

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Natural Resources, Region 5
232 Golf Course Road, Warrensburg, NY 12885
P: (518) 623-1203 | F: (518) 623-3603
www.dec.ny.gov

MEMORANDUM

TO: Rob Fiorentino
Jim Pinheiro

FROM: Chris Powers, Aquatic Biologist

DATE: June 9th, 2020

RE: Cossayuna Lake Fish Kill Investigation

A fish kill investigation was conducted at Cossayuna Lake at approximately 10:00am on June 9th, 2020 by NYS DEC Region 5 Aquatic Biologist Chris Powers in response to a report from a member of the Cossayuna Lake Improvement Association Inc. that was submitted to Jim Pinheiro on June 5th, 2019. The report stated that numerous sunfish and a single bullhead were found floating dead along the northeastern shore of the lake.

The majority of the shoreline of Cossayuna Lake is privately owned, consequently the fish kill investigation focused on the portion of the lake adjacent to the NYS DEC Boat Launch Site, as well as along portions of the lake that could be viewed directly from East Lake Road.

No dead fish were observed at the Boat Launch Site or at multiple locations along East Shore Road. Numerous live sunfish (*Lepomis spp.*) were observed guarding nests in the shallow littoral zone adjacent to East Shore Road. I spoke with 3 anglers at the Boat Launch Site who had been fishing earlier in the day from boats out on the lake; none of those anglers reported observing any dead fish. The water temperature was 71.4 degrees, two feet under the surface off the NYS DEC boat launch dock and the dissolved oxygen level was 8.62mg/L. Neither of these values would cause mortality in the warm water fish species found in Cossayuna Lake. My observations lead me to believe that the fish kill has subsided.

Naturally occurring, Springtime fish kills in ponds and lakes are not uncommon, and often result from a lack of dissolved oxygen in the water or from elevated stress levels in fish due to spawning activity. I suspect both factors contributed to the death of numerous sunfishes at Cossayuna Lake this June. As mentioned earlier sunfish species are currently actively spawning in the lake. Furthermore, unseasonably warm air temperatures in late May – Early June likely caused abrupt changes in water temperature, particularly in the very shallow portions of the lake. These shallow areas are the same locations where the sunfish are actively spawning. As water warms, its capacity for dissolved oxygen diminishes. It is likely that the combination of spawning stress and low dissolved oxygen levels is the cause of this fish kill. This hypothesis is corroborated by the fact that the dead fish observed were nearly all sunfish.

No further investigations will be conducted at Cossayuna Lake at this time. In the event that another fish kill is observed a Biologist will return to the lake to attempt to determine the cause.

-- -- END OF MEMORANDUM -- --

