The LA GROUP
Landscape Architecture & Engineering P.C.
People. Purpose. Place.
40 Long Alley
Saratoga Springs
NY 12866
p: 518-587-8100
f: 518-587-0180
www.thelagroup.com

July 28, 2021

Via E-mail Only
Mr. Devan Korn
NYS Adirondack Park Agency
PO Box 99, 1133 NYS Route 86
Ray Brook, NY 12977
(Devan.Korn@apa.ny.gov)

Randall Young, Regional Director
NYSDEC Region 6
317 Washington St.
Watertown, NY 13601
(Randall.Young@dec.ny.gov)

Re: APA No. 2021-0075 (DEC #6-3038-00081/00003)
Comments of The Adirondack White Lake Association

Dear Mr. Korn & Mr. Young:

The LA Group was retained by the Adirondack White Lake Association (AWLA) to review the permit applications for the proposed White Lake Granite Quarry (quarry, mine) to determine if their concerns with the proposed mine were adequately addressed. These comments on the proposed White Lake Granite Quarry permit applications are submitted on behalf of AWLA.

Since 1981, AWLA has sought to protect the peace and serenity of White Lake. They have been at the forefront of maintaining the ecological balance and preserving the water quality for today's enjoyment and future generations. (https://www.whitelakeadk.com/what-we-do) The goals of the AWLA are:

- to promote and encourage an interest in the community pertaining to the concerns of lake front property owners, the establishment of sound policies designed to conserve, restore, protect, monitor and safely regulate the natural resources, and the safe use and enjoyment of the waters of White Lake,
- to provide a program of social and recreational activity for members of the association and their guests,
- to promote the propagation and protection of fish and game in the New York Adirondack Park, specifically on White Lake, and
- to promote, advance, encourage and stimulate cooperation, understanding, fellowship and friendly exchange among members of the association. (Ibid).

The Application Record

The April 2021 *Mined Land Use Pl*an (MLUP) prepared by Strategic Mining Solutions LLC and submitted to both APA and DEC in support of their respective permit applications include multiple citations to Karboski, 2000. The referenced source is the January 2000 *Mining and Reclamation Pla*n Prepared by KCS Geology for a very similar mine proposal at the same location as the current proposal. The comments that follow are from a review of the current application record (as posted to APA's website https://apa.ny.gov/FOIL%20White%20Lake%20Granite%20Quarry(P2021-0075).pdf) as well as the application record for the January 2000 mining application (APA Project 2000-80 and DEC ID#6-3038-0081/00001).

Development Considerations

Overall, the application lacks sufficient information needed to make a determination of whether or not the proposed action would have undue adverse impacts to the resources of the park, including the White Lake and the Forestport community.

The following development considerations from APA Act Section 805(4) are not adequately addressed in the current application record.

a. Natural resource considerations
- (1) Water
  - (a) Existing water quality
  - (d) Existing drainage and runoff patterns
  - (e) Existing flow characteristics
  - (f) Existing water table and rates of recharge
- (2) Land
  - (i) The quality and availability of land for outdoor recreational purposes
- (3) Air
  - (a) Air quality
- (4) Noise
  - (a) Noise levels

c. Site Development Considerations
- (1) Natural site factors
  - (c) Soil characteristics
  - (d) Depth to ground water and other hydrological factors
- (2) Other site factors
  - (a) Adjoining and nearby land uses
  - (b) Adequacy of site facilities

d. Governmental considerations
- (1) Governmental service and finance factors
  - (a) Ability of government to provide facilities and services

AWLA Comments

The following are our comments on behalf of the AWLA on the permit application for APA Project No. 2021-0075.

1. Hydrogeology

Numerous public comments submitted to date for APA project no. 2021-0075 state that subsurface inflow is a significant component of the water budget of White Lake. USGS mapping of White Lake shows a single surface inlet and a single surface outlet. See Figure 1, White Lake – USGS. Observations of the lake shoreline made from a boat on 7/16/21 did not include observations of any other surface inlets. The inlet of White Lake passes under Newell Road via a 28-inch corrugated metal pipe. The outlet of White Lake passes through two (2) 42-inch ductile iron pipes at Stone Quarry Road approximately 1,900 feet below the beginning of the lake outlet at Bridge Road. Photographs of the inlet and outlet of White Lake are included in Attachment 1 of this letter. Measurements taken at Newell Road and Stone Quarry Road resulted in an approximate inflow of 0.37 cfs and an approximate outflow of 9.61 cfs. These measurements confirm the importance of subsurface flow to the health of White Lake. A primary concern is that proposed mining activities will disrupt the subsurface component of White Lake's water budget which, in turn, has the potential for negatively impacting the current physical, chemical, and biological characteristics of White Lake.

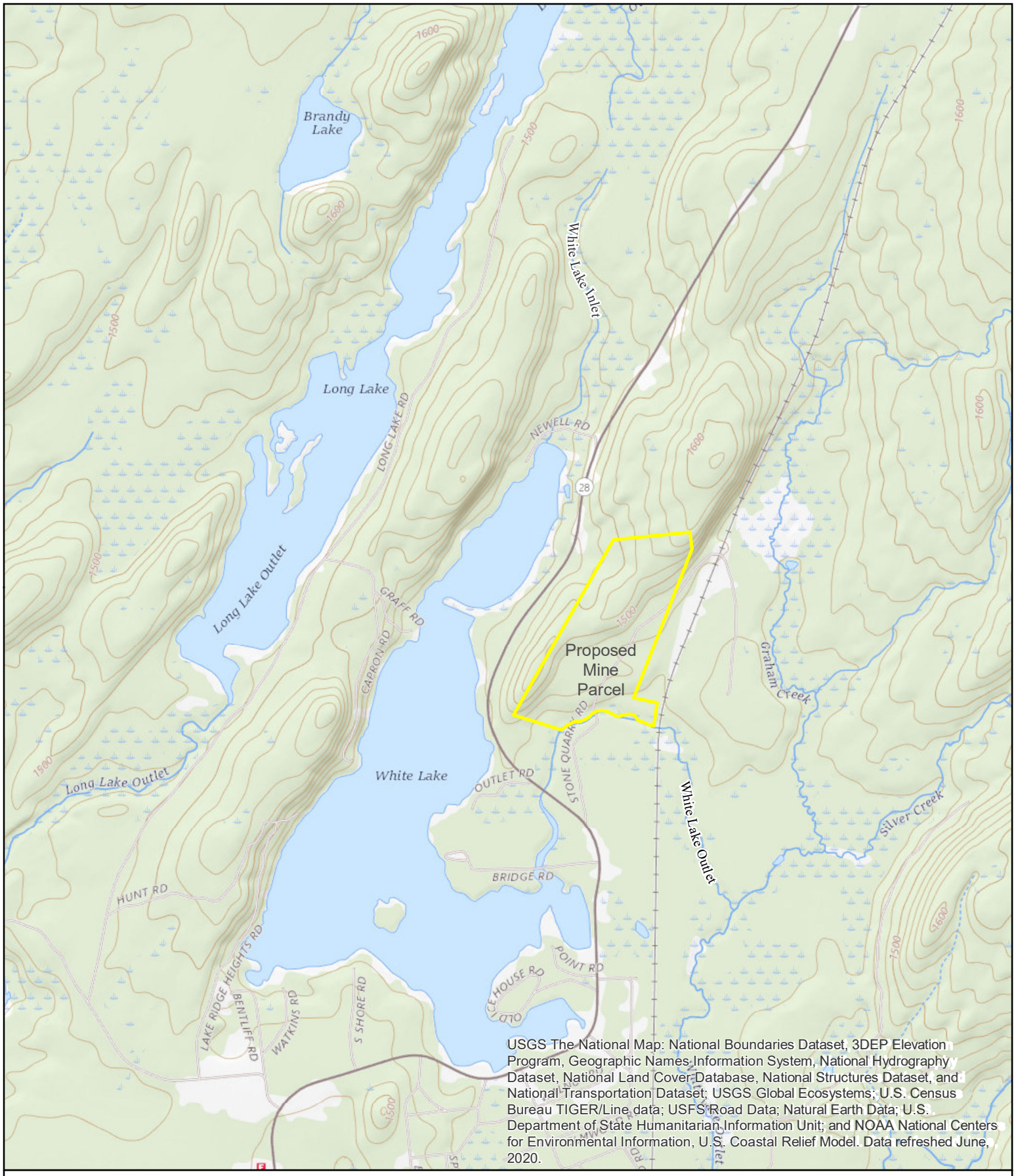
White Lake (ONT-19-104-3-5-P958) is currently an invasive species free, oligotrophic water body with a secchi disk transparency of 7.6 m[1]. The lake has a low watershed area to lake are ratio of 3.4 (329 ha/ 97 ha). White Lake supports a coldwater fishery including brook trout, rainbow trout, white sucker, and yellow perch. White Lake has been participating in the Adirondack Lake Assessment Program since 1999 and AWLA members have assisted by collecting water quality samples during that time. The last full ALAP report on the status of White Lake was published by Paul Smith's Watershed Institute in 2015[2] and is in Attachment 2 of this letter. The lakebed of White Lake is NYS Forest Preserve land (Josh Clague, NYSDEC Natural Resources Planner Bureau of Forest Preserve Management, personal communication July 19, 2021) and is afforded those protections associated with Forest Preserve lands.

A. The application record does not substantiate the applicant's claims of separation between the lowest proposed mine floor elevation and groundwater on the site because the applicant has not adequately documented where groundwater is located below the proposed mine. This information is critical to assessing potential impacts to hydrogeology.

The following statements, some of which are inconsistent, are included in the record:

- *Proposed mining operations will occur above the water table in consolidated bedrock*. MLUP p.3
- *Proposed terminal depth of excavation is 1445 ft. roughly 5 to 10 feet above the water table.* MLUP p.4

[1] 98% of the lakes in the Adirondack Lake Assessment Program had less water column transparency than White Lake
[2] Laxson, C.L., Kelting, D.L., and E.C Yeager. 2015. Adirondack Lake Assessment Program: 2014 Report, White Lake. Adirondack Watershed Institute of Paul Smith's College. Report No. PSAWI 2015-62. 14 pp.



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2020.

1:18,000

0 500 1,000 Feet

White Lake Granite Quarry Review - Figure 1

Title

White Lake - USGS

WOODGATE 2020

PREPARED FOR:

Adirondack White Lake Association

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Project 2021076

Date 07/20/2021

- *Mining is not proposed to occur below the water table. A minimum separation of 5 to 10 feet between the proposed mine floor and the water table will be maintained over the life of the mine.* MLUP p. 15
- *A minimum separation of ten feet will be maintained between the proposed mine floor and the ground water table. The separation is necessary from an operational perspective because the mine is operable only if the mine floor is dry. Water entering the affected area will be directed into the quarry for internal drainage*. MLUP p. 17
- FEAF (MLUP Appendix C, page 4) states maximum excavation depth is 80 feet. The same source (page 11) states that the average depth to the water table is "50+ feet".

It was not until the Applicant's June 14, 2021 response to the Agency's June 8, 2021 Notice of Incomplete Application (page 2) that it was disclosed that the depth to water table information contained in the permit application was based on the surface elevation of the White Lake Outlet and nearby wetlands. Use of this approximated groundwater elevation is unacceptable for use in determining whether or not the project will have adverse impacts on the natural resources of the park, including White Lake. The actual depth of the water table at the mine site must be established for every area where there will be subsurface mining via test bores or some other method(s) acceptable to APA and DEC. Only then can the applicant's claims of separation between the bottom of the mine and groundwater begin to be substantiated or revised. The application record must include documentation of the adequacy, both during and after mining, of providing as little as 5 feet of separation to groundwater while protecting White Lake located less than 1,000 feet away.

B. The application record lacks any analysis of potential impacts to hydrogeology from the use of process water in mining operations. The MLUP in the April 2021 application stated that no process water would be used. It was not until the applicant's June 14, 2021 response to APA comments that it was revealed that process water would be used in the proposed mining operations.

The April 2021 MLUP (p. 15) states [nearby] *wells will not be affected because groundwater will not be encountered and no pumping is proposed. The proposed portable screen processor does not utilize water for washing, it is a dry system.* The Applicant's response to the APA's second NIPA (June 16, 2021, page 2) states *Less than 10gpm of water is proposed to be used while the wire saw is in operation. Water for sawing is to be pumped from an existing well at the site and recycled within a closed circuit system where clean saw cuttings are settled out and clarified water is returned to the saw for reuse*. Project plans should include the location of the existing well and the anticipated location of the sawing operation. Information should be provided in the application record on the existing well including, but not limited to, the driller's log from well installation and the results of any pump testing performed on the existing well, including drawdown data. Furthermore, the application should provide additional details on the closed-circuit water system. Is this system integral to the saw equipment or is it an open external system (pond)? If the latter, project plans should show the location and size of the open external system on the site, show details of how the open system will be lined in order to make the system closed circuit, and how the presence of the open system will not interfere with mining operations within the 5.2 acre mine site that the applicant states must remain dry (MLUP p. 17).

C. The record for the APA and DEC review of a very similar mining project proposed for the same location in 2000 (proposal was abandoned in 2004)[3] contains similar, pertinent hydrogeological questions that remain unanswered. It is fully expected that your agencies will require the same information from the current applicant as part of their review of the currently proposed mine.

The same concerns expressed by AWLA above were previously expressed by the regulatory agencies when a very similar mining proposal was made for the same location in January 2000 (APA NO. 2000-80, NYSDEC #6-3038-00081/00001[4])

We will need some specific groundwater information. This information needs to include but not be limited to the following; depth to groundwater, groundwater flow direction, water table map, rock transmissivity, amount of water expected to be pumped from the quarry and expanded water table drawdown. (NYSDEC (C. Randy Voss Region 6 Regional Supervisor of Environmental Permits) July 31, 2000 letter to Martin Zarnock (applicant for 2000 White Lake Granite Quarry mine permit)).

Item number 22 in the APA's April 27, 2000 NIPA stated the following: *Provide a professionally prepared hydrological report for the area around the project site, which discusses the existing hydrological conditions in the area and the effect that the project (e.g., blasting operations, water usage, etc.) will have on the existing hydrology in the area. (APA (William J. Curran, Deputy Director (Regulatory Programs)) April 27, 2000 Notice of Incomplete Permit Application to Martin Zarnock)*

The applicant should prepare and submit a data collection plan for APA and DEC approval before undertaking the additional work needed to address these critical issues.

2. STORMWATER/SURFACE DRAINAGE

A. The applicant's qualitative assessment of surface hydrology is inadequate and many statements are unsubstantiated. A quantitative assessment performed by a qualified professional is necessary for determining if the project will have adverse impacts on the resources of the park.

The proposed White Like Quarry will operate without surface water discharge because water entering the affected area from precipitation and/or run-on will be internally drained. The proposed excavation will not extend into the water table, facilitating vertical internal drainage into the ground under vadose conditions (MLUP p. 15). This statement is made without any supporting information or analysis. For example, will the entire 5.2 acre life of mine area (LOMA) be cleared of vegetation? Will the entire LOMA be graded? What quantities of water can be expected from rainfall and run-on during a 1-year or 2-year storm event? What is the percolation rate of the materials that will be in the area where water collects? What areas will be

[3] The property deed included in Attachment A of the GIR in the April 2021 MLUP shows that the applicant for the current proposal, Thomas J. Sunderlin Jr., took ownership of the property from Martin Zarnock in March 2012. This same deed shows that Mr. Sunderlin was a co-owner of the property with Mr. Zarnick at the time the 2000 mining permit applications were filed with Mr. Zarnock as the applicant.

[4] Copies of the April 27, 2000 APA Notice of Incomplete Permit Application and the July 31, 2000 DEC Notice of Incomplete Application are attached to this letter in Attachments 3 and 4, respectively.

inundated during these lower return interval storms? What about higher return interval storms such as a 10-year or 25-year storm? Answers to these questions are needed for a proper regulatory review of the project, but they are also important to quarry operations given the applicant's statement that *the mine is operable only if the mine floor is dry* (MLUP p. 17).

APA typically requires that draft stormwater pollution prevention plans (SWPPP) be prepared and included in permit applications for their review of those projects that require a SWPPP under DEC's Article 17 SPDES regulations and general permit GP-0-20-001. This project will require a SWPPP because it will disturb more than one acre. It is possible that a 5-acre waiver may be needed for this project given the 5.2 acre LOMA, which is more reason why APA should require that the application record be supplemented with a draft SWPPP prepared by a qualified professional. Depending on the type(s) of discharge(s) proposed, mining activities on the site may require coverage under DEC's multi-sector general permit for Discharges from Industrial Activities (GP-0-17-004). A critical component of project stormwater documentation, regardless of the most applicable DEC General Permit for stormwater discharges, will be the stormwater management design report.

The stormwater management design report should include quantification of runoff quantities and locating and sizing collection areas to demonstrate that precipitation and run-on can be accommodated on site along with all other site components (equipment, stockpiles, truck access, etc.). A site grading plan needs to be included to substantiate the applicant's claim that there will be no surface water discharge. Topography continues to slope away from mine and towards White Lake Outlet along the low (east) side of the LOMA. Will a diversion swale be installed along the length of the east side of the LOMA to prevent runoff from discharging? Where would this swale discharge to within the LOMA? How large of an area will be needed to capture and hold the collected runoff? Is the LOMA large enough to site an adequately sized stormwater management practice? Site soils are well drained to excessively drained. Are percolation rates slow enough to allow for effective removal of pollutants? What are the expected loadings to groundwater for parameters such as various forms of phosphorus, various forms of nitrogen, total dissolved solids, etc.?

B. The application record does not disclose that the proposed mine is located above a Principal Aquifer. The application record needs to be supplemented to document this condition and how the project will not adversely impact the resources of the park.

The project is located over a principal aquifer according to NYSDEC's online EAF Mapper tool. Principal aquifers are *aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time (https://www.dec.ny.gov/lands/36119.html#Principal).* The application should include a spill prevention and countermeasures plan that provides more details on types and quantities of all potentially deleterious materials that could be stored on site, the secure means of storing these materials to prevent contamination in the case of accidental release, an inventory of spill cleanup materials to be kept on-site, and a discussion of immediate response actions to be undertaken upon discovery of a spill or release (i.e., containment and notification).

C. The 100-year floodplain boundary in relation to the proposed mine needs to be added to the application record, including project plans.

The site is located within the 100-year floodplain according to NYSDEC's online EAF Mapper tool. The floodplain boundary should be added to project plans. Furthermore, should the area of 100-year floodplain include any portion of the proposed LOMA, the application should include a flood contingency plan demonstrating the ability to locate any deleterious and/or dislodgable materials outside the floodplain area and within the LOMA to prevent project impacts should flooding occur.

3. Wetlands

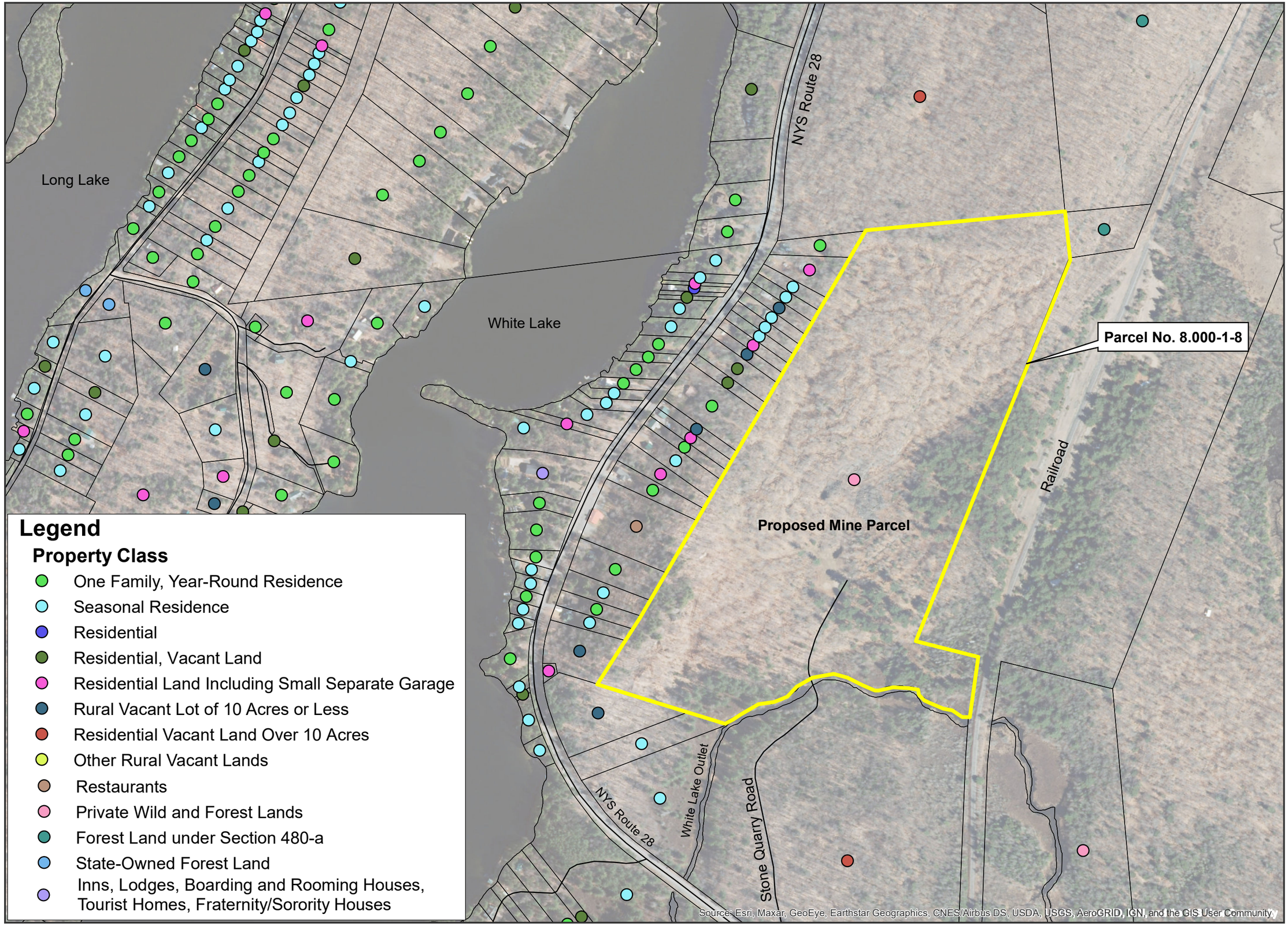
The APA GIR form in Appendix D of the April 2021 MLUP states that the on-site wetlands were delineated in 2000 (+/-). Given that more than 20 years has elapsed, on-site wetlands should be re-delineated and provided to APA for confirmation[5]. This is particularly true given the following statement in APA's April 20, 2021 Notice of Incomplete Permit Application (Item 1, page 2) that states: *Please note, field verification of wetlands may be required if the proposal changes to include development or mining activities near the 100-foot wetlands buffer.* The revised project plans that were submitted by the Applicant to APA in response to the April 20, 2021 NIPA (Mine Use Plan last revised April 2021) include a dimension callout of exactly 100 feet between the 20 year old wetlands boundary (0 feet to the 20 year old wetland buffer). In accordance with APA's April 20, 2021 directive, the application record for the project should include a current delineation of wetlands on the property approved by APA and demonstrating that proposed mining activities will be at least 100 feet from wetlands as they currently exist.

4. Noise

A. It is imperative that the ambient noise environment is correctly characterized as it serves as the baseline against which mine-generated noise is compared in order to determine the potential for adverse impacts to the park's aesthetic resources. The current use of NYSDOT traffic data to characterize the existing noise environment is not appropriate. A noise impact assessment based on measured ambient sound levels must be part of the application record.

The application correctly states that the noise environment in the closest residential area is dominated by vehicle traffic on NYS Route 28. The MLUP establishes an ambient noise level of 58 dBA based on NYSDOT average annual daily traffic (AADT) data. Because the mine is proposed in area dominated by residential uses (see Figure 2, Nearby Parcel Land Use Classifications), actual ambient noise levels need to be established via measurements taken in proximity to sensitive receptors in the vicinity of the proposed mine. DEC's Program Policy for Assessing and Mitigating Noise Impacts (page 11) states: *Most objective attempts to assess nuisance noise adopt the technique of comparing the noise with actual ambient sound levels or with some derived criterion.* The proximity of the mine to nearby concerned landowners (under 600 feet for some) dictates that collection of sound data is imperative to the review of this project. The DEC Noise Program Policy then goes on to state *If there is any concern that levels based on performance values do not correctly reflect sound pressure levels, field measurements should be undertaken to determine ambient*

[5] Jurisdictional determinations/confirmations of delineated wetland boundaries by APA, DEC and the US Army Corps of Engineers are typically only valid for a certain period of time, oftentimes 5 years, from the agency acceptance of the delineation.



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White Lake Granite Quarry Review

Title

Nearby Parcel Land Use Classifications

Source: NYS Department of Taxation and Finance

1 inch = 400 feet

0 200 400

Feet

Project: 2021076

Date: 7/20/21

Figure:

2

sound pressure levels. (emphasis added) AWLA has these concerns.

This request for collection of ambient sound data at sensitive receptor locations is consistent with a request for additional information in item 14 of APA's April 27, 2000 Notice of Incomplete Application for the previously proposed, very similar mine plan at the same location as the current proposal: *Provide a professionally prepared study of noise related impacts to adjoining/nearby land owners and the surrounding environment, wetlands and wildlife, anticipated from trucking, blasting and mobile and stationary equipment to be used on the site. The study should include at a minimum actual decibel readings of background/ambient noise levels from specific locations around the site in comparison to anticipated noise levels, as well as all measures proposed to minimize noise impacts, and if possible decibel readings while equipment/blasting is being tested at the site. The noise study should be prepared in consultation with Agency staff* (emphasis added).

Sound data collected during a designated time period should be used to calculate comparable indices that characterize the existing sound environment such as L_{90} or L_{dn}[6]. The applicant should prepare a data collection plan for review and comment by the reviewing agencies before proceeding with data collection.

B. The noise assessment in the application record does not include the proposed crusher. All noise sources associated with the mine project must be included in order to generate meaningful data to compare against ambient baseline conditions.

Although the sound from operating the crusher is significant at 82dBA at 50 feet, the applicant correctly states on page 2 of their April 22, 2021 response to NYSDEC's April 26, 2021 NOIA that the sound from the crusher will be insignificant when considered in the context of noise generated from other mine noise sources when all sources are operating simultaneously. When the crusher is added to the other mine noise sources from the MLUP (page 9) in a readily available on-line tool for calculating sound pressure levels from multiple sources (http://www.sengpielaudio.com/calculator-spl.htm) there is a slight increase in mine sound levels when the crusher is added to the other mine noise sources. As stated above, it is imperative that all factors considered in the project Noise Impact Assessment contain as complete and accurate data as feasible in order to produce results that can be relied upon by the regulatory agencies and those who reside in the affected environment.

C. The noise attenuation portion of the assessment in the application record contains conflicting information.

A 15' tall earthen barrier was used in the noise attenuation calculations on MLUP p. 11. In Appendix H of the MLUP noise attenuation calculations use a 28.2' tall barrier ($d_{SB}^2 + H^2 = r_{SB}^2$, where H = barrier height and d_{SB} is provided as 35' and r_{SB} is provided as 45').

Noise barrier attenuation effectiveness decreases when there is more distance between the noise source(s) and the barrier. There is no site plan or other graphic demonstrating how all noise-generating equipment

[6] L_{90} = sound pressure level exceeded 90% of the time during the period of measurement
L_{dn} = day-night average sound level

will be operating 35 feet or less from a barrier (the mine face) and that the barrier attenuation of 24 dBA (MLUP Appendix H) is achievable. The applicant needs to produce a plan showing how all mining noise sources, both mobile and stationary, will operate within 35 feet of the mine face. Alternatively, barrier attenuation calculations need to be revised accordingly in the professionally prepared noise impact assessment to accurately characterize mining noise generation with noise sources located more than 35 feet from the mine face.

There will be no natural barrier (natural topography or created by mining operations) between the affected area of the mine and residences to the southwest. The application should include assessment of noise impacts on these residences. It is possible that the longer distances to these residences could provide enough attenuation that a barrier is not needed, but the application does not contain the information needed to make this determination.

D. The noise assessment in the current application record does not address episodic noise sources with unusual tones or pressure levels. These sources need to be addressed in the application record.

The July 31, 2000 DEC letter to the Applicant for a very similar mining proposal at the same location states: *The proposed rock splitting with primacord is suspected to emit a very sharp and high frequency noise. Please elaborate on this aspect of the mining and how much noise is anticipated from this and how far it is expected to travel.* A response to this comment was not provided by the previous applicant and a response should be included in the record for this permit application. Impacts of all other potential noise sources with unusual tones, pressure levels, and sound patterns that could be sharp or startling, such as truck and equipment back up alarms, should be provided in addition to the assessment of noise impacts from longer duration, more tone-consistent noise sources. Similarly, the Applicant needs to address the following from DEC's Noise Program Policy (p 10): *At a hard rock mine, curved quarry walls have the potential to cause an amphitheater effect, while straight cliffs and quarry walls may cause an echo.*

5. Crushing Operations

A. The application record is deficient in its assessment of potential impacts from crushing operations at the proposed mine.

On occasion a portable processing plant with a capacity of less than 150 tph would be utilized to produce small amounts of crushed aggregate for use at the project site or for sale, provided there is demand. Processing, if it occurs, would be limited to occur over a period of 1-3 weeks during work hours. (April 2021 MLUP p.5)

The APA SIR form in Appendix D of the MLUP (page 2 of 21) states that 3,000 – 6,000 cy/year of dimension stone material will be produced along with 10,000 cy/year of crushed stone. Given the relative quantities of dimension stone and crushed stone produced, it would appear that on-site crushing will be more than "on occasion" as stated by the Applicant per above. Additional quantitative information needs to be provided in the application regarding the frequency and duration of anticipated crusher operations. For example, from the information contained in the current application record:

Processing of 10,000 cy of aggregate over a 1 to 3 week (6-18 day) period is an average of 556 to 185 cy/day or 55.6 to 18.5 ten-yard over-the-road dump trucks per day.

Will crushing be occurring concurrently with dimension stone extraction? The application record states that operation of the mine in its entirety will generate a maximum of 20 truck trips per day. According to the Applicant's data, there is potential for an average of anywhere from 55.6 to 18.5 trucks per day just for moving crushed stone.

Will there be stockpiles of crushed material on-site? How large will stockpiles need to be to keep truck trips below the 20 per week stipulated by the applicant? Is there room within the LOMA to accommodate stockpiling? NYSDEC asked the stockpile(s) question of the applicant in their April 27, 2021 notice of incomplete application and the applicant did not provide a response to that question in their (mis-dated?) April 22, 2021 response letter to DEC (pp. 1-2).

B. The applicant states that the proposed crusher will be a dry system – no water will be used for dust suppression. Potential air quality impacts from dry crushing need be analyzed and compared to potential air quality impacts from a crusher with dust control.

The April 2021 MLUP (p. 15) states [nearby] *wells won't be affected because groundwater will not be encountered and no pumping is proposed. The proposed portable screen processor does not utilize water for washing, it is a dry system.* The application should contain a comparison of dust generated by the proposed dry system versus an alternative wet system that is typically employed for crusher dust suppression. The comparison should include estimates of total dust generation as well as characterization of the dust generated (i.e., PM_{10}, $PM_{2.5}$, etc.) from the 2 alternative systems. The comparison should discuss the results in the context of DEC's Policy CP-33: Assessing and Mitigating Impacts of Fine Particulate Matter Emissions.

Should the analysis demonstrate that a wet system for the crusher will produce significantly less dust than the dry system, then a revised total demand from water uses for the saw operations and from the crusher operations should be used in the assessment of surface hydrology in previous comment 2(A) and hydrogeology in previous comment 1(B).

6. Site Access Feasibility

A. The application record does not contain any documentation of the Applicant's ability to utilize Stone Quarry Road to access the mine site. *Stone Quarry Road is a seasonal-use municipal road which ends at a bridge transecting White Lake Outlet. The privately owned access road begins at the bridge and extends north into the project site* (April 2021 MLUP p. 1). The applicant must demonstrate they have titled ingress/egress to NYS Rte. 28.

It is incumbent on the applicant to demonstrate that they have suitable access which includes appropriate and demonstrable access for commercial / industrial operations. Typically, this can either be very easily demonstrated through deeds, easements, or maps prepared by a licensed land surveyor.

It is unclear in the current application record whether or not the applicant has demonstrable access through the adjacent 37.7-acre Turczyn property based on Oneida County land records for TPN 8.000-1-1 (Instrument No. 2008-001789) to the proposed mining operation from NYS Route 28. 'Stone Quarry Road' does appear on the NYS CHIPS (Consolidated Local Street and Highway Improvement Program) report for the Town of Forestport. However, there are no application materials that indicate whether this "seasonal "road" has any clearly known history and may, or may not, have ever been a *public highway* through that property. The applicant should include in the application record an ALTA/NSPS Land Title Survey depicting all easements and encumbrances, leases, mineral interests, other non-fee simple interests to be sure the submitted information is appropriately uniform, complete, and accurate.

It is unclear whether there are any cross-easements allowing Sunderlin express or implied access through the Turczyn property if it isn't actually a *public highway*. Furthermore, the applicant submitted a survey (April 2021 MLUP Appendix D, prepared by Parker Land Surveying, P.C., last revised 5/6/14) without a surveyor's signature or stamp – that includes a notation alleging a statement by the Town Highway Superintendent on 1/18/2012[7] but does not include this supporting documentation in the application materials. Plus, a seasonal designation must be renewed annually by the Highway Superintendent. 'Seasonal Road Per Town' might be an assumption by the surveyor.

If it was ever a true public highway, then there is also a question of whether it has been abandoned by the public, or otherwise. In accordance with the NYS Highway Law, the Town's approval, rejection, or filing or non-filing of a certificate of abandonment will not change the status of the road at all. If the road was ever a *public highway*, and if it was abandoned by non-use as a *public highway* per the meaning and intent of the Highway Law, it remains abandoned even if the Town never files a certificate of abandonment. Moreover, demonstrating that this is a public right-of-way is demonstrable not by merely any use, it is use in a manner that a *public highway* is used, along the normal course of the roadbed. Use as driveway, occasional use for access, or by sightseers, farmers, wayfarers, or hunters and hikers is not sufficient to be a *public highway* under NYS Highway Law (NYS Highway Law §§ 205(1), 205(2), and 207, and Town Law § 280-a).

The application record needs to clearly establish that either: (1) Stone Quarry Road is a Town Road available for use by the public, including the applicant; or (2) that the applicant holds an easement or some other type of legal entitlement that allows them to cross through the adjoining property using Stone Quarry Road.

B. This same access issue was a concern of APA during their review of a very similar mining proposal for the same site in 2000.

Item 18 in the APA's Notice of Incomplete Application for project 2000-80 was never addressed by the applicant for that project and needs to be addressed at this time: *Do other persons have the right to use the existing right-of-way across the project site or the access road to the project site? If so, please provide documentation of their right to do so (e.g., deeds, leases, contracts, etc.). Additionally, provide the names and addresses of all persons who may claim such right at the present time and identify the properties they own (by tax map number) which benefit from these rights* (APA 4/27/2000 Notice of Incomplete Application

[7] Plan note: *Approximate End of Town Road Per Town Highway Superintendent Bill Gardner 1/8/2012*

p. 4).

7. Transportation/Access/Town Fiscal Responsibilities

A. Assuming that the Applicant can document their ability to utilize Stone Quarry Road to access the proposed mine site, NYSDOT review and approval of the intersection of Stone Quarry Road and NYS Route 28 needs to be part of the application record for this project.

The applicant should consult with NYSDOT regarding safe access onto NYS Route 28 including submitting to NYSDOT an intersection assessment prepared by a licensed traffic engineer. Our preliminary assessment of sight distances from NYS Route 28 to the project driveway conducted on 7/16/21 measured approximately 400 feet for the northbound approach and 1,525 feet for the southbound approach. (See photos in Attachment 1.) The intersection is non-perpendicular. There is currently no sign control (stop, yield or otherwise) at the Stone Quarry Road approach to NYS Route 28. In addition to site distance evaluations prepared by a properly licensed professional, the evaluation should include measurement of actual average travel speed for this section of 55 mph road, stopping distances, and the geometry of the existing NYS Route 28 and Stone Quarry Road intersection. The engineer should provide their recommendations for any intersection improvements including realignment, signage, speed reduction, etc., for DOT's review. This State agency's review and comments on the applicant's intersection assessment, including any NYSDOT recommendations for signage, intersection improvements, etc., need to be part of the application record for the project.

B. The application record should include a structural engineer's assessment of the adequacy of the current Stone Quarry Road crossing over White Lake Outlet. Replacement of the crossing in order to support mine-generated traffic could result in municipal fiscal impacts[8] as well as environmental impacts.

White Lake Outlet is conveyed under Stone Quarry Road via two (2) 42-inch diameter ductile iron pipes each 32 feet long. The application record needs to include a structural engineer's assessment of the adequacy of the existing crossing to safely carry the anticipated loaded trucks coming out of the quarry during quarry operations. The project will involve removal of 100 ft^3 to 200 ft^3 blocks of granite (MLUP, page 4) with a density of 164 lbs/ft^3 [9] . Assuming an empty gross vehicle weight of 10,000 lbs, the total load passing over the White Lake Outlet crossing will be 26,400 - 42,800 lbs or approximately 13 to 21 tons when transporting dimension stone. If it is determined that the existing crossing is structurally inadequate for the anticipated weight loads, for dimension stone and also for aggregate, then the following information needs to be included in the application record: (a.) An initial opinion of probable cost for a suitable replacement stream crossing. The crossing is part of the Town of Forestport Road, and an initial cost estimate is important to determine potential cost to the Town. (b.) Potential stream and wetlands impacts associated with replacing the exiting culverted crossing and permitting implications of such impacts, including providing suitable mitigation measures to avoid water quality impacts during removal of the existing crossing and installation of the new stream crossing.

[8] Again, assuming that the applicant can satisfactorily demonstrate that Stone Quarry Road, including the crossing of White Lake Outlet, is a Town road.

[9] From 2000 MLUP Appendix 4: *Interim Report Geologic Evaluation White Lake Granite Property Forestport, Vermont* Geomapping Associates Limited, October 28, 1994.

C. The Town of Forestport should consider entering into a Road Use Agreement with the applicant in order to try and avoid potential future fiscal impacts. Daily traffic generation is projected to be low, but the long duration of mining truck traffic could result in significant cumulative impacts to the Town road.

Stone Quarry Road is currently a +/-12 feet wide stone-surfaced, single lane road with small, vegetated pull offs located near Route 28 and near the White Lake Outlet crossing. The application record needs to include a qualified professional's evaluation of the current condition of Stone Quarry Road. The applicant's projection of the daily truck traffic is relatively low, but the projection of up to 20 trucks per day is a significant increase over what currently occurs. Coupled with a proposed life of mine of 25+ years (project FEAF p. 4) there is potential for damage to Stone Quarry Road as a result of mine operations. Because of the potential for cumulative potential road impacts over such a long duration, the Town of Forestport may want to consider entering into a Road Use Agreement with the Applicant. Documentation of the existing conditions of Stone Quarry Road, agreed to by the Town's Highway Superintendent, would serve as the baseline condition for any such Road Use Agreement and a starting point for determining the cost of restoring Stone Quarry Road to the conditions present prior to commencement of proposed mining operations.

D. The following APA comment from their April 7, 2000 NIPA for a very similar mine proposal at the same site was not answered for that project. It is expected that APA's concerns remain for this action and that the application record should contain information in response to this comment.

17. Provide an engineering report and supporting plans, details and specifications prepared by an engineer licensed in the State of New York assessing the adequacy, in terms of both structural adequacy and traffic safety, for Stone Quarry Road between the site and NYS Route 28. The engineering report must also include plans for and a written description of all proposed upgrades to the road and the long-term maintenance requirements of the road. Since this road is a Town road, the report should be prepared in consultation with the Town of Forestport Highway Superintendent, and it should clearly indicate who will be responsible for the road.

We assert on AWLA's behalf that these comments demonstrate that the current permit application record does not meet APA statutory or regulatory criteria necessary to reach a determination that the proposed White Lake Granite Quarry will not have undue adverse impacts to the resources of the park. I trust that both of your agencies will give these comments due consideration. I am available to discuss this matter with you should you have any questions or concerns.

Sincerely,

Kevin J. Franke
Senior Associate/Director of Environmental Services
kfranke@thelagroup.com

Enc

cc (via e-mail only) Courtney Wellar, President AWLA
Terry Martino, Executive Director APA
Zachary Goodale, Environmental Analyst NYSDEC
Supervisor TJ Entwistle, Town of Forestport

Attachment 1 Photographs
Attachment 2 Paul Smiths Adirondack Watershed Institute 2014 White Lake Report
Attachment 3 APA NIPA for No. 2000-80
Attachment 4 DEC NOIA for ID#6-3038-0081/00001

Attachment 1

Photographs

Granite bedrock outcropping in rear of residence at 12950 NYS Route 28

View South

Photographed July 16, 2021

Granite bedrock outcropping in rear of residence at 12952 NYS Route 28

View North

Photographed July 16, 2021

View west towards White Lake from 12950 and 12952 NYS Route 28 with lake approximately 300 feet away.

It is believed that the bedrock proposed to be mined continues to dip under the lake and then rise again to form the ridge line between White Lake and Long Lake just further to the west.

Photographed July 16, 2021

White Lake inlet passing under Newell Road via a 28" CMP. View South.

Measurements taken at approximately 10:00 AM on 7/16/21 resulted in an estimated lake inflow of +/- 0.37 cfs.

View of Bridge Street bridge passing over the beginning of White Lake outlet.

View east.

Photographed 7/16/21

White Lake Outlet passing under Stone Quarry Road via two 42" DIP culverts.

Measurements taken at approximately 11:00 AM on 7/16/21 resulted in an estimated outflow of +/- 9.61 cfs.

Surface outflow was 26 times higher than surface inflow indicating a significant subsurface inflow component in White Lake's water budget.

View north of NYS Route 28 from the intersection with Stone Quarry Road.

Sight distance was measured as approximately 1,525 feet. The posted speed limit is 55 mph.

Photographed July 16, 2021

View south of NYS Route 28 from the intersection with Stone Quarry Road.

Sight distance was measured as approximately 400 feet. The posted speed limit is 55 mph.

Photographed July 16, 2021

Attachment 2

Paul Smiths Adirondack Watershed Institute 2014 White Lake Report

2014 Report:

White Lake

Adirondack Lake Assessment Program

Adirondack Watershed Institute

Paul Smith's College

P.O. Box 265

Paul Smiths, NY 12970

Report No. PSCAWI 2015-62

Paul Smith's College
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Acknowledgements

The Adirondack Lake Assessment Program (ALAP) is collaboration between the Paul Smith's College Adirondack Watershed Institute (AWI) (www.adkwatershed.org), Protect the Adirondacks (PROTECT) (www.protectadks.org), volunteer lakes monitors, and lake associations. The AWI is a program of Paul Smith's College that conducts research and service work broadly focused on conservation and protection of water resources. PROTECT is a non-profit organization dedicated to the protection and stewardship of the public and private lands of the Adirondack Park, and to building the health and diversity of its human communities and economies for the benefit of current and future generations. PROTECT recruits volunteers to participate in the program and provides administrative support, while AWI trains volunteers, conducts site visits, analyzes samples, and writes the reports. As such, this report and all results and interpretations contained herein were the sole responsibility of AWI. The narrative and results presented in this report were produced by Corey Laxson (Research Associate), Elizabeth Yerger (Research Assistant), and Daniel L Kelting (Executive Director), all with the AWI. Laboratory work on samples received from ALAP volunteers was conducted by Corey Laxson, Elizabeth Yerger, Sean Patton, Brandon Morey, and Dan Kelting. Sean Regalado produced watershed maps in GIS. Peter Bauer, Nancy Bernstein and Evelyn Greene from PROTECT provided administrative support. The lake sampling was conducted by the dedicated ALAP volunteers. John and Ellen Collins, Susan Murante and Marty Mozdzier provided locations for sample collection hubs. Paul Smith's College provided office and laboratory space. PROTECT is very grateful for the support provide to ALAP from the F.M. Kirby Foundation.

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*Corresponding author Corey Laxson at claxson@paulsmiths.edu

Cover Photo: Lower Saranac Lake, an ALAP participating lake since 2001.

How to Use This Report

The ALAP reports are designed to provide lake information to the informed lay person, scientific community, lake managers, and other interested individuals. As such, it is written in a way to provide something for everyone. The report includes an overview of the water quality indicators, a detailed description of the methods, discussion of this year's results and historical trends, and characterization of the trophic status of the lake. Members of the scientific community will likely find the entire document useful, while readers who are interested in a simple summary of the lake may find the *Executive Summary* and the *Quick Facts* sections to be most helpful. The data and accompanying analysis provided in this report give insight into the water quality of the study lakes, more detailed limnological studies may be necessary to produce management recommendations or specific trend interpretations. Readers interested in additional information or accesses to the raw data are welcome to contact the corresponding author.

The data in this document are reported in metric units. Although this system has not been fully adopted in the United States, it is the standard system of measurement used by scientists and lake mangers throughout the world. Information on converting the metric units of measurements used in this report to English units is provided below. The amount of chemical elements dissolved in the lake samples are always described using metric concentration units. The most common ways chemical data is expressed is in milligrams per liter (mg/L) and micrograms per liter (µg/L). One milligram per liter is equal to one part analyte to one million parts water. One microgram per liter is equal to one part analyte to one billion parts water.

Metric Unit	Multiply by	English Unit
Liters (L)	1.05	Quart (qt)
Meters (m)	3.38	Feet (ft)
Kilometer (km)	0.62	Miles (mi)
Hectares (ha)	2.47	Acres (ac)
Cubic Meters (m^3)	1.31	Cubic Yards (yd^3)

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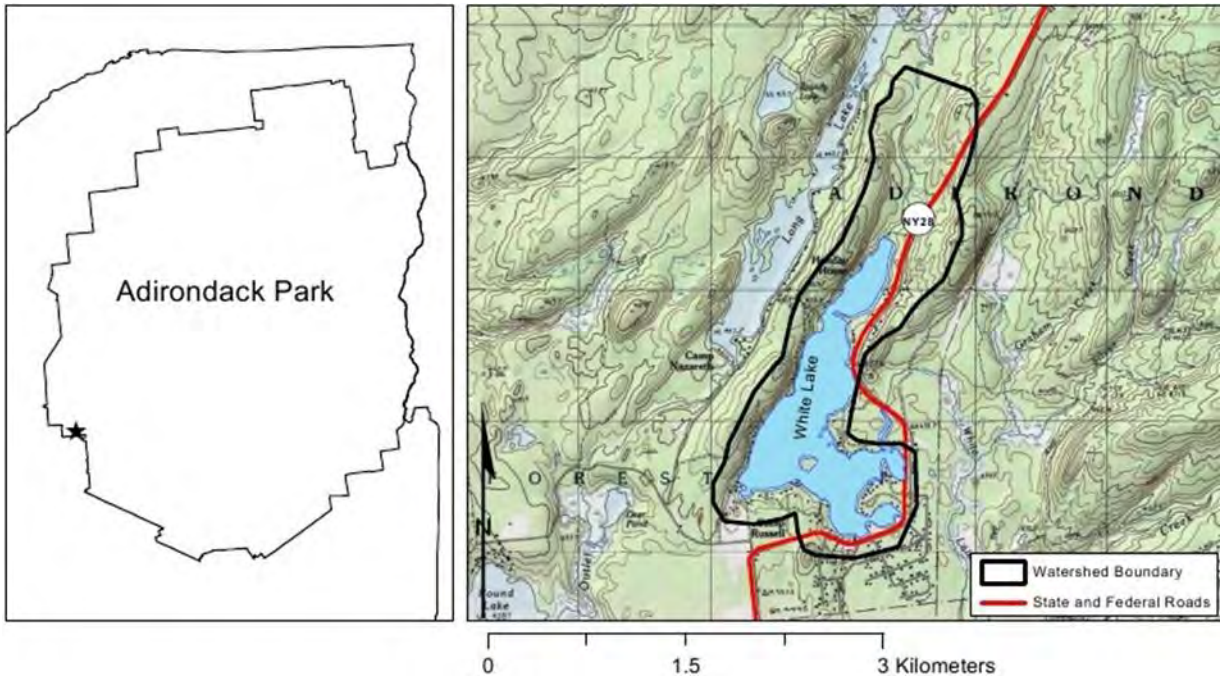

County:	**Oneida**	**Lake Area (ha):**	**97**
Town:	**Forestport**	**Watershed Area (ha):**	**329**

Trophic Status: Oligotrophic **Years in ALAP: 15**

2014 Water Quality Indicators and Long-Term Trends*:

Indicator	Avg.	Trend	Indicator	Avg.	Trend
Transparency (m)	7.6	no trend	Alkalinity (mg/L)	13.3	no trend
Total P (µg/L)	4.3	no trend	Nitrate (µg/L)	59.9	na
Chlorophyll-*a* (µg/L)	1.8	no trend	Chloride (mg/L)	39.1	increasing
Laboratory pH	7.1	no trend	Calcium (mg/L)	7.0	na
Conductance (µS/cm)	158.0	no trend	Sodium (mg/L)	21.5	na
Color (Pt-Co)	5.8	no trend			

*Long term trends are only shown for indicators with more than five years of data.

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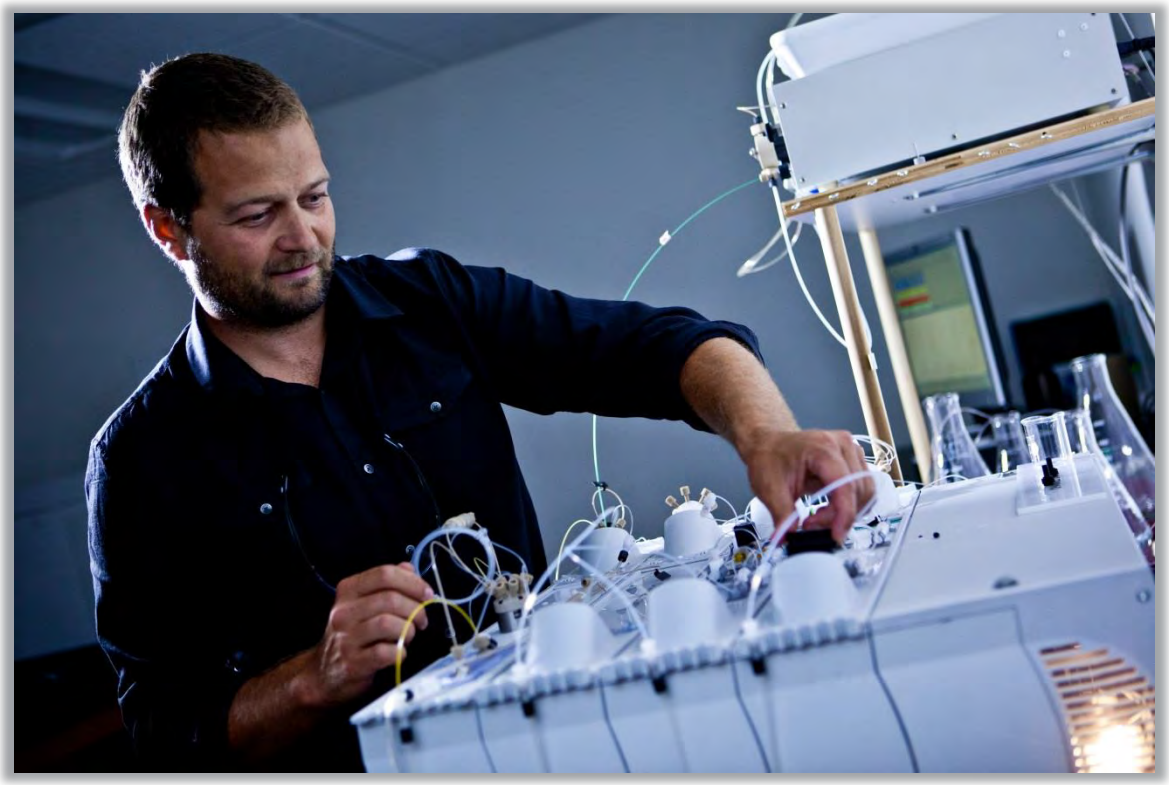

Preparing the Lachat to analyze ALAP water samples for total phosphorus via flow injection analysis in the AWI Environmental Research Lab

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Water quality analysis in the AWI Environmental Research Lab

Executive Summary

White Lake is a 97 ha lake located in Oneida County in the Town of Forestport. The lake is located within a 329 ha watershed dominated by forests. White Lake has been monitored by ALAP volunteers and the Adirondack Watershed Institute since 2000. Three samples were analyzed in 2014 for transparency, chlorophyll-a, total phosphorus, nitrate, pH, color, alkalinity, conductivity, chloride, calcium and sodium. This report presents the 2014 data and describes long-term trends in water quality for analytes with sufficient data.

1. The secchi disk transparency of the lake averaged 7.6 meters in 2014. The transparency of the lake has remained relatively constant over the 15 years of monitoring, with no statistical trend detected in the data.

2. Chlorophyll-a concentration, a surrogate for algal productivity averaged 2.5 µg/L in 2014. Annual average concentrations of this pigment have ranged from 0.9 to 2.5 µg/L, with no positive or negative trend detected in the data in the data.

3. Total phosphorus concentration averaged 4.3 µg/L in 2014. Annual average concentrations of this nutrient are typically below 10 µg/L, with the exception of 2002 and 2010-2011. No trend was detected in the 15 year data set.

4. Carlson's Trophic Status Index calculated with secchi transparency (31), chlorophyll (32), and total phosphorus (25) all indicate an oligotrophic classification for White Lake. The trophic status of the lake typically fluctuates within the oligotrophic boundary with all three indicators in fairly close agreement.

5. White Lake is a circumneutral water body with a typical pH value between 6.5 and 7.8 pH units. The acid neutralizing ability of the lake is moderate (alkalinity 13 mg/L) and the lake is not particularly sensitive to acid deposition.

6. Adirondack lakes in watersheds without paved roads typically have sodium and chloride concentrations less than 0.55 and 0.24 mg/L, respectively (Kelting et al 2012). The 2014 sodium and chloride concentrations in White Lake averaged 21.5 mg/L for sodium and 39.1 mg/L for chloride. These elevated values indicate that the chemistry of the lake is influenced by the 1.6 km of roads in the watershed. The concentrations of these chemicals are well above the EPA drinking water standard established for sodium (20 mg/L) and below the guideline recommended for chloride (250 mg/L).

7. Calcium concentrations in White Lake (7.0 mg/L) are below the threshold required for the establishment of a viable zebra mussel population (8-20 mg/L).

Though the data and accompanying analysis provided in this report give insight into the water quality of White Lake, more detailed limnological studies may be necessary to produce management recommendations or specific trend interpretations.

Introduction

The Adirondack Lake Assessment Program (ALAP) is a cooperative citizen science lake monitoring program between Protect the Adirondacks (PROTECT), the Paul Smith's College Adirondack Watershed Institute (AWI), and numerous dedicated volunteers from across the Adirondack Park and beyond. The objectives of ALAP are to (1) develop a reliable water quality database for Adirondack lakes, (2) document historical trends in their limnological condition, and (3) engender lake stewardship by providing opportunities for citizens to participate in scientific monitoring. To accomplish these objectives participating lakes are sampled throughout the summer by trained volunteers and analyzed by the AWI for indicators of trophic productivity (total phosphorus, chlorophyll, transparency) and water quality (nutrients, pH, alkalinity, color, chloride, and metals). ALAP continues to be a highly successful program. Established in 1998 with 9 participating lakes, the program has grown to 72 lakes in 2014 (Figure 1 and Table 1). For many lakes the ALAP dataset represents the only available source of current water quality information.

Table 1. 2014 ALAP lakes organized by the number of years in the program.

Lake Name	Years	Lake Name	Years	Lake Name	Years
Blue Mnt. Lake	17	Pleasant Lake	14	Moss Lake	10
Eagle Lake	17	Rich Lake	14	Mountain View Lake	10
Loon Lake	17	Tripp Lake	14	Chazy Lake	8
Oven Mtn Pond	17	Twitchell Lake	14	Lower Chateaugay Lake	8
Silver Lake	17	Wolf Lake	14	Upper Chateaugay Lake	8
13th Lake	16	Balfour Lake	13	Chapel Pond	7
Brandreth Lake	16	Garnet Lake	13	Simon Pond	7
Eli Pond	16	Lens Lake	13	Lake Adirondack	6
Gull Pond	16	Lower Saranac Lake	13	Upper Cascade Lake	6
Little Long Lake	16	Lower St. Regis Lake	13	Amber Lake	5
Stony Creek Ponds	16	Snowshoe Pond	13	Augur Lake	5
Austin Pond	15	Spitfire Lake	13	Otter Pond	5
Cranberry Lake	15	Upper St. Regis Lake	13	Jordan Lake	5
Fern Lake	15	Canada Lake	12	Lake Titus	5
Middle Saranac Lake	15	Kiwassa Lake	12	Star Lake	5
Osgood Pond	15	Lake Colby	12	Lake Clear	4
Trout Lake	15	Raquette Lake	12	Lake Durant	4
White Lake	**15**	Sherman Lake	12	Lake Eaton (EC)	1
Arbutus Lake	14	Tupper Lake	12	Lake Placid	1
Catlin Lake	14	Indian Lake (HC)	11	Mill Pond	1
Deer Lake	14	Big Moose Lake	10	Mirror Lake	1
Hoel Pond	14	Dug Mnt. Pond	10	Paradox Lake	1
Lake of the Pines	14	Indian Lake (FC)	10	Schroon Lake	1
Long Pond	14	Lake Abanakee	10		

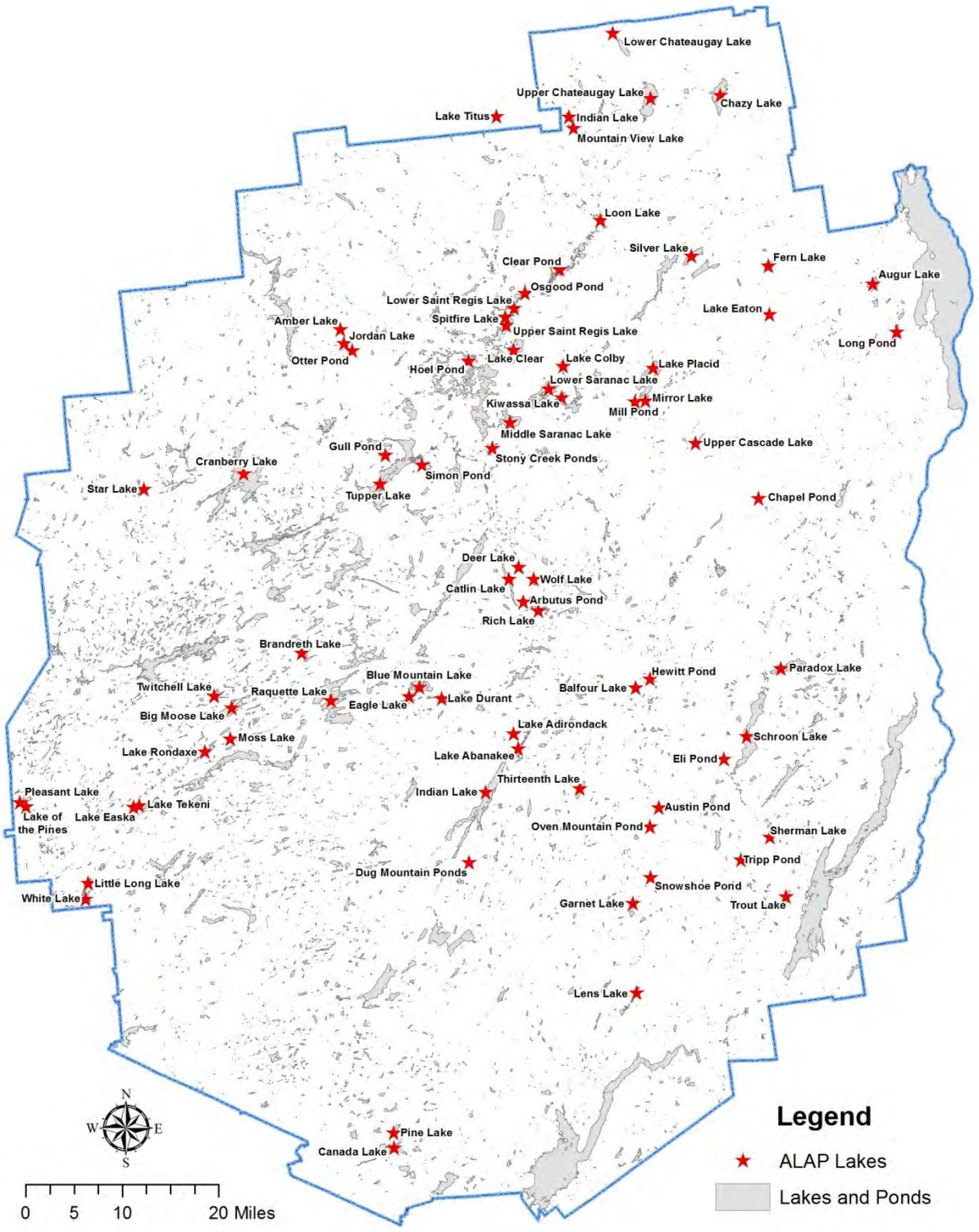

Figure 1. Locations and names of lakes that participated in the Adirondack Lake Assessment Program (ALAP) in 2014.

Table 2. Lake and watershed characteristics for White Lake.

Location	County:	Oneida	Latitude:	43.5437
	Town:	Forestport	Longitude:	-75.1513
Lake Characteristics	Lake Area (ha):	97	Z-max (m):	22.9
	Lake Perimeter (km):	10	Volume (m^3):	6,912,525
			Flushing Rate (T/Y):	0.4
Watershed Characteristics	Watershed Area (ha):	329	Residential (%):	2
	Surface Water (%):	29	Agriculture (%):	1
	Deciduous Forest (%):	48	Commercial (%):	2
	Evergreen Forest (%):	6	Local Roads (km):	1.7
	Mixed Forest (%):	6	State Roads (km):	3.6
	Wetlands (%):	5		

Methods

White Lake is located in the southern Adirondacks (Figure 2) in Oneida County in the Town of Forestport (Table 2). The lake is 97 ha in surface area and has 10 km of shoreline. The maximum depth is 22.9 m, total volume is 6,912,525 m^3, and the lake flushes about 0.4 times per year. The White Lake watershed is 329 ha, 29% of which is surface water. The watershed is dominated by forest cover, with 48% deciduous, 6% evergreen, and 6% mixed forests. The watershed contains 1.7 km of local roads (county, town, and local) and 3.6 km of state roads (state and US highways, Table 2.)

ALAP volunteers were trained by AWI staff in standard limnological sampling methods. Data was collected from the deepest location of the lake, 3 to 5 times during the summer months. During each sampling event volunteers observed the secchi transparency reading by lowering a standard 20 cm black and white secchi disk to a depth where it could no longer be seen. This process was repeated and the average secchi depth for that day was recorded. Surface water samples were collected using a 2 meter integrated tube sampler. The contents of the tube were poured into a 1 liter brown bottle and thoroughly mixed. A 250 mL aliquot of the integrated sample was collected for chemical analysis and a second 250 mL aliquot was filtered through a 0.45 µm cellulose membrane filter for chlorophyll-a analysis. The filter was retrieved and wrapped in foil. The water sample and chlorophyll filter were frozen immediately after collection and delivered frozen to the AWI Environmental Research Lab, generally within a 10 day period.

Samples were analyzed for pH, conductivity, alkalinity, total phosphorus, nitrate, chlorophyll-a, chloride calcium and sodium at the AWI Environmental Research Lab following the analytical methods described in Appendix 1. Results for 2014 were tabulated and time series charts were constructed from the annual average value for each indicator. Trend analysis was conducted using Kendall's non-parametric regression to test the hypothesis "there is no relationship between the indicator and time". Simple

linear trend lines were fit to data with statistically significant trends ($P<0.05$) and displayed on the corresponding chart. Thus, absence of a line means there was no statistically significant trend in the indicator over time.

Average annual values for secchi disk transparency, total phosphorus, and chlorophyll-a were used to calculate Carlson's Trophic Status Index, (TSI), a commonly used quantitative index for classifying lakes based on trophic status (Carlson 1977). TSI values are calculated as follows:

- TSI (Secchi Disk) = 60 – 16.41xln[Secchi Disk (m)]
- TSI (Chlorophyll) = 30.6 + 9.81xln[Chlorophyll a(µg/L)]
- TSI (Total Phosphorus) = 4.15 + 14.42xln[Total Phosphorus (µg/L)]

Typically TSI values are between 0 and 100. Lakes with TSI values less 40 are classified as oligotrophic, TSI values between 40 and 50 are classified as mesotrophic, and TSI values greater than 50 are classified as eutrophic. A detailed description of TSI values and likely lake attributes is found in Table 3.

Table 3. Trophic classification of lakes based on Carlson's Trophic Status Index (TSI).

TSI Value	Trophic Classification*	Likely Attributes
<30	Oligotrophic	Clear water, high oxygen throughout hypolimnion during the entire year
30-40	Oligotrophic	Clear water, periods of hypolimnetic anoxia possible during the summer in relatively shallow lakes
40-50	Mesotrophic	Moderately clear, increasing probability of hypolimnetic anoxia during the summer
50-60	Eutrophic	Mildly eutrophic. Decreased transparency, hypolimnetic anoxia, and warm water fishery only. Supports all recreational / aesthetic uses but threatened.
60-70	Eutrophic	Dominance of blue-green algae, algal blooms likely, extensive macrophytes growth in shallow water
70-80	Eutrophic	Heavy algal blooms possible throughout summer, hyper eutrophic
>80	Eutrophic	Algal scum, summer fish kills, few macrophytes due to algal shading

Results and Discussion

The opening paragraph in each of the following sections provides basic background information for understanding the importance of each water quality indicator and interpreting data from the lake. The background paragraph is followed by a description of the results for the study lake as well as a comparison to the other lakes in the ALAP. The 2014 water quality results for White Lake are tabulated in Table 5, frequency histograms of the water quality indicators for all participating ALAP lakes are displayed in Figure 2, and the historical trends for White Lake are plotted in Figures 3 and 4.

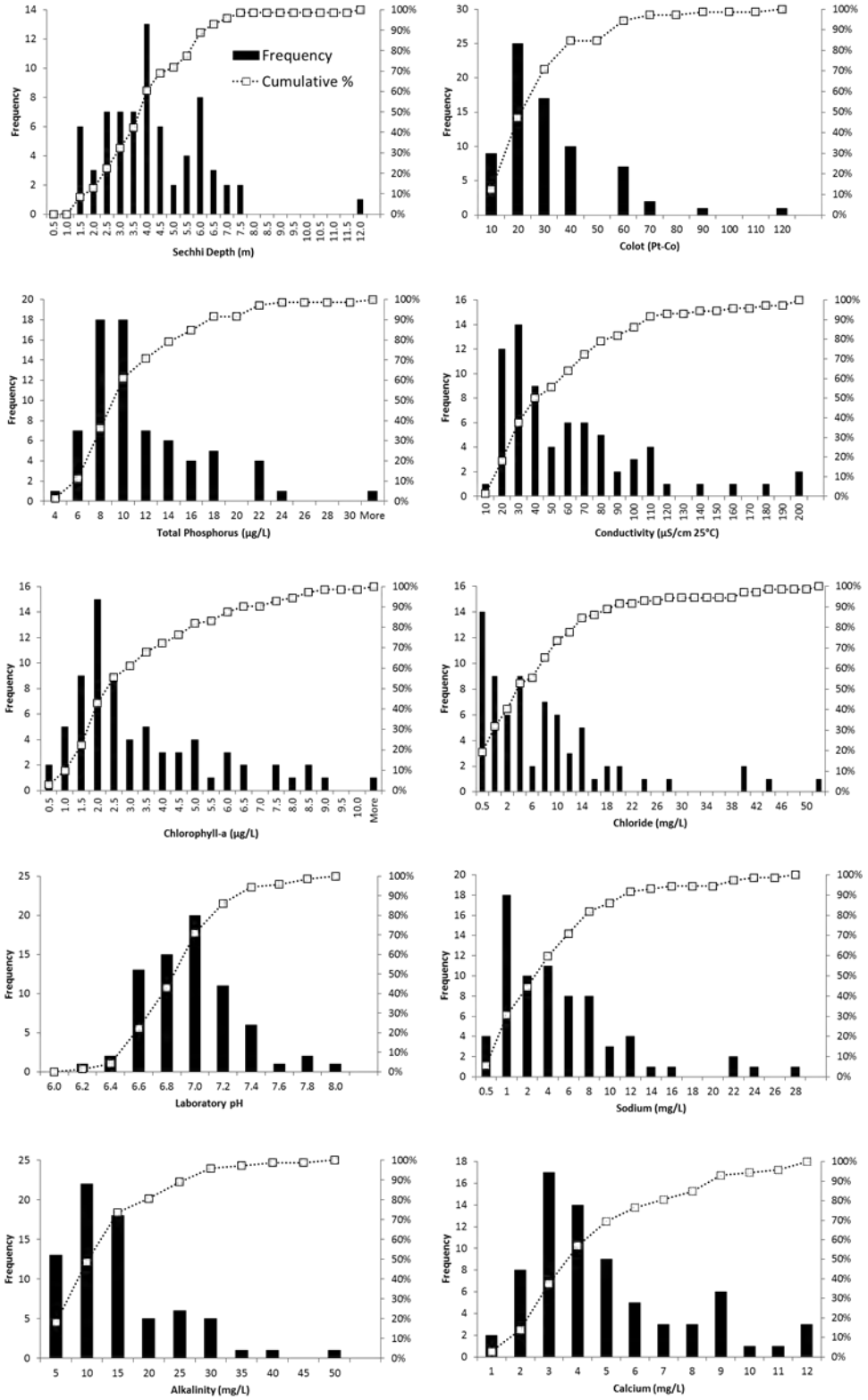

Figure 2. Frequency histogram (bars) and cumulative percentage (plots) of 2014 water quality indicators for the 72 participating lakes. Figure is constructed with each lakes 2014 average.

Transparency

Transparency is a measure of water clarity in lakes. It is measured by lowering a 20 cm black and white disk (Secchi disk) to the depth where it is no longer visible from the surface. The transparency of a lake is influenced by many factors, including algal abundance, turbidity, suspended sediments, and dissolved organic matter (Hutchinson 1957). Transparency can serve as an important indicator of overall trophic condition of a lake as well as influencing human perception of water quality. In general, lakes that have low productivity and low algal abundance have greater secchi transparencies. As algal productivity increases secchi depths become much shallower.

Transparency of White Lake ranged between 6.3 and 9.3 meters in 2014 (Table 4). The majority of Lakes in the ALAP data set (98%) had a transparency less than that of White Lake (Figure 2). Over the 15 years of participation in ALAP, the annual average transparency has ranged from 5.1 to 8.6 meters with no statistically significant trend in the data (Figure 3). None of the participating ALAP lakes showed a positive trend in transparency over time, 11% showed a decreasing trend and 89% showed no trend in the data.

Table 4. Water quality indicators by sampling date and average for White Lake, 2014. BDL = Below detection level.

Water Quality Indicator	Sampling Date			Avg.
	6/16/2014	7/22/2014	8/21/2014	
Secchi Transparency (m)	9.3	7.4	6.3	7.6
Total Phosphorus (µg/L)	3.3	5.9	3.7	4.3
Chlorophyll-*a* (µg/L)	0.5	1.5	3.5	1.8
Laboratory pH	6.9	6.7	7.7	7.1
Specific Conductance (µS/cm)	154.4	156.3	163.3	158.0
Color (Pt-Co)	4.0	13.3	0.0	5.8
Alkalinity (mg/L)	14.9	8.4	16.6	13.3
Nitrate-Nitrogen (µg/L)	119.0	40.5	20.2	59.9
Chloride (mg/L)	38.6	41.8	37.0	39.1
Calcium (mg/L)	6.7	7.2	7.2	7.0
Sodium (mg/L)	21.3	21.4	21.9	21.5

Phosphorus

Phosphorus is of major importance to structure and metabolism of all organisms. However, it exists in relatively small amounts in freshwater systems compared to other essential nutrients such as carbon, hydrogen, oxygen, and sulfur. The addition of extra phosphorus to an aquatic system allows production to increase greatly because all other essential elements are usually available in excess. Thus phosphorus is typically the limiting nutrient in aquatic systems (Schindler 1974, Wetzel 2001), and widely considered as the most important contributor to reduced water quality in lakes (Søndergaard et al. 2003). Natural

weathering releases phosphorus from rocks and soils, and it also enters our watersheds in fertilizers, human waste, and atmospheric deposition. Phosphorus exists in a number of forms in aquatic systems, including readily available dissolved phosphorus, and organically and inorganically bound phosphorus. Total phosphorus is all of the forms of phosphorus combined and serves as an important indicator of overall trophic status of a lake. Generally speaking, lakes of low productivity (oligotrophic) have total phosphorus concentrations less than 10 µg/L, while highly productive lakes (eutrophic) have total phosphorus concentrations greater than 20 µg/L (NYS DEC assessment criteria).

Total phosphorus in the surface water of White Lake ranged from 3.3 to 5.9 µg/L and averaged 4.3 µg/L in 2014 (Table 4). The majority of ALAP lakes (98%) had an average concentration of total phosphorus greater than that of White Lake (Figure 2). Historically, average total phosphorus concentrations have ranged from 3.8 to 21.5 µg/L with no apparent trend in the data (Figure 3). None of the participating ALAP lakes showed a positive trend in total phosphorus over time, 33 % showed a decreasing trend, and 67% showed no trend in the data.

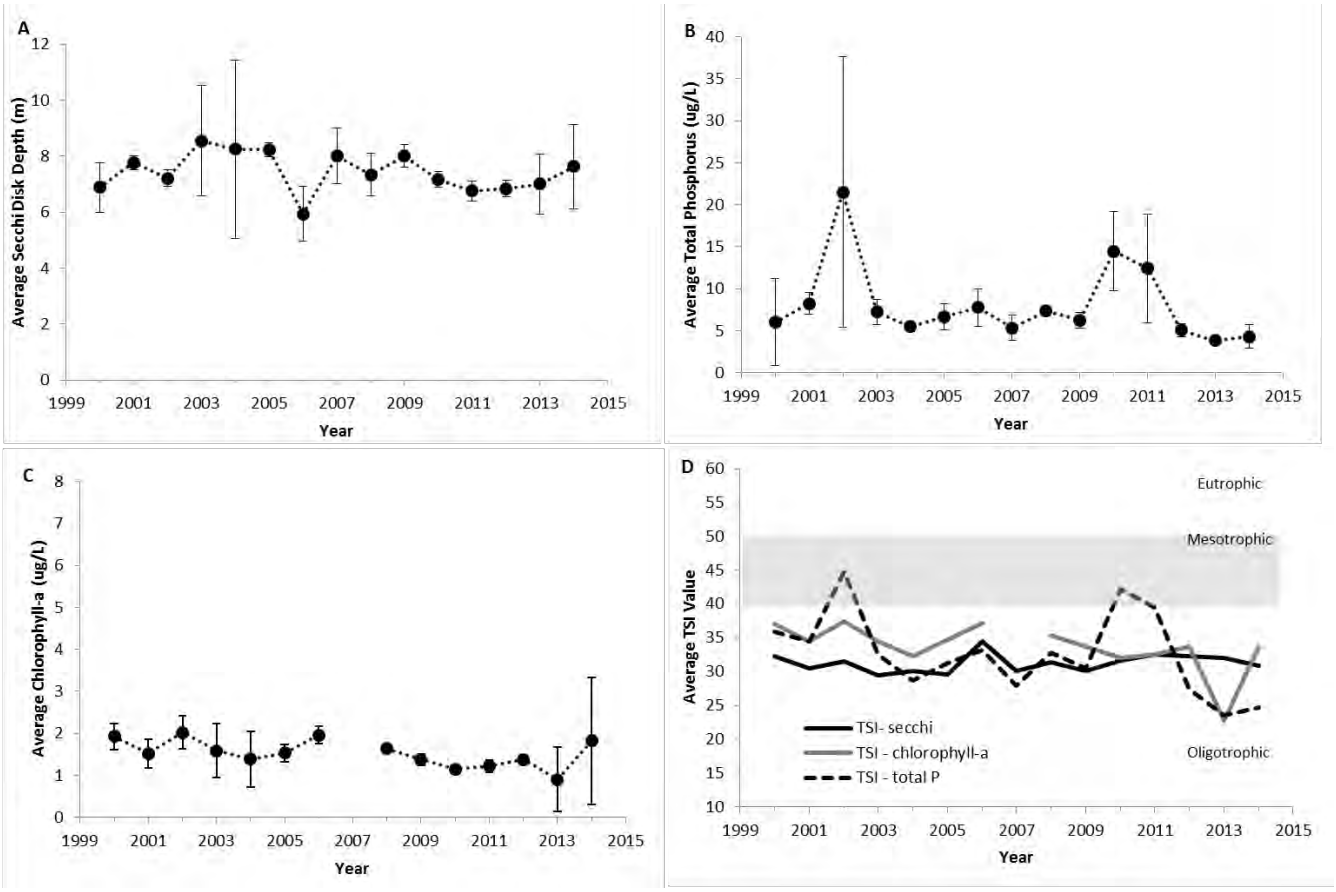

Figure 3. The annual average values of epilimnetic trophic indicators of White Lake, 2000-2014. (A) Secchi disk transparency, (B) total phosphorus concentration, (C) chlorophyll-a concentration, and (D) Carlson's Trophic Status Index. Vertical bars represent one standard deviation of the mean. Significant trends ($P \leq 0.05$) are noted with a trend line.

Chlorophyll-a

Chlorophyll-a is the primary photosynthetic pigment found in all species of algae, as well as cyanobacteria. A measurement of chlorophyll in a lake provides a surrogate measure of algal productivity (Wetzel 2001). Chlorophyll-a is not a direct measure of algal biomass as the concentration of chlorophyll varies somewhat by species and environmental conditions. This said, increases in chlorophyll are generally associated with increased algal production, and the concentration of chlorophyll is widely considered as the most direct measure of the trophic state of lakes. Algal biomass is affected by nutrient availability, water temperature, and light, so there can be considerable variation in chlorophyll concentrations throughout the year depending on which of these three factors is limiting growth at a particular time. Though, major changes in algal biomass (e.g. an algae bloom), and thus chlorophyll, are usually related to changes in the availability of phosphorus, nitrogen, silica or inorganic carbon (Wetzel 2001; Klemer 1990).

Chlorophyll concentration in White Lake ranged from 0.5 to 3.5 µg/L in 2014 (Table 4). The majority of ALAP lakes (78%) had annual average chlorophyll-a concentrations greater than White Lake (Figure 2). Historically, the annual average concentration of chlorophyll-a has ranged from 0.9 to 2.0 µg/L with no apparent trend detected in the data (Figure 3). Two percent of the participating ALAP lakes showed a positive trend in chlorophyll over time, 11 % showed a decreasing trend, and 86% showed no trend in the data.

Trophic Status

Trophic status is a term derived from the Greek word *trophi*, meaning food or nourishment, and is used by limnologists to explain the overall productivity of a lake. Lake productivity is naturally influenced by the rate of nutrient supply from the watershed, climatic condition, and lake and watershed morphology. Human activities within a watershed have the potential to increase the rate of nutrient supply into the lake, and thereby accelerate algal productivity (cultural eutrophication).

Lakes are typically assigned into one of three trophic or productivity classes (oligotrophic, mesotrophic, eutrophic) based on total phosphorus, chlorophyll *a*, and Secchi transparency.

- Oligotrophic - From the Greek words *oligo*, meaning few and *trophi*, meaning nourishment; oligotrophic lakes have low levels of available nutrients. As a result of low nutrients, oligotrophic lakes have high transparency, low algal abundance, low organic matter in the sediments, sparse aquatic plant growth, and abundant dissolved oxygen throughout the water column the entire year. Oligotrophic lakes are most likely to support a cold water fishery (Wetzel 2001).

- Eutrophic - From the Greek words *Eu*, meaning good. Eutrophic lakes have abundant levels of nutrients. As a result of high nutrient availability eutrophic lakes are typified by high algal productivity, low transparency, high organic matter in the sediments, and periods of anoxia in the bottom of the water column (hypolimnion). Eutrophic lakes tend to support dense aquatic plant growth in the littoral zone. Eutrophic lakes are unlikely to support a viable cold water fishery (Wetzel 2001).

- Mesotrophic - from the Greek words *Meso*, meaning the middle. Mesotrophic lakes are an intermediate trophic classification on the continuum between oligotrophy and eutrophy.

The Carlson Trophic Status Index (TSI Index) is a common and valuable metric for evaluating the productivity of a lake (Carlson 1977). The index is calculated by logarithmically converting the values of Secchi transparency, chlorophyll-a concentration, and total phosphorus to a scale of relative trophic state ranging from 0-100. TSI values less than 40 are considered oligotrophic, values between 40 and 50 are considered mesotrophic, and values grater that 50 are eutrophic (Table 3). Calculating the TSI scores from three trophic indicators allows further interpretation of productivity status of the lake.

The TSI for White Lake calculated with secchi transparency (30.9), chlorophyll (33.6), and total phosphorus (24.7), suggest an oligotrophic classification for White Lake (Table 3). The trophic state of White Lake typically fluctuates around the mesotrophic-oligotrophic boundary with all three indicators of trophic status in close agreement (Figure 3).

pH

pH is a measurement of the concentration of hydrogen ions in water (acidity). Hydrogen ions are very active, and their interaction with other molecules affects the behavior of gasses, nutrients, and heavy metals and biological activity; thus pH is considered a master variable for its influence on chemical processes and aquatic life. pH exists on a logarithmic scale between 0 and 14. Because pH is logarithmic a decrease in 1 pH unit represents a 10 fold increase in hydrogen ion activity. Lakes are considered circumneutral when they have a pH between 6.5 and 7.5, while lakes with pH values less than 6.5 are considered acidic and those with pH values greater than 7.5 are considered basic. Lakes can become acidified when they are influenced by organic acids from soils, wetlands and bogs or when acidic precipitation falls on a poorly buffered watershed (Dodson 2005, Wetzel 2001). Acidity is also influenced by the time of day. For example, water samples taken during a bright sunny afternoon will often have elevated pH levels due to algal photosynthesis and the subsequent removal of carbon dioxide from the water (Dodson 2005). This natural process along with release of carbon dioxide by respiration means lake pH can fluctuate throughout the day.

White Lake is a circumneutral water body. In 2014 the pH of the water samples ranged from 6.7 to7.7 pH units (Table 4). The majority of lakes in the ALAP data set (71%) had a pH lower than that of White Lake (Figure 2). Over the past 15 years of monitoring the average pH of White Lake has ranged from 6.5 to 7.9 with no trend apparent in the data (Figure 4). Three percent of the participating ALAP lakes showed a positive trend in pH over time, none of the lakes showed a decreasing trend, and 97% showed no trend in the data.

Alkalinity

Alkalinity (or acid neutralizing ability) measures the buffering capacity of a lake, which is the ability of the lake to resist a change in pH. High alkalinity lakes are well buffered against changes in pH, while low alkalinity lakes are poorly buffered against changes in pH. Thus, a high alkalinity lake would have a more stable pH compared to a low alkalinity lake, and a more stable pH is less stressful to aquatic life. The carbonate system provides acid buffering through two alkaline compounds: bicarbonate (HCO_3^-) and

carbonate ($CO_3^{=}$). These two compounds are typically found in association with calcium or magnesium. Lakes with less than 10 mg/L calcium carbonate are sensitive to acidification, while lakes with greater than 20 mg/L calcium carbonate are not sensitive to acidification (Godfrey et al. 1996).

In 2014 the alkalinity ranged from 8.4 to 16.6 mg/L and averaged 13.3 mg/L as calcium carbonate (Table 4). The alkalinity of White Lake represents approximately the median value for the participating ALAP lakes (Figure 2). Historically, the annual average alkalinity of the lake has ranged between 12.2 to 26.3 mg/L with no statistical trend apparent in the data (Figure 4). None of the participating ALAP lakes showed a positive trend in alkalinity over time, 29% of the lakes showed a decreasing trend, and 70% showed no trend in the data.

Color

The observed color of a lake is an optical property that results from light being scattered upwards after selective absorption by water molecules as well as dissolved (metallic ions, organic acids) and suspended (silt, plant pigments) materials . For example, alkaline lakes with high concentrations of calcium carbonate scatter light in the green and blue wavelength and thus appear turquoise in color. Lakes rich in dissolved organic matter and humic compounds absorb shorter wavelengths of light such as green and blue and scatter the longer wavelengths of red and yellow, thus these lakes appear to be brown in color (Wetzel 2001). Thus analysis of color can provide us with information about the quantity of dissolved organic material in the water. For objective quantification of apparent color we compare water samples to standards of platinum-cobalt solution. (Pt-Co units).

Apparent color values from White Lake ranged from 0 to 13.3 Pt-Co (Table 4). The majority of ALAP lakes (90%) had greater color to the water than White Lake (Figure 2). Over the period of ALAP participation, the annual average color value of the lake has ranged between 1 and 27.3 Pt-Co units with no statistical trend detected in the data (Figure 4). Eleven percent of the participating ALAP lakes showed a positive trend in color over time, none of the lakes showed a decreasing trend, and 89% showed no trend in the data.

Conductivity

Pure water is a poor conductor of electricity. The ability of water to conduct electricity increases as the concentration of dissolved ions in the water increases. Thus, conductivity is considered a strong indicator of the amount of dissolved ions in water. Typically the conductivity of a clean undeveloped lake in the Adirondacks is in the range of 10-25 µS/cm. Elevated conductance may be indicative of road salt pollution, faulty septic systems or the influence of bogs and wetlands in the watershed. Conductivity is a very useful surrogate when the relationships between ion concentrations and conductivity are known. For example, conductivity can be used to estimate sodium and chloride concentrations in streams (Daley et al. 2009).

Conductance values of White Lake ranged from 154.4 to 163.3 µS/cm (Table 4). The majority of ALAP lakes (96%) had less conductance values than White Lake (Figure 2). Historically, the average conductivity of the lake has ranged from 108 to 161 µS/cm with no statistical trend (Figure 4). Three percent of the participating ALAP lakes showed a positive trend in conductivity over time, 22% of

the lakes showed a decreasing trend, and 75% showed no trend in the data.

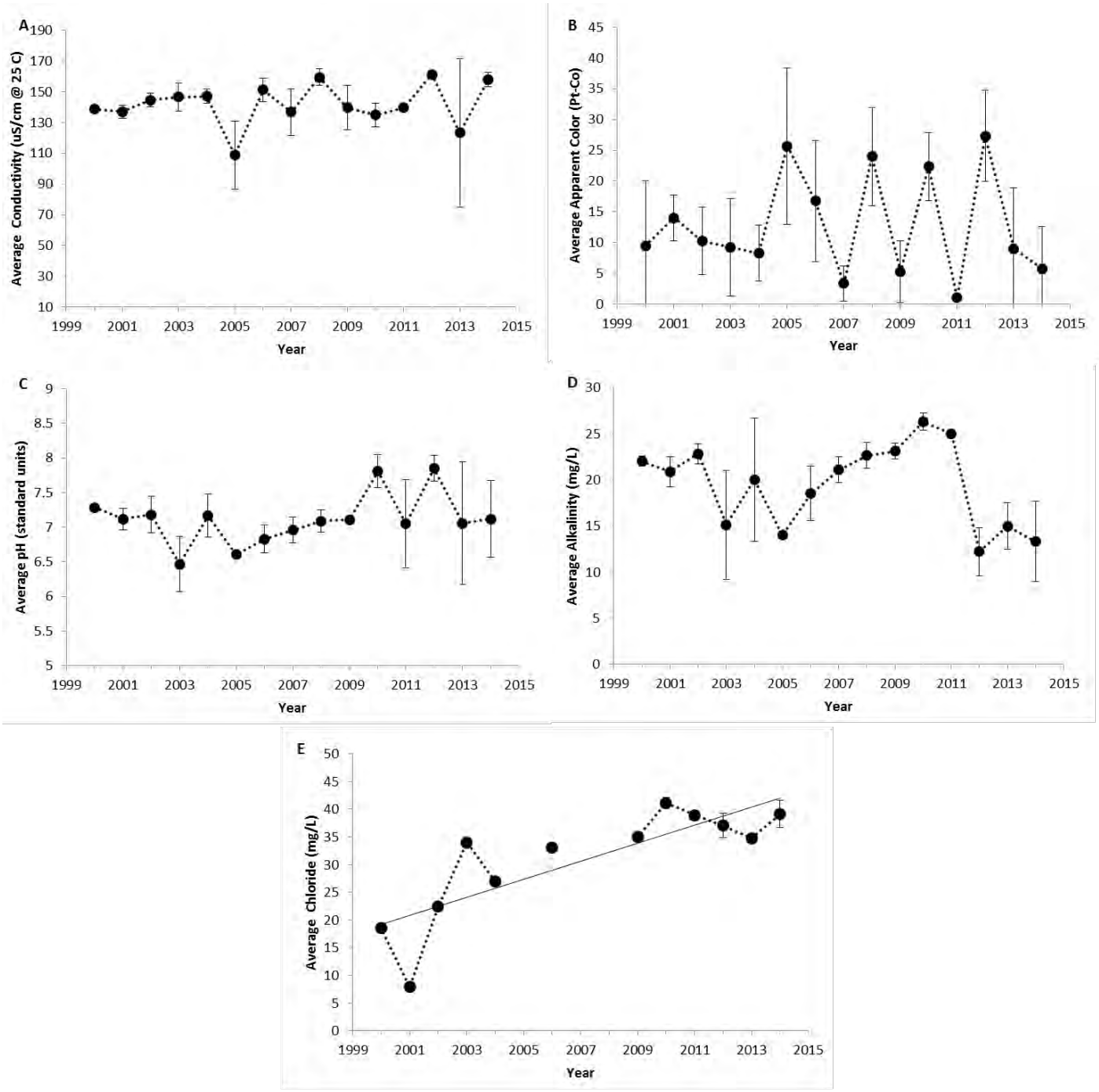

Figure 4. The annual average values of water quality indicators of White Lake, 2000-2014. (A) Specific lab conductivity @ 25 C, (B) apparent color, (C) pH, (D) total alkalinity, and (E) chloride. Vertical bars represent one standard deviation of the mean. Significant trends ($P \leq 0.05$) are noted with a trend line.

Sodium and Chloride

Non-impacted Lakes in the Adirondack region have naturally low concentrations of sodium and chloride, with average background concentrations of 0.5 mg/L and 0.24 mg/L respectively. However, wide spread use of road deicers (primarily sodium chloride) has significantly increased the concentration of these chemicals in lakes that have salted roads in their watersheds (Kelting et al 2012). Sodium and chloride can have negative effects on aquatic life when at high concentrations (Corsi et al. 2010), and can impart an undesirable taste to drinking water. The US EPA has a drinking water guideline of 250 mg/L for chloride and 20 mg/L for sodium, but these are not enforceable standards.

Average concentrations in White Lake during 2014 were 21.5 mg/L for sodium and 39.1 mg/L for chloride (Table 4). The highly elevated concentrations of these chemicals suggest that the chemistry of the lake is influenced by the 5.3km of roads within the watershed. The majority of ALAP lakes had lower concentration of chloride (97%) and sodium (97%) than White Lake (Figure 2). The average chloride concentrations generally ranged between 7.1 to 49.9 mg/L in White Lake with a statistically significant increasing trend detected in the historical data at a rate of 1.6mg/L/year (P=0.003,Figure 4). Historical trend analysis of sodium was not performed.

Calcium

Calcium is an essential element for plant growth, but is generally considered a micronutrient in freshwater systems (needed by organisms in tiny amounts, Wetzel 2001). Some organisms, such as shell producing mollusks, require larger amounts of calcium to establish a population. Calcium is derived from the weathering of calcium bearing bedrock, such as limestone and dolomite. The majority of the bedrock in the Adirondack region is comprised of granite, and thus offers little in the way of calcium to the watershed. Calcium concentration is a good indicator of the overall habitat suitability for the zebra mussel, a non-indigenous species from Eurasia that has been spreading through North America and transforming food webs and biochemical cycles in freshwater systems since 1988 (Strayer 2009). Researchers have reported minimum calcium concentrations ranging from 8-20 mg/L to support a viable zebra mussel population (Cohen 2004).

Calcium concentration in White Lake ranged from 6.7 to 7.2 mg/L, just below the reported threshold ranges for the zebra mussel. The majority of ALAP lakes (81%) have calcium concentrations lower than that of White Lake. Historical trend analysis was not performed for calcium.

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Appendix 1. Analytical methods performed on ALAP samples at the AWI Environmental Research Lab.

Analyte	Method Description	Reference
Lab pH	Mettler Toledo standard pH electrode	APHA
Conductivity	Conductivity at 25° C via Mettler Toledo conductivity cell	APHA 2510 B
Apparent Color	Single wavelength method with PtCO standards	APHA 2120 C
Chlorophyll-a	Trichromatic method uncorrected for phaeophyton	APHA 10200 H
Total Phosphorus	Acid-persulfate digestion, automated ascorbic acid reduction	APHA 4500-P H
Nitrate + Nitrite	Automated cadmium reduction	APHA 4500-NO_3 I
Alkalinity	Automated methyl orange method	EPA 301.2
Chloride	Automated ion chromatography	EPA 300.0
Calcium and Sodium	Inductively coupled plasma optical emission spectroscopy	EPA 200.7

Attachment 3

APA NIPA for No. 2000-80

STATE OF NEW YORK
EXECUTIVE DEPARTMENT
ADIRONDACK PARK AGENCY
P.O. Box 99, Route 86
RAY BROOK, NEW YORK 12977
(518) 891-4050
FAX; (518) 891-3938

May 16, 2000

Frank Karboski, CPG
KCS Geology
P.O. Box 61
Camden, NY 13316

Re: Adirondack Park Agency Project 2000-80

Dear Mr. Karboski:

Thank you for providing the Agency a copy of the Mining and Reclamation Plan for the White Lake Granite Quarry. The Plan and plans do provide some of the information requested by the Agency's Notice of Incomplete Permit Application; however, it does not provide all of the requested information. Therefore, the application remains incomplete and the time frames for review of projects specified in Section 809 of the Adirondack Park Agency Act and 9 NYCRR Part 572 will not commence until all of the originally requested information is provided for review or specifically waived by Agency staff in writing.

As indicated by Item 1 of the Agency's April 27, 2000 Additional Information Request, after receipt of the mining report and after the requested site visit, Agency staff will determine if all of the originally requested information is still necessary. Review of the Mining and Reclamation Plan may also generate additional questions not included in the original information request.

Agency staff is in the process of reviewing the Mining and Reclamation Plan. A preliminary review of the Plan suggests that it addresses items 5, 6, 8, 9, 11, 12 and 29 of the original additional information request and partially addresses items 7, 10, 13, 15, 16, 23 and 27. The Mining and Reclamation Plan does not provide the information requested by items 1, 2, 3, 4, 14, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28 and 30. Further clarification or more detail for those items only partially addressed by the Plan and the information not addressed by the Plan will be required for a complete permit application. Agency staff will provide a more detailed itemization of the information required for a complete permit application after the required site visit.

The Agency has received significant public input about this project. It would be helpful if a copy of the Mining and Reclamation Plan was provided to Don Haehl, the Town of Forestport's Code Enforcement Officer. This would allow the town officials to have a better understanding of what the proposed project entails and provide local residents the opportunity to review the plan at the Town's offices.

Should you have any questions concerning this matter or wish to schedule the required site visit, please do not hesitate to contact me at the Agency's headquarters in Ray Brook, New York.

Sincerely,

George V. Outcalt, Jr.
Env. Programs Specialist

GVO:tfb

cc: Martin Zarnock
Randy Vass, DEC
Don Haehl, Town of Forestport

APA Form
November 1996

Via Certified Mail

ADIRONDACK PARK AGENCY

NOTICE OF INCOMPLETE PERMIT APPLICATION*

This is to notify you that the Application for Project Permit described below is **incomplete**. Additional information is necessary to complete the Application as indicated on the attached Additional Information Request. A Notice of Complete Permit Application will be sent to you after receipt of all information requested. The law provides that the time requirement for the review of this project will not begin until the Agency determines that the Application is complete and that **THE PROJECT MAY NOT BE UNDERTAKEN UNTIL A PERMIT IS ISSUED BY THE AGENCY.**

Project Sponsor:
Martin Zarnock
8192 Woods Highway
Whitesboro, NY 13492

Authorized Representative:
Frank Karboski, CPG
KCS Geology
P.O. Box 61
Camden, NY 13316

APA Project No.:
2000-80

Date Application Received:
April 12, 2000

Type of Project:

Mineral Extraction involving the mining and processing of granite (i.e. block and slab granite, granite rip-rap and crushed granite). The application includes a 5,000 sq. ft. mineral extraction structure and an office building.

Location of Project:
Stone Quarry Road, Town of Forestport, Oneida County

If you have any questions regarding this information request, or the project review process, please contact:

George V. Outcalt, Jr.
Adirondack Park Agency
P.O. Box 99
Ray Brook, NY 12977
(518) 891-4050

* Pursuant to Section 809(2)(b) Adirondack Park Agency Act and Section 572.7 of the Adirondack Park Agency Rules and Regulations.

April 27, 2000
Date

William J. Curran
Director of Regulatory Programs

STATE OF NEW YORK
EXECUTIVE DEPARTMENT
ADIRONDACK PARK AGENCY
P.O. Box 99, Route 86
RAY BROOK, NEW YORK 12977
(518) 891-4050
FAX: (518) 891-3938

ADDITIONAL INFORMATION REQUEST
APA Project No. 2000-80

1. Contact George V. Outcalt, Jr. of Adirondack Park Agency staff and arrange for a meeting at the project site. Scheduling of site visits must be arranged with Agency staff well in advance. **As discussed recently with Frank Karboski, the White Lake Mining Report and Plans were not included with the application materials. After receipt of the report and plans and after the site visit, the Agency will determine if all of the originally requested information is still necessary.**

2. Provide a complete copy of all deeds for the project site back through May 22, 1973. Has any portion of the total contiguous landholding as it existed on May 22, 1973, been sold, gifted or otherwise subdivided since that date? If so, then provide a copy of the deeds of transfer for each lot that has been sold, gifted or subdivided from the original parcel.

3. Provide a complete list of the names and addresses of all landowners whose properties are located within 500 feet of the boundaries of the property on which the project is located.

4. Since approval is required from the Town of Forestport, provide a copy of the approval (i.e. permit), the minutes of all meetings at which the project was discussed and a copy of the provisions of local ordinances, laws or regulations pertaining to the project.

5. Provide for deep-hole test pits to be dug on the project site at the location of the proposed on-site wastewater treatment system. Test pits must be dug in the presence of Adirondack Park Agency staff or a qualified soil scientist recognized by the Agency. Scheduling for the digging of test pits must be arranged with staff well in advance.

6. Provide detailed plans for the proposed wastewater treatment system(s) that are prepared by an engineer licensed in the State of New York and show at a minimum:

   a. soils test pit and percolation rate data taken within the proposed absorption area(s),
   b. details on design of the system (application rate and flow rate, etc.),
   c. size and type of septic tank,
   d. pumping station (if necessary),
   e. distribution box,
   f. soil absorption system.

7. The cover letter with the application indicated that a White Lake Mining and Reclamation Plan report was included with the application submitted to the Agency. However, the Agency did not receive that report. Please provide a copy of that report. Also, provide a complete copy of all application materials submitted to the NYS Department of Environmental Conservation (DEC), including two copies of all mining and reclamation plan maps and narratives as required by the DEC pursuant to the Mined Land Reclamation Law, and the Environmental Assessment Form required by the State Environmental Quality Review Act. As part of the Agency's and DEC's desire to conduct coordinated reviews pursuant to a Memorandum of Understanding between the Agency and the Department, please be advised that the Agency cannot issue a Notice of Complete Application until it has been determined that DEC has a complete mining permit application. The DEC application should also not be considered complete until the Agency Application is complete [6 NYCRR 621.3(9)].

8. Provide a phased life of mine plan including a map and narrative depicting and describing the sequencing, size and timing of all proposed phases of mining prepared by a design professional such as a New York State licensed surveyor or engineer. Generally speaking, this will be the same information submitted to the DEC. You are encouraged to discuss the technical considerations such as map scale, area coverage, reproduction capability and level of plan detail with both DEC and Agency staff prior to their preparation to avoid added expense and unnecessary delays in the project review process.

9. Provide a site plan map, of the project site and surrounding area, drawn to a scale of 1 in. = 100 ft., that is prepared by a licensed design professional (e.g. surveyor, engineer, architect, etc). The site plan map must show at a minimum the project site in reference to the surrounding area, the proposed structures on the site, the processing pond, critical resources such as wetlands and travel corridors, all buffer areas established to minimize impacts to adjoining landowners, the areas on the site involved with each project phase of the mining operation, and all primary and secondary truck routes.

10. What is the projected average and maximum annual production (in cubic yards) for each material, product or by-product to be produced at the project site?

11. What is the maximum amount of land to be left in an open and unreclaimed state at any one time?

12. Provide a detailed project site development and operational plan that separately indicates the months, days and hours of operation of all facets of the proposed mineral extraction, including facility construction and maintenance, extraction operations, material processing (e.g., screening and crushing), and material loading and transportation.

13. Provide a detailed written description of each piece of stationary equipment (e.g., screening and crushing plants) and each piece of rolling stock (e.g., front end loaders, bulldozers and trucks) by their make, model, operating capacity and operating noise levels. Indicate which structures will be located inside and outside the proposed 5,000 sq. ft. mineral extraction structure.

14. Provide a professionally prepared study of noise related impacts to adjoining/nearby landowners and the surrounding environment, wetlands and wildlife, anticipated from trucking, blasting and mobile and stationary equipment to be used on the site. The study should include at a minimum actual decibel readings of background/ambient noise levels from specific locations around the site in comparison to anticipated noise levels, as well as all measures proposed to minimize noise impacts and if possible decibel readings while equipment/blasting is being tested at the site. The noise study should be prepared in consultation with Agency staff.

15. Describe and provide plans which detail the extent to which the extraction will be visible from public use areas (e.g., roads, lakes, trails etc.) and from neighboring properties. Describe how the placement or design of the project will minimize adverse visual and open space impacts. (A professionally prepared study of visual impacts may be required, depending on the specific project location and orientation. This aspect should be discussed with Agency staff prior to preparing such a study).

16. Provide a detailed written description of and a map showing trucking routes including the anticipated percentage of loaded truck trips using each route. Indicate the average and maximum projected number of daily loaded truck trips and return trips by truck type over each truck route. Describe the size in terms of capacity and weight of each type of truck. Indicate the general market locations for each product and by-product. Describe all measures proposed to control dust along all unpaved truck routes as well as at the extraction site.

17. Provide an engineering report and supporting plans, details and specifications prepared by an engineer licensed in the State of New York, assessing the adequacy, in terms of both structural adequacy and traffic safety, for Stone Quarry Road between the site and NYS Route 28. The engineering report must also include plans for and a written description of all proposed upgrades to the road and the long term maintenance requirements for the road. Since this road is a town road, the report should be prepared in consultation with the Town of Forestport Highway Superintendent and it should clearly indicate who will be responsible for the road. How many residences are there on the road between the project site and NYS Route 28 and where are they located?

18. Do other persons have the right to use the existing right-of-way across the project site or the access road to the project site? If so, provide documentation of their right to do so (e.g. deeds, leases, contracts, etc.). Additionally, provide the names and addresses of all persons who may claim such right at the present time and identify the properties they own (by tax map number) which benefit from these rights.

19. Provide a professionally prepared study of air blast and ground vibration impacts related to blasting that identifies levels of air blast and ground vibrations. The report must include at a minimum a detailed written description of all proposed blasting activities that includes the months, days and hours of the day that blasting will occur on the project site, the conditions under which blasting will not occur such as thermal inversions and thunderstorms and the average and maximum number of blasts to occur daily, monthly and annually. The report must also include the projected average and maximum amount of material (in cubic yards) to be removed by each blast event, a pre-blast survey on the conditions of nearby structures, wells, the surrounding environment and wildlife, as well as provisions for notification to area residents prior to blast events. Finally, the study must include a description of blast monitoring proposed to be employed, specific monitoring locations, whether both air blast and ground vibrations are to be monitored and the levels of air blast (in decibels) and ground vibrations (in peak particle velocity) to be maintained and who will perform any such monitoring. The format and content of the study should be discussed with Agency staff prior to its preparation.

20. The application indicates that two structures are proposed for the project site. The first is an office/trailer. The second is a 5,000 sq. ft. material processing building. Provide elevations and floor plans for both structures that are drawn to scale and show materials and color scheme to be used on the exterior of the structures. What is the proposed height of the structures as measured from the highest point on the structure to the lowest point of existing or finished grade, whichever is greatest?

21. The application indicates that 1.5 million gallons of water will be used in the processing of the granite and that a processing pond will be constructed on the site. Is this 1.5 million gallons per day, month, year? Provide a detailed written description of all proposed water usage, storage and treatment involved with the proposed processing to be done on the project site. Also, provide a water flow management plan that clearly indicates where water will be obtained, how it will be used, any proposed treatment and the location or point of its discharge bact to the environment. Will the temperature of the water be raised as part of its proposed usage in processing and if so will it be cooled prior to discharge to the environment?

22. Provide a professionally prepared hydrological report for the area around the project site, which discusses the existing hydrological conditions in the area and the effect that the project (e.g. blasting operations, water usage, etc.) will have on the existing hydrology of the area.

23. The application also indicates that up to 42,000 cubic yards of waste material (i.e. grout) will be generated at the site. Will this material be disposed of on the project site or off the project site? If it is to be disposed of on the site, provide engineering plans for the waste disposal area. If the waste is to be disposed of off the site but within the Park, then a separate waste disposal permit will likely be required for the off-site locations.

24. Provide documentation that all necessary applications have been submitted to the NYS Department of Environmental Conservation, the NYS Department of Health and the Army Corp of Engineers for any permits or approvals required from those entities or documentation from those entities that no permits or approvals are required from them.

25. Provide documentation from the NYS Office of Parks, Recreation and Historic Preservation that the project will not have an impact on any structures or areas eligible for or inclusion on the National or NYS Historic Registers. If the Historic Preservation Office determines that there is a potential for impacts to historic resources, then provide their recommendations for mitigation of those resources.

26. Provide a sign plan that is drawn to scale and shows the details for all proposed outdoor advertizing signs, that includes at a minimum:

    a. location, number and orientation of all exterior signs,
    b. construction details and type of materials,
    c. the size and height of the sign, and
    d. the descriptive area of the sign with the copy (e.g. lettering, logo, etc.), the proposed color scheme and the layout.

    Please note that the sign plan must comply with 9 NYCRR Appendix Q-3 (copy enclosed).

27. It is noted that there are freshwater wetlands on the project site and your application proposes alteration or disturbances to the wetlands. Therefore, describe the steps taken to avoid the wetlands in your design of the project or to minimize the impact to them. If, after a site visit and Agency staff assessment of the project's impacts to the wetlands, the impacts cannot be avoided or substantially minimized, then a mitigation plan that compensates for the impacts to the wetlands will be required as part of a complete application. The plan must be prepared in accordance with the Agency's "Compensatory Wetland Mitigation Guidelines" (copy attached).

28. Is the use of the rail line traversing the site being considered for transport of any products or by-products to be produced on site? If so, please provide details.

29. When was the stone quarry last used as a commercial operation? If possible, please provide some available details of that use including the scale of the operation, materials produced, etc.

30. Describe the alternatives to the proposed project including at a minimum other possible uses of the project site, alternative locations for the proposed mineral extraction, the consequences of not developing the site for mineral extraction purposes, the economic implications of the proposed project in comparison to the alternatives, and the resource, traffic, safety, recreational, ecological and economic impacts of the project in comparison to the alternatives.

WJC:GVO:MJG:tfb

cc: Randy Vaas, DEC Watertown
Don Haehl, Town of Forestport

Enclosures

Attachment 4

DEC NOIA for ID#6-3038-0081/00001

POOR COPY

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 6
Dulles State Office Building, 317 Washington Street, Watertown, New York 13601-3787
Phone: (315) 785-2245 • **FAX:** (315) 785-2242
Website: www.dec.state.ny.us

John P. Cahill
Commissioner

July 31, 2000

Mr. Martin Zarnock
8192 Wood Highway
Whitesboro, NY 13492

RE: **Permit Application #6-3038-00081/00001**
Town of Forestport, Oneida County
NOTICE OF INCOMPLETE APPLICATION

Dear Mr. Zarnack:

This Department has been noting the information that the Adirondack Park Agency (APA) has been reviewing for the proposed granite quarry in the above referenced application. As you are aware, your proposal is reviewed by both APA and our Department. Although the staff at the Adirondack Park Agency has received information from either you or your consultant on their Notice of Incomplete Application, this office has never seen those responses. Therefore, this Department is deeming your application Incomplete until the following information is received. The information refers to the Sections as set forth in the Mining and Reclamation Plan.

Section 1.1.2

There needs to be some site specific information on the depths of the sand and gravel in the mine areas, particularly in the quarry proper area.

Are there any wetlands on this site or on any adjacent lands? If so they need to be shown on the map.

We will need some site specific groundwater information. This information needs to include but not be limited to the following: Depth to groundwater, groundwater flow direction, water table map, rock transmissivity, amounts of water expected to be pumped from the quarry and expected water table draw down.

Section 1.1.4

This section lists an average of 150,000 cubic feet per year. This equates to 5,555 cubic yards. This seems to be a very small quantity. Is this correct?

Section 1.2

This section discusses processing water. Please elaborate on this.

Please clarify what you mean by "prospect bench quarries".

Section 1.2.2

This section mentions a stump disposal area yet there is none shown on the plan. Please locate this area on the map.

Soil stockpile areas are also discussed here but not shown on the map. Please address this.

Blasting: A specific blast design must be submitted to the Department. This design must include the various blasting techniques used in a dimension stone type operation. You must further include a design of the shots for broaching as well as any other means used to "cut" the rock. This design must include hole size, depth, spacing, burden, pounds of explosives per delay, stemming depth and so forth. What is the anticipated ground vibration at the various homes or other structures in the area? The use of "black powder" is an unconventional method in quarry operations. Please clarify this.

This section lists the use of a generator. What is the brand, horsepower and rating of this?

What is the maximum daily withdrawal of water planned for from White Lake Outlet? There may be a need to register this as a withdrawal from the Lake Ontario basin.

What is the size of the crusher for this site? What is the type and size of the compressor to be used for this facility?

Section 1.2.4

This section discusses the number of truck loads per day. If this is calculated out for an entire year (9 months at 25 truck loads per week) based on the estimated 5,555 cubic yards of granite (approximately 12,554 tons), I come up with an average truck load of 13.9 tons. Your plan discusses the use of tractor trailer trucks to haul this material. A load of 13.9 tons per tractor trailer seems light. Are the mining volumes correct or are there other variables not accounted for?

Soil overburden sites are mentioned in this section. Where are they located on the map? What specific seed mix and rates will be used to vegetate these piles?

Section 1.2.5

It is apparent that there will be some sort of storm water leaving this site. If so, a notice of intent needs to be filed and a storm water plan developed for the facility.

White Lake Outlet is a C(t) stream. Any work to replace or upgrade the road and culvert around this stream will require an stream protection permit. Complete and detailed plans of the culvert replacement as well as the time of year and an Article 15 permit application are needed.

Is there an existing DOT driveway permit for this facility? If so, please provide a copy.

Section 1.3 Pollution Control

The plan calls for the use of water for dust control purposes. If so, will there be a water truck on site? If not, the use of water on the haulage roads to suppress dust is not possible and an alternative plan must be provided. Also, due to the close proximity of a trout stream to the mine location, the use of Calcium Chloride will most likely not be allowed.

There is a need for air source registrations and permits for all sources at this mine site. There is a need to provide information on all sources of air pollution (crushers, generators, compressors, etc.).

Section 1.3.2 Noise

Provide the decibel range levels for normal operations of the equipment at this facility.

There needs to be some discussion as to how much noise attenuation is anticipated. Note that trees offer very little attenuation.

The rock splitting with primacord is suspected to emit a very sharp and high frequency noise. Please elaborate on this aspect of the mining and how much noise is anticipated from this and how far it is expected to travel. What are the anticipated noise limits expected from blasting in general?

Section 1.3.3

Need to show wetlands and any drainage courses to them.

Runoff areas need to be identified and a site specific erosion and sedimentation control plan developed. This plan will describe all structures to be installed and show their

proposed locations. Additionally, this plan should include a calculation of runoff estimates and build a plan around a 24 hour, 25 year storm event.

The settling pond circuit needs to be shown in detail on the map and described further.

Sediment storage areas (pond dredgings) need to be shown on the plans.

Please clarify on the map the property line that is traversing across the Adirondack Railway in the southeastern part of the plan.

Section 2.2.1 Reclamation

The plans propose spreading 4 inches of soil on top of the grout piles. Regulations require a minimum of 6 inches of soils capable of supporting vegetative growth be spread over a site. Additionally in this area since there is waste rock below, there will need to be at least a foot of overburden material placed on top before the soils are laid down. This will provide for additional water storage for root growth.

There is no specific vegetation plan for this application. You must include a vegetation mixture and seed rate for the facility. You need to include a fertilization and mulching plan as well.

Section 2.2.2

This section discusses the filling in of the quarry by water. What is the rate of filing anticipated to be? At what date is the quarry anticipated to be full?

What is meant by "gentle" slope to be made at the edge?

The ramp idea is speculation and could occur long after the permit is closed out. Please clarify this matter further.

Items that must be Addressed:

There is too much speculation in the reclamation plan. As written, this is very open ended. Please clarify the objectives and methods of the plan.

Will there be any oils used on site for cutting purposes or any other machinery? If so, how much and how will these be disposed of? Will there be a need for Petroleum bulk storage?

If you have any questions, please call me. If you have any technical questions, please contact Mr. Jerome Zaykoski at 315-785-2263.

Sincerely yours,

C. Randy Vaas

C. Randy Vaas
Regional Supervisor of
Environmental Permits
Region 6

CRV:dmt
cc: Skip Outcalt