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RESPONSE TO THE GREENIDGE GENERATION THERMAL STUDY

Kaitlin Fello (Administrator) | 12/26/2022 12:10 PM



Seneca Lake **PURE WATERS** Association

Tara Blum, Director, NYSDEC Region 8

RE: Greenidge 2022 Thermal Study and Discharge Permit

Dear Ms. Blum,

As you may be aware, Pure Waters is a lake association with over 1000 members with a mission to protect and preserve the waters of Seneca Lake. We pride ourselves in utilizing science and cooperative efforts in order to achieve our goals.

Pure Waters and the DEC have been engaged in past conversations which we appreciate. These have included discussions of the Greenidge bitcoin mining facility located in Dresden NY. In 2017, the DEC allowed Greenidge the right to discharge over 150 million gallons per day of heated waters into the Keuka Outlet. Those waters eventually pour into Seneca lake.

The aforesaid allowances we're provided based on two criteria: to wit,

- 1. Greenidge was producing electricity for the power grid and thus provided "lightened regulatory status."***
- 2. Greenidge was to provide a thermal study in 2018 showing the environmental consequences of discharging such vast amounts of warmed water into the Keuka Outlet and Seneca lake.***

In contrast, (1) Greenidge quickly turned its operations toward private bitcoin mining and not the power grid. I direct your attention to the DEC's own recent air emissions determination holding that Greenidge operates as a private bitcoin mining company and not as a public utility.

Secondly, (2) Greenidge far exceeded its time allowance to submit its thermal study. Rather than being submitted one year following the 2017 permit, it submitted its thermal study five years later; to wit, in April of this year. The Department reviewed these submissions before public dissemination. We were finally able to obtain a copy of it in October 2022.

This letter is submitted in response to Greenidge's thermal study. Focus is drawn on the following sections contained in the report:

Section 2.1 footnote---- states that brown trout are not sustained by the Keuka Outlet but, rather, by the fish hatchery and that rainbow trout are primarily sustained by Catherine Creek. In contrast, I have spoken to a local fisherman who, year in and out, caught large spawning brown trout in the Keuka Outlet. While rainbow trout do run up Catherine Creek this is not to say that they do not also utilize the Keuka Outlet for mid-lake spawning. If you wish, our organization can provide affirmations from local fishermen attesting to how the stream is used by cold water salmonoids for spawning purposes. I have been advised that brown trout are no longer as prevalent in the Keuka Outlet. If that has been due to warm water discharge, advantages should not be gained by Greenidge's violation of DEC thermal standards

Previously, and when the issue of thermal pollution a first arose some years back, our organization had a conversation with Dale Irwin, President of Greenidge Generation. We discussed the use of Stirling engines. Using Greenidge's own heat these devices could send water, made hot by Greenidge's steam turbines, uphill and into cooling ponds. Thereafter, it could cascade harmlessly back down into Seneca Lake.

This solution would also completely avoid warm water entering the Keuka Outlet trout stream. This alternative was approved by Rich Adams, who previously served as our VP of Water Quality and who was an environmental engineer. We also discussed this same alternative with yourself in one of our past calls. Unfortunately, we never received any feedback whatsoever from Greenidge regarding this suggested alternative. Nor were any other alternative measures mentioned in the thermal report as far as what would/could be a best management practice. I am sure you would agree that affordable best management practices must be followed in any instances of pollution entering our streams or lakes, inclusive of thermal pollution.

Section 2.4. In this section the report mentions that the DEC has approved a defined "mixing zone" in an area that begins in the Keuka Outlet from hot water discharge point and then out some "230 acres" into Seneca Lake. The report, as well, notes that the DEC provided this allowance as there was no adverse harm to any indigenous communities by reason of the discharge. If accurate, this section of the report is particularly hard to understand. 6 NYCRR 704.3 controls when mixing zones may be allowed. That regulation provides that the discharge must not be lethal to aquatic biota. Furthermore, it must be shown that the zone does not" interfere with spawning areas, nursery areas and fish migration routes".

It is apparent from the report that there has not been such a scientific study conducted to confirm such a finding. I direct your attention to page 5-3 of the report. There the authors state that such a study "may be required at the department's discretion to examine if any zooplankton, aquatic vegetation, macro invertebrates and fish have been caused appreciable harm by the discharge." In other words, the study would have to be ordered as opposed to completed.

If we are in error, and such a study exists, could you please provide it at your earliest opportunity.

The remaining portions of the study appear to accurately reflect what Pure Waters has been objecting to all along; to wit, that Greenidge has significantly been exceeding thermal pollution standards without any study as to affects.

More specifically, and again referencing the report, I address your attention to the following:

Section 4. 1.7-- states Greenidge is discharging waters in excess of 70 degrees Fahrenheit into a trout stream in violation of 6NYCRR 704.B.2

Section 4.1.8--- Greenidge is raising the water temperature in the Keuka Outlet over 2 degrees Fahrenheit in the months from June to September (other than in high flow times) again in violation of 6NYCRR 704. B.2

Section 4.1.9-- Greenidge is raising the temperatures of the Keuka Outlet over 5 degrees in the months from October to May, again in violation of 6NYC RR 704. B .2

Section 4 11. 1 –Greenidge is raising the surface temperature of Seneca Lake over 3 degrees Fahrenheit and, particularly, in the April to September time period. Said improper surface warming could be occurring in an area as large as 227.5 acres. See page 4-38.

One must presume the Departments maximum temperature allowances promulgate what are safe standards for water quality and the proper preservation of aquatic life. Overcoming such standards can and only should occur after proper scientific study to the contrary. (Again, this would appear missing per the above passages in the report.)

It is the position of our organization that (1) any renewal of the Greenidge discharge permit occur only after Greenidge implements a scheduled redirection of their warm water discharge over the following ten months. Again, all discharged waters should be taken uphill and cooled to standards before entering Seneca Lake. Discharge should also avoid any contact with the Keuka Outlet, this being a designated trout stream.

At minimum, (2) a full and complete scientific study, from the point of the discharge and out into the 230 acres of lake in the proposed "mixing zone" should occur, pursuant to 6NYCRR 704.3. This is required and necessary to determine if there will be any injurious effect on aquatic plants, zooplankton, fish, and the like. If any permit is provided there should be a set deadline for this study to be made with no allowances for lengthy extensions (as occurred with the thermal study.

We remain open to further dialogue on this topic. If desired, you can simply e-mail us. We can then set up a zoom chat as we have done previously.

Very truly yours,

Jacob Welch, Outgoing President of Seneca Lake Pure Waters Association

Daniel Corbett, Incoming President of Seneca Lake Pure Waters Association