



October 18, 2017

Colleen Darcy
NYSDEC, Region 3
Bureau of Pest Management
21 S Putt Corners Rd
New Paltz, NY 12561

RE: Herbicide treatment of aquatic plants at Mohican Lake

Dear Ms. Darcy:

The Delaware Riverkeeper Network would like to register grave concerns regarding the potential application of an aquatic herbicide (Aquathol K with active ingredient endothall) within Mohican Lake in southern Sullivan County. We are opposed to this permit and request that you rescind it.

During the application process, the applicant (Mohican Lake Taxpayers Civic Association) failed to exercise due diligence in considering all impacts and contacting all potentially affected property owners and community members. In addition, there are in-lake and downstream impacts that have not been fully considered nor fully addressed. This permit should be withdrawn until all of the concerns have been evaluated and a fully informed decision is rendered regarding the appropriateness of the proposal.

Of significant concern to the Delaware Riverkeeper Network and affected landowners along the lake is the high likelihood of human exposure during the proposed application period. With a target date of May 25th, and a window of treatment from May 1st to June 15th, the application of this toxic herbicide (see MSDS for specific toxicity information) overlaps with the Memorial Day weekend and the beginning of the peak recreation season for lakes in southern New York. NYSDEC itself has cited the unacceptable risk from human bathing exposure when rejecting the national recommendations for this product, and has required more stringent notification of exposure for individuals recreating on waters treated with this product. In addition, NYSDEC acknowledges that there is no known "safe" level for this endothall, with NYSDEC basing their 50 ppb ($\mu\text{g/L}$) human exposure concentration on generic organic compound exposure. The lack of any known safe concentration for humans and the persistence of this compound in Mohican Lake for weeks beyond the application date necessitates that all individuals facing exposure agree to this exposure before this chemical is added to a surface water body. For Mohican Lake, individual owners of both lake bottom and lakeside property do not all consent to this exposure to a toxic chemical. In addition, how will NYSDEC ensure that all users of the lake during the period of application, including waders, bathers, and

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boaters who may fall into the water and come into direct contact, will be notified of the potential exposure and the health risks associated with that contact. Furthermore, how will NYSDEC address the liability issues associated with businesses who support, advocate and rely on business associated with recreational use of the lake, including uses that will support and/or induce contact with the treated water – there may be legal risks for businesses that support recreational uses which expose users to this dangerous chemical. This chemical must therefore not be added to the lake. Doing so would be a violation of New York State law and raise significant health exposure and legal liability issues for users of, residents around, and businesses dependent upon use of the lake.

The downstream impacts within the Mill Brook watershed have also not been addressed through the current permitting process. Given the rural setting and many potential uses of the stream water below Mohican Lake for human, livestock, and plant irrigation uses, the downstream impacts need consideration and redress. The likelihood of negative downstream impacts is increased by the proposed location of the treatment within Mohican Lake, with all treated sections of the lake within a narrow cove at and immediately upstream of the lake outlet. Not only will there be no dilution from the large volume of water within the lake as a whole (see permitting comments below) but the outlet stream (with no control by the applicant of this outlet) will immediately begin exposing all downstream property owners to the toxic herbicide. Our understanding is that multiple uses exist within the Mill Brook watershed and downstream of the Mohican Lake outlet which could be impacted by this treatment, including livestock watering, crop irrigation, and/or human uses. The most disturbing revelation about these potential impacts is that the applicant apparently failed to fully notify those downstream users who may be most significantly impacted. Clearly, this permit needs to be withdrawn in order to allow for conflicts with downstream uses are identified, evaluated, and, if possible, resolved.

There has also been a failure to evaluate the potential impacts from exposure, including to threatened and endangered plant species, within Mohican Lake and/or in the regulated adjoining wetlands. Indeed, no documentation of any kind for the species composition, densities, and distribution for both native and non-native species has been provided to support the use of a toxic herbicide in this lake. Thus, NYSDEC cannot evaluate or document that severe negative impacts to state and/or federally listed plants have been prevented by issuance of permits in this setting, contrary to the requirements within the permit for pesticide applications. Nor is it clear that the target application area has high densities of non-native aquatic plants (e.g., Eurasian water milfoil) and low densities of native aquatic plants, including threatened and endangered species. The impacts to native aquatic plants from this herbicide application have therefore not been evaluated nor even considered in this setting. It is vital that the permitting of toxic compound discharges within waters of New York State not be abused under the pretense of invasive species control when the impacts to native aquatic plants may be much more profound and severe. Aquatic plant surveys, including the composition, abundance, and distribution of native species, needs to be completed before any herbicide is introduced into this lake and irreversible harm has been inflicted. New York State must permit this activity only if it can verify that the application will not adversely affect state or federally listed species or their critical habitats.

The Delaware Riverkeeper Network is equally concerned about the broader and cumulative impacts of this aquatic herbicide in the Delaware River watershed. With many lakes and ponds within the Mill Brook watershed alone, and the potential for multiple overlapping treatments of this herbicide in other lakes that will cumulatively raise levels in the receiving Mill Brook and downstream Delaware River, the cumulative

impacts need to be considered and evaluated. These broader impacts include human exposure via water intakes as well as ecological impacts to non-target species, including New York State threatened and endangered aquatic plant species such as *Podostemum ceratophyllum*, whose populations in the Delaware River and its tributaries represent the last known stronghold for this plant within the state. The Delaware Riverkeeper Network respectfully requests additional information about other lakes, ponds, and streams where endothall-containing herbicides have been permitted within the Delaware drainage.

Finally, the permit application for Mohican Lake contained multiple errors, misrepresentations, and inconsistencies. The permit should not have originally been issued by NYSDEC, and must now be withdrawn to be in compliance with the Articles 15, 17, and 24 of the Environmental Conservation Law, the general SPDES permit for pesticide applications, and/or the Generic Environmental Impact Statement for aquatic herbicides. The numerous problems with the original permit application include the following:

- failure to notify downstream users of pesticide application and their environmental exposure;
- failure to identify and map NYSDEC regulated wetlands (e.g., HL-53) and evaluate the impacts to these wetland;
- inaccurate representation of lake size and volume, thus distorting dilution calculations;
- potential misrepresentation of herbicide target species, with application area targeting high concentration of native aquatic plants such as water lilies (e.g., *Nymphaea*, *Nuphar*);
- incomplete information on the mapping of aquatic resources and water uses within and downstream of Mohican Lake, including livestock and irrigation uses within and below Mohican Lake;
- inaccurate downstream modeling based both on inaccurate lake size but also based on proposed herbicide location, lack of dilution before introduction into downstream waters, and the high risks for much for elevated exposures to downstream users.

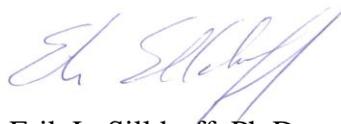
This toxic herbicide application at Mohican Lake is problematic on many fronts, including objection to this application by lake bottom and lakeside property owners. Moreover, the purported impacts to boating from Eurasian water milfoil are exaggerated and do not warrant the introduction of this toxic compound over the objections of Mohican Lake users. We have spoken with numerous boating enthusiasts who attest to Eurasian water milfoil being low among impediments to motorized and non-motorized boat travel.

We respectfully request that NYSDEC reconsider its issuance of the Mohican Lake permit for application of Aquathol K, and rescind this permit until such time that all relevant information can be verified, all impacts can be evaluated, all users of these aquatic resources are given an opportunity to be heard, and full and informed consideration of the impacts of the application can be made by NYSDEC. We further request additional consultation and discussion about the broader application of endothall-containing compounds into aquatic environments within the Delaware River drainage in order to evaluate the individual and cumulative impacts to all best uses of these waters.

Sincerely,



Maya K. van Rossum
the Delaware Riverkeeper



Erik L. Silldorff, Ph.D.
Restoration Director