

The Future of Trout Lake

Most of us in our seventh decade in the Greenway area have seen many changes in the water quality of Trout Lake over our lifetime. From red water on windy days caused by stirred up tailings from the Trout Lake concentrator to the foul smelling aroma of sewage discharged into the lake from the cities of Bovey and Coleraine, the lake has seen its share of abuse.

In 1958 a new treatment plant for both the city of Coleraine and Bovey eliminated raw sewage from entering the lake but did not eliminate the high concentration of nutrients such as nitrogen and phosphorus from being discharged into the lake. With these nutrients came increased frequency and duration of significant algae blooms. This discharge was not corrected until the building of a new treatment facility for the towns of Bovey, Coleraine, and Taconite in 1987.

However, the amount of phosphorus and other nutrients already in the water allowed for continued algae blooms and floating masses of algae for well over a decade later. Because of the poor water quality the Trout Lake beach in Coleraine did not reopen from its closure decades earlier until 2005. To indicate the effect of phosphorus, one should note research shows one pound of phosphorus can create 500 pounds of algae.

Infiltrating sediment had affected fish spawning, and oxygen depletion from poor water quality caused numerous fish kills in Trout Lake. But the improvement over the past two decades has been remarkable. With DNRs stocking of walleyes and improved water clarity, the lake is more vibrant with use than it has had over the last century. In fact, it could now be considered a destination lake for fishing as well as recreation.

Unfortunately, we cannot count on this continued improvement, and could see a return to poor water quality unless the cities of Bovey and Coleraine and the new residents around the lake continue to reduce both sediments and nutrients from entering the lake. If one were to observe the lakes of southern Minnesota and their algae problems, which is now beginning to encompass lakes in central Minnesota, we can see the long term future of Trout Lake if we are not active in the water's protection.

In 2018 the city of Coleraine was informed by a DNR Fisheries biologist that its detention pond in Longyear Park, designed to prevent sediment and nutrients from entering the lake, was no longer functioning and unless corrected the bay would eventually fill in with sediment. The increasing phosphorus addition to the lake would also affect fishing habitat and reproduction as well as a return of algae blooms.

With the assistance of the Itasca County Soil & Water Conservation District, a grant was obtained to evaluate Coleraine's stormwater system in 2018 and what improvements could be done to reduce the amount of sediment and phosphorus entering Trout Lake in this location. The resulting report called the Coleraine Stormwater Retrofit Assessment is available for review at the Coleraine's clerk office and the library. An Itasca County Shoreline Guide to Lake Stewardship is also available to explain the science of lake water protection.

The report delineated 15 subwatersheds with all but three having stormwater exiting through Longyear Park into Trout Lake. It was determined a single detention pond encompassing approximately two acres would be necessary to handle the amount of stormwater coming into the lake through Longyear Park. Realizing this size of a detention pond would, in essence, eliminate Longyear Park as a park enjoyed by all, the report gave recommendations to reduce this flow by creating rain gardens, stormwater planters, and smaller detention ponds "upstream" from Longyear Park throughout Coleraine.

The Itasca County Soil & Water Conservation District and its regional Joint Powers Board has offered to help Coleraine obtain a grant to begin the process of controlling Coleraine's stormwater to protect the waters of Trout Lake. Some preliminary designs must be determined before the grant can be applied for. It is a difficult task as there is minimal available space, and since city owned boulevards will not suffice totally for stormwater control, some private entities will be approached about possibilities of land use. Hopefully preliminary design solutions can be accomplished before the grant's application deadline.

The reward won't be dramatically noticeable at first but will rather be the satisfaction of knowing that future generations will have continued quality lake water to fish and recreate in, something that past generations have not had.