**Administrative Rules**

**FISCAL IMPACT STATEMENT**

Date: January 14, 2016

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| **Agency:** Environmental Protection Commission / Iowa Department of Natural Resources (Department)  **IAC Citation:** 567 IAC 61.3(3)  **Agency Contact:** Connie Dou, [Connie.dou@dnr.iowa.gov](mailto:Connie.dou@dnr.iowa.gov), (515)725-8400 |

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| **Summary of the Rule:**  The purpose of this proposed rule is to create additional flexibility for wastewater dischargers in complying with copper water quality criteria. Copper is found in most municipal wastewater discharges due to the corrosion of copper plumbing. Removing copper from wastewater discharges is difficult and expensive. The proposed rule will amend Iowa’s water quality standards to allow for the optional use of the Biotic Ligand Model (BLM) to determine copper water quality criteria. The proposed rule will also allow the optional use of the Water-Effect Ratio (WER) to adjust the existing copper water quality criteria. The addition of these two options has the potential to significantly reduce costs for some National Pollutant Discharge Elimination System (NPDES) permit holders who are unable to comply with the existing copper criteria. Of the 297 facilities in Iowa that are subject to the existing copper criteria, the Department estimates that 21-22 are unable to comply. Of the 21-22 facilities unable to comply with the existing criteria, the Department estimates that 7-10 would be able to comply with the copper BLM or WER-based criteria proposed in this rulemaking. These 7-10 facilities could experience a significant cost savings by avoiding the need to install copper removal technology.  The accumulation of copper at the biotic ligand (i.e., the gill of a fish or other similar site for aquatic organisms) above a critical threshold concentration leads to toxicity. But the amount of copper that will actually accumulate at the gill depends in large part on the water chemistry of the particular waterbody. The BLM accounts for several water chemistry parameters to predict the concentration of copper that would actually result in toxicity to an organism in a given waterbody. U.S. EPA has developed a BLM-based approach for calculating water quality criteria for copper. The Department seeks to adopt by reference the U.S. EPA document, “Aquatic Life Ambient Freshwater Quality Criteria - Copper 2007 Revision (EPA-822-R-07-001), February 2007”. Having the option to use the copper BLM will create additional flexibility for those wastewater dischargers that are unable to comply with the existing criteria and may result in more appropriate and affordable copper permit limits for some of these facilities.  Allowing the optional use of the WER method will also create flexibility for wastewater dischargers. The WER method allows permittees to take into account the difference between the toxicity of a metal as measured in laboratory water versus the toxicity of the metal as measured in ambient water at a particular discharge site. The WER method allows facilities to calculate a ratio between the two measured toxicity levels and use it to adjust the existing copper criteria in 567 IAC 61.3(3), Table 1. Permittees wishing to use this option will be required to conduct a WER study approved by the Department. WER studies must be conducted in accordance with the U.S. EPA documents “Interim Guidance on Determination and Use of Water-Effect Ratios for Metals (EPA-823-B-94-001), February 22, 1994”, or upon approval by the Department, “Streamlined Water-Effect Ratio Procedure for Discharges of Copper (EPA-822-R-01-005), March 2001”, which the Department seeks to adopt by reference. Having the option to use the WER method will create flexibility for those wastewater dischargers that are unable to comply with the existing criteria and may result in more appropriate and affordable copper permit limits for some of these facilities.  The proposed changes will give NPDES permit holders the ability to use the WER to adjust the existing copper criteria, or the ability to use the BLM to generate copper criteria that reflect the unique water chemistry of the receiving waterbody. The proposed changes create flexibility for those NPDES permit holders facing expensive infrastructure upgrades in order to comply with the existing standard. For those permittees, conducting a BLM or WER study may be a much more cost-effective method to achieve compliance. Permittees that do not have compliance problems may continue using the existing copper criteria and will not need to complete BLM or WER studies. |

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| *Fill in this box if the impact meets any of these criteria:*  \_X\_ No Fiscal Impact to the State.  \_\_\_ Fiscal Impact of less than $100,000 annually or $500,000 over 5 years.  \_\_\_ Fiscal Impact cannot be determined.  Brief Explanation:  The Department will use existing budget and resources to implement the proposed rule. |

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| *Fill in this box if the impact meets this criteria:*  \_\_\_ Fiscal Impact of $100,000 annually or $500,000 over 5 years.  Brief Explanation: |

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| ***Assumptions:*** | | | | | |
| ***Describe how estimates were derived:*** | | | | | |
| ***Estimated Impact to the State by Fiscal Year*** | **Year 1 (FY )** |  | **Year 2 (FY )** |  | |
| **Revenue by Each Source:** |  |  |  |  | |
| GENERAL FUND | $0 |  | $0 |  | |
| FEDERAL FUNDS | $0 |  | $0 |  | |
| OTHER (Specify) | $0 |  | $0 |  | |
| ***TOTAL REVENUE*** | $0 |  | $0 |  | |
| **Expenditures:** |  |  |  |  | |
| GENERAL FUND | $0 |  | $0 |  | |
| FEDERAL FUNDS | $0 |  | $0 |  | |
| OTHER (Specify) | $0 |  | $0 |  | |
| ***TOTAL EXPENDITURES*** | $0 |  | $0 |  | |
| ***NET IMPACT*** | $0 |  | $0 | |  |
| This rule is required by State law or Federal mandate.  *Please identify the state or federal law:*  Funding has been provided for the rule change.  *Please identify the amount provided and the funding source:*  X Funding has not been provided for the rule.  *Please explain how the agency will pay for the rule change:*  The Department will use existing budget and resources to implement the proposed rule. | | | | |  |
| ***Fiscal impact to persons affected by the rule:***  The proposed rule will potentially impact Publically Owned Treatment Works (POTW), semi-public facilities, and industries. The net fiscal impact is positive.  Overall, the proposed rule change could potentially result in a combined cost savings for 7-10 facilities ranging from $113 million to $215 million. Most of this savings is expected to be achieved by municipal wastewater treatment plants. The cost savings analysis involved several steps. First, the Department estimated the cost of installing copper removal technology at a wastewater treatment plant. This is the cost a facility could potentially save by using the copper BLM or WER-based criteria instead of the existing copper criteria. The Department then reviewed available monitoring data to estimate the number of facilities that likely cannot comply with the existing criteria, but likely could comply with copper BLM or WER-based criteria. This number was then multiplied by the savings expected to be achieved by avoiding the installation of copper removal technology. The final estimate is that 7-10 facilities across the state could achieve a savings totaling $113 million to $215 million by using copper BLM or WER-based criteria instead of the existing criteria. This cost savings is conservative due to the fact that monitoring data used in the analysis was obtained from ambient monitoring stations. These stations are mostly located on large rivers. Small, effluent dominated streams often have higher dissolved organic carbon levels that could result in even less stringent copper criteria when using the BLM or WER approach. As a result, the actual cost savings could be greater than the totals presented above.  It should be noted that the projected copper BLM or WER-based criteria used in this analysis were based on the average values of statewide ambient monitoring data. The copper BLM or WER-based criteria for any particular facility will depend on the site-specific data collected by that facility, but such data is not available to the Department at this time. The methodology described above represents the Department’s best estimate of the statewide fiscal impact of this rulemaking. The detailed fiscal impact analysis for this rulemaking is available upon request. | | | | | |
| ***Fiscal impact to Counties or other Local Governments (required by Iowa Code 25B.6):***  The proposed rule will potentially have a positive fiscal impact to wastewater treatment plants owned by local governments. | | | | | |