

## Chapter NR 207

## WATER QUALITY ANTIDegradATION

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**Note:** Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, August, 1997, No. 500.

**NR 207.01 Purpose and applicability.** (1) **PURPOSE.** The purpose of this chapter is to establish implementation procedures for the antidegradation policy in s. NR 102.05 (1) (a). This chapter sets procedures applicable to proposed new or increased discharges to outstanding resource waters, exceptional resource waters, Great Lakes system waters, fish and aquatic life waters, and waters listed in tables 3 through 8 in ss. NR 104.05 to 104.10.

(2) **APPLICABILITY.** This chapter applies to any person proposing to increase an existing discharge or create a new discharge to the surface waters of the state.

**History:** Cr. Register, February, 1989, No. 398, eff. 3-1-89; am. (1), Register, August, 1997, No. 500, eff. 9-1-97.

**NR 207.02 Definitions.** In addition to the definitions in ch. NR 205, the following definitions apply to this chapter:

(1) "Assimilative capacity" means the difference between the water quality criterion for a substance identified in ch. NR 102 or 105 and the existing level of that substance in a surface water.

(2) "Bioaccumulation factor" means the ratio of the concentration of a substance in an aquatic organism to the concentration of the substance in water to which the organism is exposed regardless of whether the concentration in the organism results solely from body contact with the water or from body contact plus ingestion of food contaminated with the substance, as determined under ch. NR 105 and associated technical support documents.

(3) "Exceptional resource waters" means any surface water, or portion thereof, in s. NR 102.11.

(4) "Fish and aquatic life water" means any surface water, or portion thereof, in s. NR 102.13.

(5) "Great Lakes system" means any surface water in s. NR 102.12 (1).

(6) (a) "Increased discharge" means any change in concentration, level or loading of a substance which would exceed an effluent limitation specified in a current WPDES permit.

(b) Except as provided in par. (c), increased discharge does not include the initial imposition of effluent limitations for substances which were in a previous discharge but which had not been limited in a prior or the current permit unless the initial imposition of effluent limitations occurs due to a changed discharge location, other than a change in location necessary to accommodate a mixing zone as provided for in ch. NR 106.

(c) For discharges of bioaccumulative chemicals of concern (BCCs), defined in s. NR 105.03 (9), to the Great Lakes system, increased discharge means:

1. An increased discharge as defined in par. (a);
2. The initial imposition of an effluent limitation for a BCC that occurs due to an actual or expected increase in loading of the BCC; and
3. Any actual or expected increase in loading of a BCC which is caused by or will be caused by a facility expansion, a process modification, or the connection to an existing public or private wastewater treatment system of a substantial source of untreated or pretreated effluent containing BCCs, and which requires notification to the department pursuant to s. NR 205.07 (2) (a) or (3) (c)

or (d). Under this subdivision, increased discharge does not include any increase in the loading of BCCs that is caused by normal operational variability, changes in intake pollutants or increasing the rate or hours of production within the existing production capacity. Normal operational variability includes, for POTWs, any additional wastewater volume within the existing capacity of the POTW from commercial, industrial or residential growth which do not normally contribute substantial quantities of BCCs to the POTW's wastewater flow.

(7) "Loading" means the concentration of a substance within a discharge multiplied by the flow of that discharge.

(8) "New discharge" means any point source which has not received a WPDES permit from the department prior to March 1, 1989.

(9) "Outstanding resource waters" means any surface water, or portion thereof, in s. NR 102.10.

(10) "Receiving water" means the portion of a surface water which will be affected by a proposed new or increased discharge.

(11) "Significant lowering of water quality" means a lowering of water quality determined to be significant under s. NR 207.05.

(12) "Surface water" means all waters of the state, as designated in 281.01 (18), Stats., except groundwater.

(13) "Water quality based effluent limitations" means effluent limitations established by the department pursuant to s. 283.13 (5), Stats.

**History:** Cr. Register, February, 1989, No. 398, eff. 3-1-89; correction in (13) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 1997, No. 495; am. (5), (6) (b) and (12), cr. (6) (c), Register, August, 1997, No. 500, eff. 9-1-97.

**NR 207.03 Antidegradation evaluation procedure.**

(1) **GENERAL.** When the department promulgates a less stringent criterion for a non-BCC pursuant to s. NR 105.02 (2) or revises a secondary value for a non-BCC due to an updated scientific database, any subsequent requests for increased permit limitations based on the revised criterion or secondary value will not be subject to the requirements of this chapter if the following occur:

(a) The department determines that the increased limitations based on the changed criterion or secondary values will still maintain and protect the existing designated uses, and

(b) The receiving water is not an outstanding resource water, an exceptional resource water subject to the requirements of sub. (4) (b), or a water for which sub. (7) (c) applies.

(2) **DISSOLVED-BASED METAL LIMITATIONS.** If a person requests an increased limitation based on a dissolved metals criterion pursuant to s. NR 106.07 (7) (b), the request for an increased limitation will not be subject to the requirements of this chapter if the following occur:

(a) The department determines that the increase limitations based on the changed criterion or secondary value will still maintain and protect the existing designated uses, and

(b) The receiving water is not an outstanding resource water, an exceptional resource water subject to the requirements of sub. (4) (b), or a water for which sub. (7) (c) applies.

(3) **OUTSTANDING RESOURCE WATERS.** If the department determines that a WPDES permit application proposes a new or increased discharge to outstanding resource waters, effluent limitations for substances in the new or increased portion of the dis-

charge will be set equal to the background levels of these substances, upstream of, or adjacent to, the discharge site unless it is determined that for Great Lakes system waters, such limitations would result in significant lowering of water quality under s. NR 207.05 (4) (b). Effluent limitations for those substances shall be determined in accordance with s. NR 207.04.

**(4) EXCEPTIONAL RESOURCE WATERS.** If the department determines that a WPDES permit application proposes a new or increased discharge to exceptional resource waters, it shall review the application as follows:

(a) For a proposed new discharge which is needed to prevent or correct either an existing surface or groundwater contamination situation, or a public health problem, water quality based effluent limitations shall be determined in accordance with sub. (6).

(b) For a proposed new discharge which is not needed to prevent or correct either an existing surface or groundwater contamination situation, or a public health problem, water quality based effluent limitations shall be set equal to the existing levels of these substances upstream of, or adjacent to, the discharge site.

(c) For a proposed increased discharge, water quality based effluent limitations for the increased portion of the discharge shall be determined in accordance with sub. (6).

(d) Whenever effluent limitations determined in accordance with pars. (a) to (c) would result in any substance in the proposed new or increased discharge causing significant lowering of water quality as determined under s. NR 207.05 (4) (b), effluent limitations shall be determined in accordance with s. NR 207.04.

**(5) GREAT LAKES SYSTEM.** If the department determines that a WPDES permit application proposes a new or increased discharge to the Great Lakes system, it shall establish effluent limitations based on the procedures in ss. NR 207.04 and 207.05.

**(6) FISH AND AQUATIC LIFE WATERS.** If the department determines that a WPDES permit application proposes a new or increased discharge to fish and aquatic life waters, it shall establish effluent limitations using the procedures in ss. NR 207.04 and 207.05.

**(7) WATERS LISTED IN TABLES 3 THROUGH 8 IN SS. NR 104.05 TO 104.10.** If the department determines that a WPDES permit application proposes a new or increased discharge to waters listed in tables 3 through 8 in ss. NR 104.05 to 104.10, the following procedure shall apply:

(a) The person proposing a new or increased discharge shall demonstrate to the department whether or not the discharge will result in:

1. Significant lowering of water quality in downstream fish and aquatic life or Great Lakes system waters as determined under s. NR 207.05;

2. Lowering of water quality of downstream outstanding resource waters;

3. Lowering of water quality of downstream exceptional resource waters, except for a proposed increased discharge or a proposed new discharge necessary to correct or prevent an existing surface or groundwater contamination situation or a public health problem.

(b) Sections NR 207.04 and 207.05 shall apply under either of the following circumstances:

1. A proposed increased discharge would result in significant lowering of water quality of downstream fish and aquatic life waters, exceptional resource waters, or Great Lakes system waters; or

2. A proposed new discharge which is necessary to correct or prevent an existing surface or groundwater contamination situation or a public health problem and would result in a significant lowering of downstream exceptional resource waters.

(c) Effluent limitations shall be set to prevent a lowering of water quality under the following circumstances:

1. The proposed new or increased discharge would result in a lowering of water quality to downstream outstanding resource waters; or

2. A proposed new discharge not subject to par. (b) 2. would result in a lowering of water quality to downstream exceptional resource waters.

(d) The remaining provisions of this chapter do not apply to situations relating to proposed new or increased discharges to waters listed in tables 3 through 8 in ss. NR 104.05 to 104.10 not covered by pars. (a) to (c).

**(8) NONCONTACT COOLING WATER.** The requirements of subs. (1) and (2) apply to new or increased discharges of noncontact cooling water. The requirements of subs. (3) to (5) do not apply to new or increased discharges of noncontact cooling water which meet the following criteria:

(a) The discharge contains no additives other than those necessary to provide a safe drinking water supply or those similar in type and amount to substances typically added to a public drinking water supply.

(b) The discharge complies with the thermal criteria in ch. NR 102.

(c) The department has determined that the discharge does not contain concentrations of substances other than additives specified in par. (a) which will result in violations of water quality criteria established under ch. NR 105 or if the department has determined that the existing concentration of a toxic substance in the receiving water is greater than the water quality criterion in ch. NR 105 that the source of the water supply for the discharge is the same receiving water.

(d) The discharge does not contain groundwater which is withdrawn from a location because of noncompliance with the standards in ch. NR 140.

**(9) PERMIT CONDITIONS AND REPORTING REQUIREMENTS.** All WPDES permit applications for new or increased discharges reviewed under the procedures established in this chapter shall be subject to the permit conditions and reporting requirements in chs. NR 200 to 297.

**History:** Cr. Register, February, 1989, No. 398, eff. 3-1-89; **renum. (1) to (7) to be (3) to (9) and am. (3), (4) (a) and (c), cr. (1) and (2), Register, August, 1997, No. 500, eff. 9-1-97.**

**NR 207.04 Fish and aquatic life waters. (1) APPLICATION INFORMATION.** Persons proposing a new or increased discharge to fish and aquatic life waters shall provide documentation for the following:

(a) An assessment of existing treatment capability which demonstrates:

1. Any of the following:

a. The permittee's discharge equals or exceeds 85% of any mass permit limitation.

b. The permittee's monthly average discharge equals or exceeds 85% of a monthly average effluent limitation established in a permit for 3 consecutive months;

c. The permittee's weekly average discharge equals or exceeds 85% of a weekly average effluent limitation established in a permit for 4 consecutive weeks.

d. The permittee's daily discharge equals or exceeds 85% of a daily maximum effluent limitation established in a permit 5 or more times during a calendar year;

e. There are exceedances of any daily maximum, weekly average or monthly average effluent limitation for a parameter in a permit; or

f. A municipal permittee's compliance maintenance annual report point total, as required in ch. NR 208, is 70 or greater;

2. The treatment facilities were maintained in good working order;

3. The treatment facilities were operated and maintained as efficiently as possible; and

4. The conditions documented in subd. 1. were not due to temporary upsets.

(b) Effluent quality data and background water quality data for indicator parameters so a determination will be made on whether or not a significant lowering of water quality will occur under s. NR 207.05.

(c) If the proposed new or increased discharge is found to result in any lowering of water quality or if the person proposing the new or increased discharge has waived the procedure in s. NR 207.05 (2) (a) to (d), the permit applicant shall demonstrate the following:

1. The proposed new or increased discharge will accommodate important economic or social development in any of the following ways:

- a. The discharger will be increasing its employment.
- b. The discharger will be increasing its production level.
- c. The discharger will be avoiding a reduction in its employment level.
- d. The discharger will be increasing its efficiency.
- e. There will be industrial, commercial or residential growth in the community.
- f. The discharger will be providing economic or social benefit to the community.
- g. The discharger will be correcting an environmental or public health problem.

(d) If the new or increased discharge is found to result in a significant lowering of water quality or if the person proposing the new or increased discharge has waived the procedure in s. NR 207.05 (2) (a) to (d), the permit applicant shall demonstrate the following:

1. The proposed significant lowering of water quality cannot be prevented in a cost effective manner by the following types of pollution control alternatives:

- a. Use of conservation measures.
- b. Use of recycling measures.
- c. Use of other applicable wastewater treatment process or operational changes.
- d. Use of source reduction measures.
- e. Use of other pollution minimization alternatives.

2. For proposals involving the expansion of a wastewater treatment plant, whether or not there are alternative wastewater treatment technologies which:

- a. Have documented performance levels for similar wastewater composition,
- b. Have capital costs less than 110% of the capital costs (or present worth less than 115% of the related total present worth value) for alternatives achieving the water quality based effluent limitations or the effluent limitations determined pursuant to chs. NR 200 to 297, as appropriate, and
- c. Would prevent a significant lowering of water quality.

3. Whether or not there are other discharge locations or alternatives which would meet the conditions of subd. 2. b. and c.

4. Any other information required by the department or believed by the applicant to be necessary to complete review of the application.

**Note:** It is the intent of the department that, where possible, an applicant may use applicable information contained in a facility plan approved by the department to meet the requirements of s. NR 207.04 (1) (a) 1.a. to f..

**(2) DEPARTMENT DETERMINATIONS.** (a) If the department determines that the existing wastewater treatment facilities have treatment capability to treat any proposed new or increased discharge and maintain treatment levels sufficient to meet existing effluent limitations as documented under sub. (1) (a), effluent limitations will remain unchanged.

(b) If the department determines that the existing treatment facilities do not have treatment capability to treat any proposed new or increased discharge and maintain treatment levels sufficient to meet existing effluent limitations, effluent limitations will be developed using the following procedures:

1. If the proposed new or increased discharge will not significantly lower water quality as determined under s. NR 207.05 (4) and will accommodate important economic and social development as documented under sub. (1) (c), water quality based effluent limitations will be determined based on applicable procedures and criteria in chs. NR 102, 103, 105 and 106 or on categorical effluent limitation procedures pursuant to chs. NR 200 to 297 as appropriate.

2. If the proposed new or increased discharge will not significantly lower water quality as determined under s. NR 207.05 (4) and will not accommodate important economic and social development as documented under sub. (1) (c), water quality based effluent limitations for substances in the new or increased discharge will be set equal to the existing levels of these substances upstream of, or adjacent to, the discharge site.

3. If the proposed new or increased discharge will significantly lower water quality as determined under s. NR 207.05 (4), or the applicant has chosen to waive the procedure in s. NR 207.05 (2) (a) to (d), and the proposed discharge will not accommodate important economic and social development as documented under sub. (1) (c), water quality based effluent limitations for substances in the new or increased discharge will be set equal to the existing levels of these substances upstream of, or adjacent to, the discharge site.

4. If the proposed new or increased discharge will significantly lower water quality as determined under s. NR 207.05 (4), or the applicant has chosen to waive the procedure in s. NR 207.05 (2) (a) to (d), and the proposed discharge will accommodate important economic and social development as documented under sub. (1) (c), effluent limitations for the proposed new or increased discharge will be determined using the procedure in par. (c).

**Note:** When assessing existing treatment capabilities, it is the intent of the department to consider projected increases in a permittee's discharge due to a planned water conservation project.

(c) The department shall use the following procedures to determine water quality based effluent limitations or effluent limitations determined pursuant to chs. NR 200 to 297 as appropriate, for each substance in the proposed new or increased discharge for which the existing levels upstream of, or adjacent to, the discharge site are of better quality than applicable water quality criteria or secondary values derived according to ch. NR 102, 103 or 105:

1. If there are no applicable pollution control alternatives or alternative discharge locations which meet the conditions of sub. (1) (d) 2. or 3., effluent limitations will be determined for the new or increased portion of the discharge based on applicable procedures and criteria or secondary values derived according to chs. NR 102, 103, 105 and 106 or based on effluent limitations pursuant to chs. NR 200 to 297, as appropriate.

2. If there are applicable pollution control alternatives or alternative discharge locations which meet the conditions of sub. (1) (d) 2. or 3., water quality based effluent limitations will be determined for the new or increased portion of the discharge based on the applicable pollution control alternative or alternative discharge site which prevents the significant lowering of water quality.

3. For an increased discharge not involving expansion of a wastewater treatment plant:

- a. If there are no demonstrated, cost effective pollution control alternatives which would prevent significant lowering of water quality as demonstrated under sub. (1) (d) 1., effluent limitations shall be determined pursuant to chs. NR 102 and 106 or chs. NR 200 to 297, as appropriate.

b. If there are demonstrated, cost effective pollution control alternatives which would prevent the significant lowering of water quality as demonstrated under sub. (1) (d) 1., water quality based effluent limitations will be determined for the new or increased portion of the discharge based on the cost effective pollution control alternative which prevents the significant lowering of water quality.

(d) The department shall determine water quality based effluent limitations using the water quality criteria or secondary values derived according to ch. NR 102, 103, 104 or 105 for substances in the proposed new or increased discharge whose levels in the receiving water are of lesser quality than the water quality criteria or secondary values for the receiving water upstream of, or adjacent to, the discharge site.

(e) In addition to the provisions of pars. (a) to (c), if the department determines that a proposed new or increased discharge will result in lowering of water quality in downstream outstanding resource waters or a proposed new discharge would result in lowering of water quality in exceptional resource waters, other than for the reasons specified in s. NR 207.03 (2) (a), water quality based effluent limitations for substances in the new or increased portion of the discharge will be set to prevent the lowering of water quality in the downstream outstanding or exceptional resource water. Whenever s. NR 207.03 (2) (a) applies, effluent limitations shall be established using the procedures in this section.

**History:** Cr. Register, February, 1989, No. 398, eff. 3-1-89; **renum.** (1) (a) 1. a. to d. to be (1) (a) 1. b. and d. to f., cr. (1) (a) 1. a., c. and (d) 1. e., am. (2) (c) (intro.), 1. and (d), Register, August, 1997, No. 500, eff. 9-1-97.

**NR 207.05 Determining significant lowering of water quality. (1) INDICATOR PARAMETERS.** For each proposed new or increased discharge the department shall determine a list of water quality parameters for which the significant lowering of water quality test will be applied. The list shall consist of:

(a) Biochemical oxygen demand/dissolved oxygen, ammonia-nitrogen, and copper; or

(b) Some other list of substances for which water quality criteria or secondary values have been determined according to chs. NR 102 to 105, not to exceed 10 parameters, which is determined to be representative of the discharge.

**(2) APPLICATION INFORMATION.** Persons proposing a new or increased discharge shall use the following procedure to demonstrate to the department whether the discharge will result in a significant lowering of water quality:

(a) Determine the expected levels of the indicator parameters in the discharge.

(b) Determine existing levels of the indicator parameters upstream of, or adjacent to, the discharge site using applicable procedures in chs. NR 102 and 106 or specified by the department

if none of those procedures apply. Existing levels shall be based on the earliest source of data after March 1, 1989 unless a demonstration is made that there has been a change in existing levels resulting in a change in the assimilative capacity of the receiving water, in which case the existing levels shall be based on the data used in the demonstration.

(c) Calculate expected levels in the receiving water of the indicator parameters as a result of the proposed new or increased discharge. In calculating expected levels in the receiving water, the following shall be used:

1. Applicable design low flow rates or dilution ratios for the receiving water in ch. NR 102 or 106 or specified by the department if none of those rates or ratios apply.

2. The daily average discharge loading rates for the new or increased portion of a municipal discharge or the yearly average discharge loading rates for the new or increased portion of an industrial discharge.

(d) Compare the expected levels in the receiving water of each indicator parameter as calculated in par. (c) to:

1. The assimilative capacity multiplied by one-third for all indicator parameters except dissolved oxygen; or

2. The sum of the existing level multiplied by two-thirds and the water quality criterion multiplied by one-third for dissolved oxygen.

**(3) PROCEDURE WAIVER.** Persons proposing a new or increased discharge may choose to waive the procedure in sub. (2), and proceed directly to the economic and social development test in s. NR 207.04 (1) (c).

**(4) DEPARTMENT DETERMINATIONS.** The department shall determine that a proposed new or increased discharge will result in a significant lowering of water quality if either:

(a) The proposed new or increased discharge, along with all other new or increased discharges after March 1, 1989, taking into account any changes in assimilative capacity over time that have been demonstrated under sub. (2) (b), results in an expected level of an indicator parameter in the receiving water of either of the following:

1. Greater than one-third multiplied by the assimilative capacity for any indicator parameter other than dissolved oxygen; or

2. Greater than the sum of the existing level multiplied by two-thirds and the water quality criterion multiplied by one-third for dissolved oxygen.

(b) For a discharge to the Great Lakes system, the mass loading to the receiving water of any substance in the proposed new or increased discharge having a bioaccumulation factor greater than 1000 would be increased.

**History:** Cr. Register, February, 1989, No. 398, eff. 3-1-89; **am.** (1) (b) and (4) (b), Register, August, 1997, No. 500, eff. 9-1-97.