June 3, 2021

David McFadden, Mayor

Board of Trustees

Village of Tuxedo Park, NY 10987

Dear Mayor, my first full stocking of the Tuxedo Lake occurred on 11/06/2013. My Bio-Manipulation of the Lake by Trout Stocking resulted in the Trout consuming and controlling the Herring (Alewife) population which further resulted in keeping a balance between the Phytoplankton (tiny plants that create algae blooms) and Zooplankton (tiny animals populations).

This bio-manipulation of the Lake has resulted in unprecedented good water clarity, stable PH, and one algae bloom per year through the year 2018 at a fraction of the cost of what the Lake Committee was costing the Village. This also proves that the popular "Water Run-off Theory" is full of holes as I have consistently stated. Further our Lake is Spring Water fed. I have been told by the last of the "old guard" that the springs supply an estimated 75%+ of the water coming into our Lake. I have requested for the last 6 years a water sampling of the Spring water. I especially want to know the oxygen, PH, etc...content of that Spring water.

We had no algae blooms during the years 2019 and 2020. This occurred because of the bio-manipulation of the trout stocking and the Eurasian Milfoil over populating the lake. Two positive results have occurred since 2019. One is the return of our Crawfish to their pre-1964 habitats. Crawfish are like Canaries in a coal mine: they are very sensitive to poor drinking water as a Canary is to deadly gas in a coal mine. The other positive result is a large healthy Black Muscle population which are also sensitive to poor water conditions.

I want to thank Paul Gluck who has greatly advanced my understanding of the water herbicide procellaCOR which was used in the Pond as his testing laboratory. He has laid the ground work for treating the Tuxedo Lake. I have been told by the Mayor that this herbicide has been approved by the DEC and New York State Health Department for use in drinking water reservoirs. Paul told me that procellaCOR got rid of the Eurasian Milfoil in the pond while leaving most of our aquatic plants intact. In other words ProcellaCOR is a "good selective systemic herbicide" which does not harm the fish. After 3 years Paul informed me that they haven't spotted any Milfoil in the Pond.

It is interesting that the invasion of Eurasian Milfoil in the Tuxedo Lake is parallel to the same serious problems that I had to deal with the fish population im-balance starting in 2010. Algae blooms, cloudy brown and green water all summer long, and the Lake's inability to recycle the nutrients is occurring again. This time it is a plant-milfoil imbalance– instead of a fish population imbalance. The same conditions and problems we got rid of in 2013 will occur again except they will be worse.

If the Eurasian Milfoil is NOT TREATED WITH THIS SELECTIVE SYSTEMIC HERBICIDE (procellaCOR) the following events will occur:

Firstly, the PH will continue to rise killing off the Trout population (8.0 PH is lethal to Trout) and allowing the Herring population to dramatically increase causing Algae blooms and deadly high levels of PH again.

Secondly, the out-of-control rapid growth of the Milfoil will continue. When the Milfoil dies during the winter the dead debris from the Milfoil will overcome the re-cycling capabilities of the Lake resulting in Algae blooms, high PH levels and cloudy color water.

The combination of these two conditions will create a Double-Whammy on the ecology of the Lake resulting in the growth of blue-green Algae and ultimately the poisoning of the Lake's drinking water.

Last summer (2020) I noticed the development of green cloudy water from Boulder Point down to the South end of the Tuxedo Lake. The Northern part of the Lake had clearer water and no green color. I called this condition a "Localized Algae Bloom" and this condition lasted half the summer.

Using logic I realize that to treat the Lake with procellaCOR would have to occur during the Spring time when the Milfoil is not a large aquatic plant. By eliminating the Milfoil in its smaller size would help the Lake re-cycle the smaller quantities of nutrient-rich dead material.

The use of aeration equipment—not expensive—is necessary in order to bring up the dead nutrient material from the bottom of the Lake to oxidize it on the surface. Sunlight breaks it down into harmless material. My friend Jim Reichle is an expert in this area of aeration and full maintenance of Lakes.

When the ice melted on the Lake this spring—2021—I noticed for the first time since 2013 cloudy colored water. This is a warning of conditions to come. I started taking PH readings in the Lake during April and they showed an elevated PH reading of 7.4 ! The third week in May showed roughly a 7.8 PH reading. The water has returned to being crystal clear temporarily due to the climate.

In closing I refer you to the "Van Zandt Letter of 2013", a public document in the files of the Village of Tuxedo Park, which explains the history and ecology of the Tuxedo Lake.

Sincerely,

Peter Van Zandt

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