

ENVIRONMENTAL REGULATION

MPCA proposes change to clean water rules

Proposal would likely reduce need for clean-up of taconite mine contamination

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REGIONAL— It appears mining companies on the Iron Range can afford to clean-up toxic water discharges at their taconite plants and tailings basins. But they likely won't have to if new rules the Minnesota Pollution Control Agency is proposing are enacted, as early as this year.

The new rules, designed to replace standards first established in the late 1960s, were the subject of a public hearing earlier this month before an administrative law judge in St. Paul. The public comment period on the new rules, which would all but eliminate numeric water quality standards for what are known as Class 3 and Class 4 waters in Minnesota, ends Feb. 24. (See sidebar for more on water classifications in Minnesota).

According to MPCA spokesperson Darin Broton, the proposed change in rules has been ten years in the making. "The proposed rule applies modern science to the standards and will provide a more nuanced, localized approach to protecting water quality," Broton said. "In addition, the revised standards will allow for flexibility in creating permits, reduce wastewater permitting delays, and avoid wastewater treatment costs that don't provide environmental benefits."

The changes have found support, in general, from the mining industry, agricultural processors, and the Coalition of Greater Minnesota Cities. A long list of Iron Range cities also sent nearly identical letters in support of the changes, which are designed to lessen regulatory burdens on dischargers.

Tribal officials and environmentalists, who have waged a 12-year effort to get the MPCA to enforce the state's existing water quality rules, particularly on the mining industry, see the new rules as little more than a capitulation to industry. "The new rules will require less treatment and, in many cases, no treatment whatsoever," said Paula Maccabee, legal counsel and advocacy director for Duluth-based Water Legacy. Tribal officials also view the changes as a weakening of the state's pollution standards, and they complained to the Walz administration about it in a letter last October, which alleged that the changes were coming to placate U.S. Steel, which operates the Minntac and Keetac taconite mines on the Iron Range.

MPCA officials don't deny that the proposed changes would make life easier for some taconite mines. In the agency's Statement of Need and Reasonableness, which goes by the acronym SONAR, officials note that costs that the mines might incur in order to meet existing standards would "generally be avoided if the [new] rules are adopted."

Indeed, the proposed new rules would eliminate existing numeric standards for hardness, bicarbonates, sodium, conductivity and would weaken standards for chloride (from the current 50-100 milligrams per liter to 230 mg/l), total dissolved solids (from 700 mg/l to 3,000 mg/l), pH (from 8.5 to 9), and salinity (from 1,000 mg/l to 3,000 mg/l).

Many of these pollutant categories are regularly exceeded by taconite mines in Minnesota under current rules, but most mines would likely have less trouble meeting the new standards.

The new rules do not propose to eliminate the 10 mg/l sulfate standard, which is included under the Class 4A designation and is designed to protect wild rice. Yet, the MPCA isn't currently enforcing that standard in any

of its permits, ostensibly per the direction of the state Legislature. The new rule is expected to set a sulfate standard for Class 4 waters, but at 600 mg/l it's far higher than the federal drinking water standard of 250 mg/l and the existing wild rice standard. Even so, the MPCA predicts that the new sulfate standard could require at least some treatment of discharge from area taconite mines, if enforced.

While the proposed new rules appear to weaken or eliminate existing numeric standards, they also appear to weaken the narrative descriptions of the "beneficial uses" of water desired under the Class 3 and 4 designations. For example, under Minnesota's existing Class 3A designation, water is supposed to be maintained at sufficient quality to "use without chemical treatment, except softening for groundwater, for most industrial purposes... for which a high quality of water is required." The new rules would eliminate the three subclasses (Class 3A, 3B, and 3C) currently listed under the Class 3 designation and set a water quality standard for all three subclasses that appears to establish a remarkably low bar, allowing water that can be used "for industrial purposes to avoid severe fouling, corrosion, or scaling."

Under Class 4B, the existing narrative describes use by wildlife for watering, "without inhibition or injurious effect." The proposed new standard for all Class 4 waters, removes the qualifier about inhibition or injurious effect.

Critics of the MPCA plan say the new rules won't protect aquatic life because they allow more pollutants that are currently allowed. MPCA officials don't disagree but argue that's not the point. "The Class 3 and 4 standards were not designed or intended to protect aquatic life, and revision of these standards should not be tied to aquatic life standards," state agency officials in their SONAR, published in December. Instead, agency officials argue that the standards for Class 2 waters (designed to protect aquatic life) won't be affected by the new rules. Yet Maccabee notes that some of the strictest numerical standards for some pollutants are actually found in the existing Class 3 or Class 4 rules, and that by eliminating those standards, it will impact aquatic life.

The new rules are supposed to address concerns about the lack of numeric standards, through the use of a "translator," which MPCA officials say will allow them to convert narrative descriptions into numeric pollutant levels they can actually apply in permits. But the MPCA, in its SONAR, acknowledges that the proposed translator is likely to allow many dischargers to go without effluent limits in their permits. Indeed, the agency acknowledges that the proposed changes will have broad impacts on permitted dischargers, most likely eliminating the need for effluent limits on such factors as total dissolved solids, specific conductance, hardness, and bicarbonates, or sodium.

MPCA says current treatment costs are high

MPCA officials argue that the high cost of treating the types of pollutants addressed in its proposed new rule is a significant factor in its decision to revise the existing standards. While tribes have focused much of their attention on mining pollution, which impacts wild rice in northeastern Minnesota, the new rules are also intended to address high levels of various salts and sulfate being discharged by wastewater treatment plants and some agricultural processing



A view across a portion of Twin Lakes, located just downstream of the Minntac taconite tailings basin. The MPCA is proposing to change water quality rules in a manner that could significantly reduce the need for cleanup of discharges from the tailings basin. file photo

How water is classified, and protected, in Minnesota

Public waters in Minnesota are regulated based on their classifications, which reflect potential uses of those waters, such as drinking water, recreation, industrial or agricultural irrigation. Those classes include: Class 1 (drinking water), Class 2 (aquatic life, recreation, and wildlife), Class 3 (industrial), Class 4 (agricultural), and Class 5 (aesthetic enjoyment). Many public waters have multiple designated uses and, when taken together, those designations can impact the water quality standards that the MPCA is required to enforce for those lakes or streams.

The MPCA proposal would largely eliminate existing standards for Class 3 and 4 waters that limit the concentration of pollutants based on various numeric measurements, such as mil-

ligrams per liter. Instead, the MPCA will rely on written descriptions, or narratives, of the water quality the agency seeks to maintain in lakes or streams subject to discharge permits. According to the MPCA, narrative standards typically address basic forms of water pollution, such as floating solids, scums, oil films, or algae blooms, but can be more difficult to enforce because any narrative description can be subject to varying interpretation. Numeric standards, by contrast, set clear pollution limits which can be easily monitored for compliance.

While narrative standards are used routinely in pollution regulation, they are more typically used in combination with numeric standards which most regulators and environmental groups see as more enforceable.

facilities.

According to the MPCA, the treatment of many of the pollutants covered in the new rules can only be effectively addressed with currently available technology through the use of reverse osmosis, or RO, which is costly and comes with its own list of environmental concerns, including the need to dispose of highly concentrated, salty brines. Because of the significant energy demand associated with RO, it's also a potential contributor to climate change, according to agency officials. An MPCA analysis suggests the energy inputs required to treat the discharges from the Minntac facility would result in new annual carbon emissions equivalent to those emitted from a city of 5,000-10,000 people. "The complex environmental trade-offs involved in mine water treatment are difficult to analyze quantitatively and ultimately require decisions to be made taking into account more than just finances," states the MPCA in its SONAR.

The costs to some cities of using RO to meet existing water quality standards could be high, argues the MPCA in its SONAR. "Collectively they face millions of dollars in costs related to these... standards," the agency wrote. According to agency officials more than 160 Minnesota municipal wastewater treatment plants are likely to require a limit to protect a Class 3 or 4 water quality standard. In almost every case, they argue, compliance with those limits would require the wastewater treatment plant operator to build new infrastructure. "Over 90 percent of affected cities are small cities of less than 5,000 people and no city

of greater than 25,000 people is likely to be affected by the current rules," according to the MPCA's SONAR.

The MPCA's claim, however, assumes that the agency will actually enforce its current standards on public wastewater treatment facilities, when its past practice has been more relaxed. Indeed, the rules in effect for Class 3 and 4 waters were instituted in 1967. Of the 571 wastewater treatment facilities in the state, only nine have standards in their permit requiring them to meet existing rules. The agency suggests that many more facilities, perhaps as many as 100, are likely to require additional treatment in order to meet the existing standard of 700 mg/l for total dissolved solids, for example. That standard would be relaxed to 3,000 mg/l under the proposed new rule.

Maccabee notes that the existing rules already allow for variances for most public facilities, particularly in smaller communities, if the cost of treating wastewater to a certain standard proves to be too high. She suggests the MPCA is using professed concern over such facilities to justify changes to water quality rules that are more likely to benefit industrial polluters.

Even industrial polluters can apply for variances, although they aren't often granted, particularly if the company has sufficient resources to meet standards in its discharges. When it comes to large industrial facilities, like taconite mines, the MPCA conducts an economic and socioeconomic analysis to determine whether a variance is justified.

The agency conducted such

an analysis for the Iron Range's taconite plants and found that the companies, under the most likely circumstances, would appear to have sufficient resources to meet the existing standards. "If the parent companies' finances can be leveraged for complying with existing water quality standards for their subsidiary taconite mines in Minnesota, this assessment has not proven substantial economic impacts would result from doing so," notes the SONAR. "The strong associations between parent companies and subsidiaries indicate that such leverage can be reasonably expected."

The MPCA's calculations indicate that the annual cost of operating RO treatment at area mines would average about \$60 million across the industry, or about \$1.50 per ton of taconite produced. Iron ore is currently selling for about \$120 a ton on the open market, which would put the cost of clean-up at just over one percent of the gross sale price.

Such calculations haven't always prevented the MPCA from issuing variances to taconite mines. The former Dunka Mine, for example, currently has a variance for its exceedances of several pollution standards, including total dissolved solids, bicarbonates, total hardness, and specific conductance. The Thunderbird Mine in Eveleth was also awarded a variance, for exceedances on pH.

Nancy Schuldt, water quality specialist with the Fond du Lac Band, says she doesn't understand why the tribes' arguments for enforcement of existing standards has faced such pushback. "At the heart of it all, what the tribes are asking for should not be controversial," she said. "We have never said 'no mining'. We have been engaging with the intent that industry plays by the rules."

Big change without much public attention

Maccabee has been among those at the forefront of the debate over water quality in Minnesota in recent years and says she has increasingly lost faith in the work of the MPCA. But of all the agency actions she has fought, she says this latest proposal is the most far-reaching, potentially the most damaging to the environment, and among the toughest to fight because of the complexity of the rules proposed for change.

Schuldt agrees. "It is eminently frustrating," she said, "because these are complicated and mostly esoteric issues for most of the public." By and large, she says, the public has bought into a myth that Minnesota has a strong regulatory framework and willingness to maintain water quality.

"That might have been true 40 years ago, but it's not true today," she said.