35-foot stream buffers are too little too late. The harmful algal bloom of this past fall included our own neighborhood, along our shorelines in Harris Bay, Sandy Bay, and Warner Bay.

Many of our Lake Stewardship Group of Cleverdale members feel an urgency -- a

personal urgency to mitigate what causes HABs. Nutrient loading is the only -- is said to be the only factor among the several conditions that -- results in HABs that humans can control. A hundred-foot stream buffers were agreed upon by the park commission, approved in Albany some years ago, and never implemented by the park commission.

Moving on to climate resiliency. A hundred-year storms are coming more than once a century, as several people before me have said this afternoon. In the past decade, climate resiliency has become more accepted in planning and design. The language in the draft regs does not seem to reflect current scientific and regulatory thinking on the urgency or protecting the watershed and the lake by requiring engineered culverts and structures and whatever to withstand greater than a 50-year storm.

We've all seen this in our lives, in our area around the lake.

We were concerned about unregulated temporary stream crossings, and there still

seems to be fuzziness from what I could hear listening just now about -- I'm not an expert on that. We did not see the language in the draft regs to preclude driving through a stream on a temporary basis, and it seemed to us that whoever would be logging or doing -- clearing and building should be required to -- to install adequate stream crossing to meet their regs and then, when the process is complete, remove the temporary crossing.

Four. Moving on to what streams are precluded, I've heard -- I've heard other people address this better than my language that we all wrote here, but you're relying on the DEC designation. Yes, it would be easy to -- for people to look at one particular map, but the map is not the territory. It's important to protect Lake George, all the watershed.

I thank you for the opportunity to comment. And that's on behalf of the Lake Stewardship Group of Cleverdale.

MR. LUYK: Thank you, Rosemary.

All right. That was it for folks who

sent me messages indicating they wished to make comments.

At this time, if there's anyone else who would like to speak, please make sure you're not muted and say your name and let me know you'd like to make a comment.

I guess we're done with public comments.

CHAIRMAN YOUNG: I think that does it, Justin.

I want to thank everyone for their effort that they put into this. At the beginning, Ken Parker, I want to comment, did a super job as the chairman of the ad hoc committee, and I appreciate the input from people that have had raised comments today concerning this. We will respond to these comments, all of them, in writing, and they'll be available -- if I'm correct, Dave? -- on the website.

EXECUTIVE DIRECTOR WICK: Correct.

CHAIRMAN YOUNG: Yeah.

And, with that, I have nothing further to add except to thank everyone for attending

today, and I appreciate your interest in Lake George and what we're doing to try to preserve it. Thank you very much.

COMMISSIONER PARKER: Okay.

CHAIRMAN YOUNG: We are adjourned.

COMMISSIONER LABOMBARD: Can I say something, please?

CHAIRMAN YOUNG: Well, it's a little late, but go ahead.

COMMISSIONER LABOMBARD: Well, I didn't realize I wasn't unmuted. It took me a second there; I'm on a different computer than I usually use, Bruce.

But I just -- I don't know if this is appropriate, but I don't know why it wouldn't be.

After all the public comments were given in September and I -- I read over so many of the comments that the people who spoke today had written and --

(Telephonic interruption.)

COMMISSIONER LABOMBARD: Just a second. The stupid...

Okay. And I wanted to get the

committee together and talk about things just to make sure. It had so much time, so many months had passed, and I want you to know, all you people that are here today, that we did meet and we went through everything, and there were a few -- a couple of individuals on the committee, myself included, that were concerned about the new things that have been brought up and -- over the fact that maybe we haven't gone far enough, but we came to kind of a conclusion, and I -- I'm not -- and -- and I -- and it was, I think, a good conclusion.

I don't know if we have liberty to say what it was, but I want you people that are here to know, that have expressed all your concerns and -- and you're very passionate about this -- and we are too -- that we have heard everything in -- and heard it more than you think we have.

But at this time and -- and the fact that four years has gone by, I -- I don't know what's going to be able to happen, but I just want you to know that we did take the extra

time to meet and go through everything again.

CHAIRMAN YOUNG: Thank you, Cathy.

COMMISSIONER LABOMBARD: Thank you, Chairman.

CHAIRMAN YOUNG: With that, I'll call for an adjournment.

Okay. All commissioners in favor of adjournment raise your hand.

Fine. We're adjourned.

Thank you very much, ladies and gentlemen.

COMMISSIONER PARKER: Okay. Thanks, everybody.

(End time: 5:13 p.m.)

REPORTER'S CERTIFICATE

I, TARA M. DRAKE, RPR, a Court Reporter and Notary Public in and for the State of New York, certify:

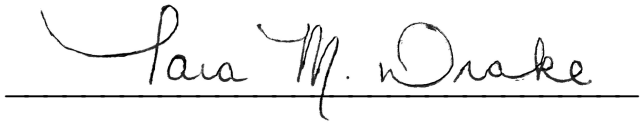
That the foregoing proceedings were stenographically reported by me at the time and place therein set forth and were thereafter transcribed;

That the foregoing is a true and correct transcript of my shorthand notes so taken to the best of my ability and belief.

I further certify that I am not a relative or employee of any attorney of the parties nor financially interested in the action.

I declare under penalty of perjury under the laws of New York that the foregoing is true and correct.

Dated: January 25, 2021



Tara M. Drake, RPR