Bruce Johnson

I am a retired environmental scientist with over 30 years of water quality and regulatory expertise, much of which is in Northeast Minnesota. I have determined this proposed rule to be nothing more than a permanent permit to pollute replacing the wild rice sulfate standard with a site-specific standard (SSS) for dischargers.

1. It would allow industry, municipal and other dischargers to routinely discharge sulfates above the numerical limits into wild rice waters during the detailed scientific and economic studies currently associated with the site-specific individual justifications, since a complete study would take six to ten years to complete (Hudson, 2022).
2. It would allow Grandfathering in areas that have had numeric violations of sulfate concentrations after the mid- 1970's Clean Water Act initial allowance of existing pollution, thus ignoring the fact that many of these waters after the CWA may have had healthy wild rice populations.
3. It would sidestep NPDES permitting that uses reasonable potential calculations for permit holders.
4. Once approved it would allow dischargers to avoid best management technologies that are developed.

The proposed rule is ecologically excessively narrow; it addresses a single numeric parameter, sulfate. This approach fails to assess other cumulative pollutant stresses that act synergistically with sulfate to impact not only wild rice but the aquatic food web in a receiving water. Mercury is a known human neurotoxin for many years. One main route humans acquire mercury is through the consumption fish. Mercury levels in fish in Minnesota are increasing in many areas. The Minnesota Department of Health has numerous fish consumption advisories. These advisories have recommended limits to the amounts of fish humans should consume from specific waters. Fish from the St. Louis River watershed are some of the least recommended to be consumed. Overall, the advisories in the State are becoming more stringent. Mercury is sequestered in wetlands. NE Minnesota has abundant wetlands, especially the St. Louis River watershed. Addition of sulfate to wetlands convert mercury to methyl mercury the form that is biologically available to the food web. Ambient levels of sulfate in non-anthropogenically impaired waters in NE Minnesota average median concentrations of less than 7.4 mg/l (Thingvold, 1979). Research has demonstrated that increasing sulfate concentrations in wetlands converts sequestered mercury into methyl mercury and is readily taken up in the food chain (Groetsch 2003, Mitchell 2007, Wasik 2015). The current mercury TMDL study appears to be avoiding chemical involvement of sulfate in its mercury study. The proposed rule for site-specific standards ignores the relationship between mercury and sulfate. The parsing of ecological synergy is neither scientifically defensible nor is it protective of public health or the environment.

Native American tribes are disproportionally affected by methyl mercury, no SSS for discharge of sulfate to wild rice should be approved by MPCA without tribal consultation and tribal consent and a formal and public rulemaking process.

Although the SSS formally approved in state rules, the SSS in the case of sulfate is not scientifically defensible. MPCA must apply the 10 mg/l wild rice sulfate standard in setting and enforcing permit limits and in preparing TMDL studies and implementation plans to restore wild rice waters listed as

impaired due to excessive sulfate. MPCA must neither delay nor assume a less stringent number will at some point be approved.

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