

For many years as president of Conservationists with Common Sense (CWCS), I have written numerous articles on the wild rice sulfate standard in our CWCS Newsletters.

Since 2015, Minnesota Pollution Control Agency (MPCA) has been looking to change the then 42-year-old wild rice standard that was put in place in 1973. This was at the beginning of the environmental movement with the passage of the Clean Water Act. The state developed a rule that limits the amount of sulfate in waters where wild rice grows. The limit was set at 10 milligrams per liter. This was based on an observation done by one biologist, John Moyle, in the 1930s and 1940s.

Evidently this seemed like a 'good enough' study to base a sulfate level on waters where wild rice grows! There was no science involved in this wild rice standard at all.

Minnesota is the only state that has a rule on wild rice sulfate standards, but it has never been enforced. According to MN DNR, wild rice has been historically documented in 45 of Minnesota's 87 counties. How does the sulfate level vary from lakes in these counties?

There are nearly one thousand facilities statewide with high sulfate levels in their wastewater treatment systems, yet the MPCA is going after taconite plants that provide jobs for our communities. Taconite plants and municipalities would have to invest millions of dollars to meet the 10 milligrams per liter standard of sulfate in wastewater discharge, based on a nearly century-old observation.

The 50+ year-old sulfate standard set in 1973 would cost millions of dollars to the state's rural municipal wastewater treatment plants and would drive up the cost of mining. This would greatly impact property taxes and our economy.

Citing new science, the MPCA charged with keeping Minnesota's waters clean, plans to stick with its draft approach for setting sulfate standards for wild rice protection. The MPCA says using the same limit for every river or lake where wild rice grows doesn't make sense, because many factors influence whether wild rice will thrive.

The draft proposal says sulfate levels should be based on location-specific factors rather than a single sulfate level for all wild rice waters. The MPCA says scientists will continue to work on a final wild rice plan, and that it is expected to mirror their suggestion of location-specific factors. So why has the MPCA been dragging their feet on this issue? It's been ten years!

Minnesota cannot allow administration law judges make decisions on sulfate standard that must be based on science.

The Environmental Protection Agency's (EPA) federal sulfate level in drinking water is set at 250 milligrams per liter, based on taste and odor. What was the 10 milligrams per liter standard of sulfate based on for wild rice, when wild rice has been successful in waters with sulfate levels of 1,600 milligrams per liter?

Many taconite plants and municipalities more than likely couldn't meet the safe drinking water sulfate standard of 250 milligrams per liter, let alone meet the 10 milligrams per liter. The MPCA needs to use science based studies to set sulfate standard.

Wild rice prefers water between one and three feet deep with a mucky bottom, said Darren Vogt, Resource Management Division Director for the 1854 Treaty Authority which manages the off-reservation hunting, fishing and gathering rights of the Bois Forte and Grand Portage Ojibwe bands in northeast Minnesota.

In 2017, 1854's Environmental Biologist, Darren Vogt, was awarded as the Biologist of the Year!

"If you get high spring water levels or beaver issues [blocking water flow] or major storms, you raise the water above those optimal levels and you'll get a poor wild rice year, so that's why generally drier years or lower water on a lake favors wild rice," said Vogt.

There hasn't been any proof that sulfate levels higher than 10mg/l has an impact on wild rice growth. High water levels have more impact.

The Brook Trout survives.



*This picture is of a Brook Trout from a higher sulfide pit near the Dunka Pit. This was from one of the last pits Reserve Mining Company blasted. When Reserve closed in

1986 the pit began to fill with water. In 1990, under Cyprus Mining Company, one of the first jobs was to pump the water out of the pit. This took months to do.

Once the water level reached the bottom of the pit, it was discovered to be filled with Brook Trout. Workers netted 50- gallon barrels of these fish and transferred them to a lake on the property.

A Northshore geologist, Pete Pastika wrote: In past years, miners carried canaries with them into underground coal mines to monitor air quality. The small birds were quite sensitive and if the bird lived the air was safe. However, if it died, it was time to leave quickly.

Native brook trout can serve the same purpose, to judge the quality of surface waters in and from taconite mine pits. They can be thought of as the “Canaries” for surface taconite mine waters.

This two pound native male brook trout in full spawning colors was netted, from a flooded northeastern Minnesota mine pit adjacent to an abandoned waste rock blast containing heavy sulfide mineralization. The trout had apparently migrated into the flooded pit from a nearby river, or maybe dropped in the pit by a bird flying overhead. It thrived for several years to grow quite large despite the sulfides and metals leaching into the water from the waste rock blast.

The ‘Canary’ lived. So does the trout.”

Has the MPCA been approached by Clearwater BioLogics and tested their process for removal process of sulfate in wastewater discharge? Is there merit to this process?

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