

1 Pollution Control Agency

2 Adopted Permanent Rules Relating to Water Quality

3 7050.0150 DETERMINATION OF COMPLIANCE WITH WATER QUALITY

4 STANDARDS AND WATER QUALITY CONDITION.

5 Subpart 1. Policy and scope. The intent of the state is
6 to protect and maintain surface waters in a condition which
7 allows for the maintenance of all existing beneficial uses. The
8 condition of a surface water body is determined by its physical,
9 chemical, and biological qualities. The agency shall determine
10 an exceedance of water quality standards or an impaired
11 condition based on pollution of the waters of the state from
12 point and nonpoint sources that has resulted in degradation of
13 the physical, chemical, or biological qualities of the water
14 body to the extent that attainable or previously existing
15 beneficial uses are actually or potentially lost.

16 The narrative water quality standards in subpart 3
17 prescribe the qualities or properties of surface waters that are
18 necessary for the protection of designated public uses and
19 benefits. If the narrative standards in this part are exceeded,
20 it is considered indicative of a polluted condition which is
21 actually or potentially deleterious, harmful, detrimental, or
22 injurious with respect to the designated uses of the waters of
23 the state.

24 Subparts 5 to 7 list factors the commissioner will use to
25 determine if surface waters are in compliance with applicable
26 narrative standards in subpart 3. Determination of compliance
27 with the narrative standards will be made for individual water

1 bodies on a case by case basis.

2 [For text of subps 2 and 3, see M.R.]

3 Subp. 4. Definitions. For the purposes of this chapter
4 part, the following terms have the meanings given them.

5 A. "Altered materially," "material increase,"
6 "material manner," "seriously impaired," and "significant
7 increase," as used in subparts 3, 5, and 6, mean that pollution
8 of the waters of the state has resulted in degradation of the
9 physical, chemical, or biological qualities of the water body to
10 the extent that attainable or previously existing beneficial
11 uses are actually or potentially lost.

12 B. "Chlorophyll-a" means a pigment in green plants
13 including algae. The concentration of chlorophyll-a, expressed
14 in weight per unit volume of water, is a measurement of the
15 abundance of algae.

16 C. "Ecoregion" means an area of relative homogeneity
17 in ecological systems based on similar soils, land use, land
18 surface form, and potential natural vegetation.

19 D. "Hydraulic residence time" means the time water
20 resides in a basin or, alternately, the time it would take to
21 fill the basin if it were empty.

22 E. "Impaired water" or "impaired condition" means a
23 water body that does not meet applicable water quality standards
24 or fully support applicable beneficial uses, due in whole or in
25 part to water pollution from point or nonpoint sources, or any
26 combination thereof.

27 F. "Index of biological integrity" or "IBI" means an

1 index developed by measuring attributes of an aquatic community
2 that change in quantifiable and predictable ways in response to
3 human disturbance, representing the health of that community.

4 G. "Lake morphometry" means the physical
5 characteristics of the lake basin that are reasonably necessary
6 to determine the shape of a lake, such as maximum length and
7 width, maximum and mean depth, area, volume, and shoreline
8 configuration.

9 H. "Mixing status" means the frequency of complete
10 mixing of the lake water from surface to bottom, which is
11 determined by whether temperature gradients are established and
12 maintained in the water column during the summer season.

13 I. "Normal fishery" and "normally present" mean the
14 fishery and other aquatic biota expected to be present in the
15 water body in the absence of pollution of the water, consistent
16 with any variability due to natural hydrological, substrate,
17 habitat, or other physical and chemical characteristics.
18 Expected presence is based on comparing the aquatic community in
19 the water body of interest to the aquatic community in
20 representative reference water bodies.

21 J. "Nuisance algae bloom" means an excessive
22 population of algae that is characterized by obvious green or
23 blue-green pigmentation in the water, floating mats of algae,
24 reduced light transparency, aesthetic degradation, loss of
25 recreational use, possible harm to the aquatic community, or
26 possible toxicity to animals and humans. Algae blooms are
27 measured through tests for chlorophyll-a, observations using a

1 Secchi disk, and observations of impaired recreational and
2 aesthetic conditions by the users of the water body, or any
3 other reliable data that identifies the population of algae in
4 an aquatic community.

5 K. "Readily available and reliable data and
6 information" means chemical, biological, and physical data and
7 information determined by the commissioner to meet the quality
8 assurance and quality control requirements in subpart 8, that
9 are not more than ten years old from the time they are used for
10 the assessment. A subset of data in the ten-year period, or
11 data more than ten years old can be used if credible scientific
12 evidence shows that these data are representative of current
13 conditions.

14 L. "Reference water body" means a water body least
15 impacted by point or nonpoint sources of pollution that is
16 representative of water bodies in the same ecoregion or
17 watershed. Reference water bodies are used as a base for
18 comparing the quality of similar water bodies in the same
19 ecoregion or watershed.

20 M. "Secchi disk transparency" means the average water
21 depth of the point where a weighted white or black and white
22 disk disappears when viewed from the shaded side of a boat, and
23 the point where it reappears upon raising it after it has been
24 lowered beyond visibility. The Secchi disk measures water
25 clarity and is usually used in lakes.

26 N. "Summer-average" means a representative average of
27 concentrations or measurements of nutrient enrichment factors,

1 taken over one summer growing season from June 1 through
2 September 30.

3 O. "Transparency tube" means a graduated clear
4 plastic tube, 24 inches or more in length by 1-1/2 inches in
5 diameter, with a stopper at the bottom end, the inside surface
6 of which is painted black and white. The tube is filled with
7 water from a surface water; the water is released through a
8 valve at the bottom end until the painted surface of the stopper
9 is just visible through the water column when viewed from the
10 top of the tube. The depth of water at the point of initial
11 visibility is the transparency. The transparency tube measures
12 water clarity and is usually used in rivers and streams.

13 P. "Trophic status or condition" means the
14 productivity of a lake as measured by the phosphorus content,
15 algae abundance, and depth of light penetration.

16 Q. "Water body" means a lake, reservoir, wetland, or
17 a geographically defined portion of a river or stream.

18 Subp. 5. Impairment of waters due to excess algae or plant
19 growth. In evaluating whether the narrative standards in
20 subpart 3, which prohibit any material increase in undesirable
21 slime growths or aquatic plants including algae, are being met,
22 the commissioner will use all readily available and reliable
23 data and information for the following factors of use impairment:

24 [For text of items A to C, see M.R.]

25 D. any other scientifically objective, credible, and
26 supportable factor.

27 A finding of an impaired condition must be supported by

1 data showing elevated levels of nutrients in item A, and at
2 least one factor showing impaired conditions resulting from
3 nutrient over-enrichment in items B and C. The trophic status
4 data described in items A to D must be assessed in light of the
5 magnitude, duration, and frequency of nuisance algae blooms in
6 the water body; and documented impaired recreational and
7 aesthetic conditions observed by the users of the water body due
8 to excess algae or plant growth, reduced transparency, or other
9 deleterious conditions caused by nutrient over-enrichment.

10 Assessment of trophic status and the response of a given
11 water body to nutrient enrichment will take into account the
12 trophic status of reference water bodies; and all relevant
13 factors that affect the trophic status of the given water body
14 appropriate for its geographic region, such as the temperature,
15 morphometry, hydraulic residence time, mixing status, watershed
16 size, and location. The factors in this subpart apply to lakes
17 and, where scientifically justified, to rivers, streams, and
18 wetlands.

19 [For text of subps 6 to 8, see M.R.]

20 7050.0405 PETITION BY OUTSIDE PARTY TO CONSIDER ATTAINABILITY OF
21 USE.

22 Subpart 1. Petition. Any person may present evidence to
23 the agency that a beneficial use assigned to a water body in
24 this chapter does not exist or is not attainable and petition
25 the agency to consider a reclassification of that water body
26 under Minnesota Statutes, section 14.09. Outside parties must
27 submit written evidence in support of the petition to the

1 commissioner that includes:

2 A. the name and address of the petitioner;

3 B. the name, location, and description of the water
4 body;

5 C. the specific designated use or uses that do not
6 exist or are unattainable in the water body and the reasons they
7 do not exist or are unattainable;

8 D. the reasons the current use classification is
9 causing harm, unnecessary expense, or other hardship to the
10 petitioner; and

11 E. any additional supporting evidence including, but
12 not limited to, water quality, hydrological, and other relevant
13 data; pictures; testimony of local residents; survey results;
14 and resolutions or actions by local organizations or
15 governmental entities.

16 Subp. 2. Disposition of petition. Upon receiving a
17 petition, the commissioner has 60 days to reply in writing and
18 indicate a plan for disposition of the petition. The
19 commissioner may request additional information from the
20 petitioner if the request is considered incomplete, in which
21 case the commissioner has 60 days to reply after the additional
22 information is received and the petition is complete. If the
23 commissioner finds that the evidence submitted supports a review
24 of the designated uses, a use attainability analysis must be
25 commenced within six months of the commissioner's reply to the
26 complete petition. The petition becomes part of the use
27 attainability analysis. If the commissioner finds that the use

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- 1 attainability analysis supports a change in use classification,
- 2 the commissioner shall propose the change through rulemaking.