State of Minnesota
Minnesota Pollution Control Agency

In the Matter of Proposed Amendments to Rules Governing Water Quality: Minnesota Rules, Chapter 7050 (Water Quality Standards for Protection of Waters of the State); Addition of Minnesota Rules, Chapter 7053 (Effluent Limits and Treatment Requirements for Discharges to Waters of the State); Repeal of Minnesota Rules, Parts 7056.0010 to 7056.0040 (Classification for Use and Standards for Select Reaches of the Mississippi River and its Stream Tributaries); and Repeal of Minnesota Rules, parts 7065.0010 to 7065.0260 (Specific Effluent Limits for Select Watersheds)	Staff Proposed Changes to Proposed Minn. R. ch. 7050 and Minn. R. ch. 7053. October 3, 2007

The Minnesota Pollution Control Agency staff is proposing several changes to the original proposed wording in Minn. R. ch. 7050 and Minn. R. ch. 7053 as published in the July 23, 2007 *State Register* (32 SR 87). The proposed changes are in response to written and oral comments received during the public hearings (August 29 through September 12, 2007) and in response to other MPCA staff review comments. The rationale for the proposed changes is included in the Agency's Staff Post-Hearing Response to Public Comments.

Proposed added language is shown in bold with double underline and proposed deleted language is in bold with strikethrough.

1. Changes proposed to Minn. R. 7053.0255, subp.4, item A and item C

[Minn. R. 7053.0255] Subp. 4. **Alternative phosphorus effluent limits for new or expanded discharges**. New or expanded discharges subject to a one milligram per liter phosphorus effluent limit in subpart 3, item A, subitem (3) may request an alternative limit or no limit if one or more of items A to C apply. New or expanded discharges are defined in subpart 2. The exemptions in this subpart do not apply to facilities that discharge directly to or affect a lake, shallow lake, or reservoir or to discharges to the waters listed in subpart 5. Dischargers seeking an alternative limit due to very high per capita treatment costs or economic hardship must apply for a variance under parts 7000.7000 and 7053.0195.

The information submitted to the commissioner for consideration of an alternative limit must include, at a minimum, a description of the treatment technology used, influent and effluent total phosphorus concentrations, a phosphorus management plan for the facility, descriptions of any measures already taken to reduce phosphorus sources to the facility, and expected reductions in phosphorus concentrations following implementation of the phosphorus management plan. The discharger may qualify for an alternative total phosphorus limit or no limit if it can demonstrate:

A. the discharge is to or upstream of a water body listed on the applicable impaired water list, section 303(d) of the Clean Water Act, and the **subsequent** total maximum daily load study is complete and approved by the United States Environmental Protection Agency**, as required by Code of Federal Regulations, title 40, part 130, section 7,** at the time the new or expanding facility is in the planning and design phase. The total maximum daily load study must have considered impacts from phosphorus loading on the impaired water body. In this case the total maximum daily load study will determine the applicable phosphorus effluent limit;

B. the environmental benefits to be achieved by meeting a phosphorus limit are outweighed or negated by the environmental harm caused by meeting a limit; or

C. the treatment works, regardless of the type of treatment technology, ~~**must use**~~ **uses** chemical addition to achieve compliance with the one milligram per liter limit and the discharge is to a receiving stream in a watershed listed in subitems (1) to (3). In this case the discharger may be granted a seasonal one milligram per liter limit, applicable from May 1 through September 30 and not applicable from October 1 through April 30:

(1) the lower Mississippi River and its tributaries from the mouth of the Chippewa River in Wisconsin to the Minnesota border;
(2) the Bois de Sioux and Red Rivers and their tributaries from the southern end of Lake Traverse at Browns Valley to the Canadian border; and
(3) the Missouri, Des Moines and Cedar Rivers and their tributaries in Minnesota.

2. Changes to Proposed Chronic Water Quality Standard for Acetochlor

The Agency is proposing to change the chronic standard for acetochlor from 1.7 µg/L to 3.6 µg/L. The standard appears in six locations in Minn. R. ch. 7050 as listed below.

Minn. R 7050.0220, subp. 3a, item C, subitem (2)
Minn. R 7050.0220, subp. 4a, item C, subitem (2)
Minn. R 7050.0220, subp. 5a, item C, subitem (2)
Minn. R 7050.0222, subp. 2
Minn. R 7050.0222, subp. 3
Minn. R 7050.0222, subp. 4

The Agency is proposing to change the chronic standard in the three locations in Minn. R. 7050.0220 and in the three locations in Minn. R. 7050.0222 as shown in the examples below. The proposed chronic (and acute) standards are the same for all Class 2 subclasses.

[Minn. R 7050.0220, subp. 3a, item C, subitem (2)]

2A CS	2A MS	2A FAV	1B DC	3A/3B IC	4A IR	4B LS	5 AN
(2) Acetochlor, µg/L							
3.6 ~~**1.7**~~	86	173	--	--	--	--	--

[Minn. R 7050.0222, subp. 2]

Substance, Characteristic or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS,FAV
Acetochlor	µg/L	**3.6** ~~**1.7**~~	Tox	86	173	Tox

3. Change to Class 2A Proposed Chronic Water Quality Standard for Benzene

The Agency is proposing to change the proposed chronic standard for benzene for Class 2A waters from 5.4 µg/L to 5.1 µg/L to account for a minor calculation error. The Agency is proposing to change the Class 2A chronic benzene standard in the two locations where it appears as shown below.

[Minn. R 7050.0220, subp. 3a, item C, subitem (10)]

2A CS	2A MS	2A FAV	1B DC	3A/3B IC	4A IR	4B LS	5 AN
(10) Benzene (c), µg/L							
5.1 ~~**5.4**~~ ~~**9.7**~~	4,487*	8,974*	5	--	--	--	--

[Minn. R 7050.0222, subp. 2]

Substance, Characteristic or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS,FAV
Benzene (c)	µg/L	**5.1** ~~**5.49.7**~~	HH	4,487*	8,974*	Tox

4. Removal of Proposed Lower Limit of 10 mg/L Total Hardness for Calculation of Hardness-related Trace Metal Standards

The Agency is proposing to withdraw the proposal to include a minimum total hardness of 10 mg/L for the calculation of the hardness-variable trace metal standards. We propose to return to the hardness provision in the current rule, which establishes a maximum hardness of 400 mg/L but has no minimum. The language associated with each of the seven metal standards (cadmium, chromium (trivalent), copper, lead, nickel, silver (MS and FAV only) and Zinc) will need to be revised in both Minn. R. 7050.0220 and 7050.0222. The numeric standards themselves are not impacted. Below are examples of the proposed changes at the two locations for cadmium.

Minn. R. 7050.0220, subp.3a, item B, subitem (7)

(7) Cadmium, total, µg/L ~~See Note No. 3 below~~
1.1 3.9 7.8 5 -- -- -- --
Class 2A cadmium standards are hardness dependent. Cadmium values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 2, for examples at other hardness values and equations to calculate cadmium standards for any hardness value **~~between 10 and~~ not to exceed** 400 mg/L.

Minn. R. 7050.0222, subp.2

Cadmium, total	µg/L	~~Formula~~ equation	Tox	~~Formula~~ equation	~~Formula~~ equation	Tox

~~Cadmium, total~~ The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)
The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.828)
The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.1349)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values **~~less than 10 mg/L, 10 mg/L shall be used to calculate the standard and for hardness values~~** greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	1.8	3.9	8.6	14	19
FAV µg/L	3.6	7.8	17	27	37

The same changes are proposed at a total of 12 additional locations for the other six hardness-related metal standards in Minn. R. 7050.0220 and 7050.0222.

5. Changes to Certain Classification Listings

In addition to the subitem cross reference change in Minn. R. 7050.0470, subp. 1, item B, subitem (129) as noted in MPCA Public Hearing Exhibit 12, the following corrections and additions to the classification listings are proposed for change. The referenced listings are cited from the rule as originally noticed.

Minn. R. 7050.0470, subp. 2, item A, subitem (12)

(12) Dumbbell River, (T.60, R.7, S.3,4,5,7,8,9,10,16,18,19,20,28,29,31,32; **T.61, R.7, S.34**) : 1B, 2A, 3B;

Minn. R. 7050.0470, subp. 3, item A, subitem (42)

(42) Mustinka River Ditch, (T.128, R.45, S.19; T.128, R.46, S.**13,14,**23,24; ~~T.129, R.46, S.13,14~~) : 2C;

Minn. R. 7050.0470, subp. 5, item A, subitem (85)

(85) Judicial Ditch No. 4, Dawson, Lac Qui Parle Oil Coop, (T.117, R.43, S.7,17,18,**20,**21 NW1/4; T.117, R.44, S.12) : 7;

Minn. R. 7050.0470, subp. 5, item A, subitem (93)

(93) Judicial Ditch No. 29 **(Spring Creek)**, Evan, (T.110, R.33, S6; T.111, R.33, S.21,22,28,31,32,33) : 7;