

Chapter NR 212

WASTE LOAD ALLOCATED WATER QUALITY RELATED  
EFFLUENT LIMITATIONS

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**NR 212.01 Purpose.** The purpose of this chapter is to establish the procedures, methodologies and requirements to be used by the department for determining total maximum pollutant loadings and corresponding water quality related effluent limitations in accordance with ss. 147.04 (5), 147.05 and 147.25 (3), Stats. Such restrictions are established to attain and maintain the designated uses specified in the water quality standards appearing in chs. NR 102, 103 and 104.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.02 Applicability.** (1) The provisions of this chapter are applicable to water quality related effluent limitations for conventional pollutants, ammonia and phosphorus developed through waste load allocations and established under s. 147.05, Stats.

(2) Nothing in this chapter shall in any way inhibit, override, preclude or prevent the department from issuing any permit with toxic effluent limits even if such permit limitations would result in more stringent limitations than provided in this chapter.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.03 Definitions.** In addition to the definitions and abbreviations in ss. NR 205.03 and 205.04, the following definitions are applicable to terms used in this chapter:

(1) "Baseline load" means the reference load used in distributing all or part of the total maximum load among multiple point source dischargers to a water quality limited segment.

(2) "Categorical effluent limitation" means a point source effluent limitation for categories and classes of point sources other than publicly-owned treatment works achieved by application of the best practicable control technology currently available, the best conventional pollutant control technology, or the best available technology economically achievable as required by s. 147.04 (2), Stats.; or means a point source

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effluent limitation for a publicly-owned treatment works achieved by application of secondary treatment as required by s. 147.04 (4), Stats.

(3) "Conventional pollutant" means those pollutants identified in section 304 (a) (4) of the federal clean water act amendments of 1977. These pollutants are; biological oxygen demand (BOD), total suspended solids (TSS), pH, fecal coliform and oil and grease.

(4) "Cost-effective analysis" means a systematic comparison of alternative means of meeting state water quality standards, effluent limitations or other treatment standards in order to identify the alternative which will minimize the total resources costs over the appropriate planning period. These resources costs include monetary costs and environmental as well as other nonmonetary costs.

(5) "Critical water quality conditions" means those water conditions upon which are based the most stringent water quality effluent limitations.

(6) "Effluent limitation" whenever used without qualification means any restriction including schedules of compliance, established by the department, on quantities, rates and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into waters of this state.

(7) "Flow reregulation" means any practice with respect to the available surface waters in a basin that would alter the stream flows from those which would occur under existing regimes.

(8) "Infiltration" means water other than waste water that enters a sewerage system, including sewer service connections, from the ground through such sources as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

(9) "Inflow" means water other than waste water that enters a sewerage system, including sewer service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

(10) "Instream aeration" means techniques which increase the dissolved oxygen content of a receiving water. Those techniques include, but are not limited to, mechanical aeration devices, diffuser systems, and turbine venting.

(11) "Margin of safety" means a portion of the total maximum load which accounts for the uncertainties concerning the relationship between effluent limitations and water quality or provide a greater assurance that the water quality standards will be met. This portion of the total maximum load is not available for allocation to point sources.

(12) "New point source", for the purposes of this chapter, means a point source which commenced operation after January 1, 1980.

(13) "Nonpoint source" means a source of pollution resulting from a land management activity which contributes to runoff, seepage or percolation; and which is not defined as a point source.

(14) "Nonpoint source allocation" means that portion of the total maximum load distributed or apportioned to nonpoint sources and unavailable for allocation to point sources.

(15) "Point source allocation" means that portion of the total maximum load distributed or apportioned to point sources.

(16) "Publicly-owned point source" means any point source which is owned by a municipality.

(17) "Public sector growth" means an increase in waste water discharge from any person except industrial establishments, whose waste water is treated by a publicly-owned point source.

(18) "Reserve capacity" means that portion of the total maximum load reserved for allocation to new or expanding point sources.

(19) "Residential growth" means an increase in population.

(20) "Stream segment" means a portion of a stream including natural and artificial flowages.

(21) "Total maximum load" means the maximum quantity of a pollutant or pollutants that can be discharged into a water quality limited segment over a specified period of time to maintain the applicable water quality standards. The total maximum load is the sum of the point source allocation, the nonpoint source allocation, the reserve capacity and the margin of safety.

(22) "Waste load allocation" means the allocation resulting from the process of distributing or apportioning the total maximum load to each individual point source, nonpoint sources, reserve capacity and margin of safety.

(23) "Water quality limited segment" means any area or portion of a stream which will not meet the established water quality standard with application of only categorical effluent limitations to all point sources.

(24) "Water quality related effluent limitation" means a point source effluent limitation designed to meet applicable water quality standards and which is more restrictive than the categorical effluent limitations. For the purposes of this chapter, water quality related effluent limitations refer to those determined as a result of a waste load allocation.

(25) "Water quality standards" means administrative rules adopted as chs. NR 102, 103 and 104, under authority of s. 144.025 (2) (b), Stats.

(26) "WPDES permit" means a Wisconsin pollutant discharge elimination system permit for the discharge of pollutants issued by the department under ch. 147, Stats.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

NR 212.05 General. (1) Water quality related effluent limitations and total maximum loads shall be established whenever categorical effluent limits required under s. 147.04, Stats., are less stringent than necessary to achieve the designated water quality standard. Water quality related effluent limitations for point sources shall be specified in a WPDES permit.

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(2) For the purposes of this chapter compliance with water quality related effluent limitations is recognized as compliance with s. 147.02 (4) (d), Stats.

(3) In no case shall the water quality related effluent limitations be less stringent than applicable categorical effluent limitations.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.06 Determination of the total maximum load.** (1) When required by s. NR 212.05, total maximum loads for stream segments shall be established based upon relevant water quality and quantity considerations including, but not limited to, streamflow, water temperature, pH, dissolved oxygen, suspended solids and hardness or other natural background conditions. The stream conditions to be used for calculating the total maximum load are specified in s. NR 102.03 (3). Variable loadings may be established for a given stream segment to reflect the varying capacity of a stream to assimilate wastes under differing conditions when necessary supporting data is available.

(2) Total maximum loads shall be reviewed at least once every 5 years and if necessary, recalculated by the department prior to permit reissuance, based on factors which shall include but not be limited to changes in stream conditions and advancements in stream modeling techniques.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.07 Allocation for reserve capacity.** The allocation for a reserve capacity for a particular stream segment shall be zero unless otherwise specified in ss. NR 212.40 to 212.70.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; am. Register, May, 1985, No. 353, eff. 6-1-85.

**NR 212.08 Allocation for margin of safety.** The allocation for a margin of safety shall be zero unless otherwise specified in ss. NR 212.40 to 212.70.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; am. Register, May, 1985, No. 353, eff. 6-1-85.

**NR 212.09 Nonpoint source allocation.** The allocation for nonpoint sources shall be zero unless otherwise specified in ss. NR 212.40 to 212.70.

Note: For those stream conditions where the allocation of water quality related effluent limitations is necessary, nonpoint source effects on stream segments will normally be accounted for in the water quality model or other technical analysis used to determine the total maximum load. In unforeseen circumstances requiring the specific allocation of a portion of the total maximum load for contributions from nonpoint sources, s. NR 212.09 can be used. Direct control of contributions from nonpoint sources will be implemented through land management control practices and will not normally be included in a waste load allocation.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; am. Register, May, 1985, No. 353, eff. 6-1-85.

**NR 212.10 Point source allocations.** (1) The water quality related effluent limitations for a point source discharge to a stream segment which is not impacted by any other point source shall be calculated by subtracting any allocations for reserve capacity, margin of safety or nonpoint sources from the total maximum loading.

(2) The procedures for determining water quality related effluent limitations for point source dischargers to a stream segment affected by more than one discharger are found in ss. NR 212.40 to 212.70.

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(3) The department may permit point source water quality related effluent limitations to vary according to flow, temperature or other water quality conditions only when all of the following are met:

(a) The limitations shall result in the attainment of water quality standards; and

(b) During the term of the permit the discharger provides sufficient monitoring capability where such capability does not otherwise exist.

(4) Water quality related effluent limits shall be expressed as daily maximum loads. Consistent with techniques established under ss. NR 212.40 through 212.70 effluent limits may be expressed as averages in conjunction with daily maximum limits if the permittee demonstrates that such limits would not increase the probability of water quality standards violations. The flow and temperature measurements of stream conditions for flow and temperature related permits may be based on averages in cases where averages better approximate actual river conditions.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; am. (2) and (4), Register, May, 1985, No. 353, eff. 6-1-85.

**NR 212.11 Modifications and temporary reallocation of point source allocations.** (1) When a discharger to a publicly-owned point source covered by this chapter applies to receive a separate WPDES permit or when a person with a WPDES permit applies to terminate its direct discharge in order to contribute to a publicly-owned point source covered by this chapter, permit modification procedures contained in ss. 147.025 and 147.03 (2), Stats., shall apply. Any reallocation pursuant to such action shall only affect the applicant and the publicly-owned point source to which it discharges.

(2) Procedures for temporary reallocation for individual stream segments are identified in ss. NR 212.40 through 212.70. Notwithstanding procedures identified in ss. NR 212.40 through 212.70, temporary reallocation of wasteload allocations may be allowed under the following conditions:

(a) Reallocations approved by the department shall be for at least one calendar year and shall expire at the end of the affected discharger's WPDES permit term;

(b) Reallocations shall account for differences in waste characteristics and location of discharge as determined by the department and may not adversely affect a downstream segment's wasteload allocation; and

(c) Reallocations may not affect baseline loads in affected stream segments but may result in an adjustment to total maximum daily loads identified in ss. NR 212.40 through 212.70.

(3) Reallocations may not be approved by the department until the discharger applying for a reallocation demonstrates through the use of a toxicity test approved by the department that such reallocation will not result in toxicity in the receiving water.

(4) Prior to department approval of a reallocation, all parties to the transfer shall waive all rights under s. 227.14, Stats., to retain any reallocation beyond the expiration date of the WPDES permit of the dischargers applying to receive a reallocation. The waiver shall be effectuated

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through incorporation into the WPDES permit of the affected discharger.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; r. and recr. Register, August, 1985, No. 356, eff. 9-1-85.

**NR 212.12 Instream aeration.** (1) Total maximum loads established under this chapter may be calculated based on the use of instream aeration techniques when WPDES permit applications meet both the following conditions:

(a) A cost-effectiveness analysis is submitted to the department which demonstrates that instream aeration is a satisfactory means of attaining water quality standards; and

(b) A demonstration is made to the satisfaction of the department that applicable water quality standards will be met and no environmental pollution as defined in s. 144.01 (3), Stats., will occur.

(2) Instream aeration may not be used to accommodate new or increased discharges of pollutants either from new point sources or from the expansion of existing point sources, except that instream aeration may be available on a temporary basis to accommodate increased pollution loads due to the growth of a municipality when:

(a) The use of aeration for this purpose is restricted to residential or public sector growth;

(b) Adequate operation and maintenance of the publicly-owned point source exists;

(c) Excessive infiltration and inflow have been removed from the collection systems;

(d) No bypasses exist which are not authorized by the department; and

(e) The municipality has taken all reasonable steps to obtain federal and state financing for its point source.

(3) The use of instream aeration under sub. (2) shall be allowed for a period not to exceed 5 years, at which time the publicly-owned point source shall have sufficient treatment capability in place to meet the waste water treatment needs as required by an approved municipal waste water treatment facility plan developed under ch. NR 110.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.13 Flow reregulation.** (1) Total maximum loads established under this chapter may be calculated based on the use of flow reregulation techniques when WPDES permit applicants meet all of the following conditions:

(a) A cost-effectiveness analysis is submitted to the department which demonstrates that flow reregulation is a satisfactory means of attaining water quality standards.

(b) A technical analysis is presented to the satisfaction of the department which determines the critical water quality conditions for the affected stream segment as a function of the flow reregulation technique.

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(c) Legally binding assurances are provided to the satisfaction of the department that the entity responsible for reregulating flows on the affected stream segment will undertake the agreed-upon flow reregulation activities.

(d) The flow reregulation does not interfere with the uses for which the impoundment was authorized.

(2) Flow reregulation may not be used to accommodate new discharges of pollutants either from new point sources or from the expansion of existing point sources.

(3) Flow reregulation may not be accomplished by the construction of new impoundments built for the primary purpose of increasing flows to accommodate pollution loadings.

(4) Flow reregulation may not be accomplished by flow augmentation practices which would increase the overall quantity of surface water in the basin. Prohibited practices include interbasin transfers or ground-water pumping.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81.

**NR 212.40 Determination of lower Fox river water quality related effluent limitations.** Effluent limitations for point sources discharging BOD<sub>5</sub> to the lower Fox river shall be calculated according to the procedures contained in this section. These limitations shall apply from May 1 to October 31 annually.

(1) Total maximum daily load for BOD<sub>5</sub>. (a) The total maximum daily BOD loads which are available for allocation to point sources discharging to the lower Fox river between milepoints 40.0 and 32.4 are shown in Table 1-a.

(b) The total maximum daily BOD<sub>5</sub> loads which are available for allocation to point sources discharging to the lower Fox river between milepoints 32.4 and 19.2 are shown in Table 1-b.

(2) Determine baseline loads for each point source subject to the waste load allocation.

(a) Publicly-owned point sources between milepoints 40.0 and 19.2. The baseline load expressed in pounds per day for each publicly-owned point source shall be calculated as follows:

$$\text{Baseline Load} = (Q) (8.34) (60)$$

Where: Q = The average daily flow for the publicly-owned point source during 1976 and 1977 expressed in millions of gallons per day.

8.34 = Conversion factor

60 = Concentration of BOD<sub>5</sub> expressed in milligrams per liter.

(b) Nonpublicly-owned point sources between milepoints 40.0 and 19.2. The baseline load expressed in pounds per day for each nonpublicly-owned point source shall be calculated as follows:

$$\text{Baseline Load} = (\text{BPT}) (\text{Production}) (0.85)$$

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Where: BPT = The final best practicable waste treatment effluent limitations for the point source as provided in chs. NR 284 and 285, expressed as pounds of BOD<sub>5</sub> per ton of production. If chs. NR 284 and 285, are not applicable, the final best practicable waste treatment effluent limitations as determined under ch. NR 217, shall apply.

Production = The maximum weekly off-machine production during 1973 expressed as tons per day.

0.85 = Adjustment factor.

(3) Determine the reserve capacity adjustment. The reserve capacity for each publicly-owned point source shall be calculated as follows:

$$\text{Reserve Capacity} = (P) (124) (8.34) (60)$$

Where: P = Projected population change for the area served by the publicly-owned point source between the years 1977 and 2000 expressed in millions of persons.

124 = Projected per-capita waste water flow expressed in gallons per day.

8.34 = Conversion factor.

60 = Concentration of BOD<sub>5</sub> expressed in milligrams per liter.

(4) Determine the adjustments to the baseline loads.

(a) The adjusted baseline load for each publicly-owned point source shall be equal to the baseline load for the source calculated in sub. (2) (a) plus the reserve capacity for the same source calculated in sub. (3).

(b) The adjusted baseline load for each nonpublicly-owned point source shall be calculated as follows:

$$\text{Adjusted Baseline Load} = (BL) - \frac{(BL)}{\text{Total BL}} \times (\text{Total Reserve Capacity})$$

Where: BL = The baseline load for the nonpublicly-owned point source as determined using the procedures in sub. (2) (b)

Total BL = The sum of all the baseline loads for nonpublicly-owned point sources calculated in sub. (2) (b) within the applicable stream segment defined in sub. (1).

Total Reserve Capacity = The sum of all the reserve capacities for publicly-owned point sources calculated in sub. (3) within the applicable stream segment defined in sub. (1).

(5) Determine the allocation for each point source. The allocation for each point source shall be calculated as follows:



$$\text{Point Source Allocation} = (\text{Adjusted Baseline Load}) \frac{(T)}{C+D}$$

Where: Adjusted

Baseline Load = The adjusted baseline load for the point source calculated in sub. (4)

T = The applicable total maximum daily BOD<sub>5</sub> load available for allocation as shown in sub. (1)

C = The sum of all the adjusted baseline loads within the applicable jgm stream segment as defined in sub. (1) for publicly-owned point sources calculated in sub. (4) (a).

D = The sum of all the adjusted baseline loads within the applicable stream segment defined in sub. (1) for nonpublicly-owned point sources calculated in sub. (4) (b).

(6) For purposes of determining compliance with water quality related effluent limits, the following conditions shall be met:

(a) For a point source discharging into the lower Fox river from milepoints 40.0 through 19.2, the sum of the actual daily discharges for any 7-consecutive-day-period may not exceed the sum of the daily point source allocation values calculated under sub. (5) for the same 7-consecutive-day-period; and

(b) For any one day period;

1. For a point source discharging into the lower Fox river between milepoints 40.0 through 32.4, the actual discharge may not exceed 135% of the allocation for that day as calculated under sub. (5).

2. For a point source discharging into the lower Fox river between milepoints 32.4 and 19.2, the actual discharge may not exceed 128.9% of the allocation for that day as calculated under sub. (5).

(7) The flow and temperature conditions used to determine compliance with permit effluent limits shall be the representative measurements of the flow averaged over the previous 4 days and temperature of the previous day.

(8) REALLOCATION OF AVAILABLE WASTELOAD ALLOCATIONS. (a) Wasteload allocations may be reallocated under par. (b) when a wasteload allocated permit expires, is revoked or surrendered for the following purposes:

1. Provide for the wasteload needed due to the reactivation of a facility that had closed and made the wasteload available.

2. Provide the wasteload for new production increases by existing dischargers.

3. Provide the wasteload for production by a new discharger.

4. Provide for existing dischargers to raise their existing allocations in the appropriate stream segment towards categorical effluent limitation levels.

(b) The following procedures shall be used to reallocate available wasteloads:

1. Upon notification by the department of an available wasteload allocation pursuant to par. (a), the designated management agency shall publish a notice of wasteload availability.

2. A 6 month period shall be provided for persons to declare interest in available wasteload allocations.

3. Within 60 days of the end of the 6 month period the designated management agency shall conduct a public meeting regarding the proposed reallocation.

4. The designated management agency shall recommend a reallocation proposal to the department.

5. The department shall notify the designated management agency of acceptance or rejection of the recommendation within 6 months.

History: Cr. Register, September, 1981, No. 309, eff. 10-1-81; cr. (8), Register, August, 1985, No. 356, eff. 9-1-85.

**NR 212.60 Determination of upper Wisconsin river water quality related effluent limitations.** Effluent limitations for point sources discharging BOD<sub>5</sub> to the upper Wisconsin river shall be calculated according to the procedures contained in this section. These limitations shall apply from May 1 to October 31 annually.

(1) Determine baseline loads for each point source subject to the waste load allocation.

(a) The baseline load for each publicly-owned point source located between milepoints 205.3 and 171.9 shall be calculated as follows:

$$\text{Baseline Load} = (Q) (8.34) (60)$$

Where Q = The average daily flow for the publicly-owned point source during 1978 expressed in millions of gallons per day.

8.34 = Conversion factor.

60 = Concentration of BOD<sub>5</sub> expressed in milligrams per liter.

(b) The baseline load for each nonpublicly-owned point source located between milepoints 205.3 and 171.9 shall be calculated as follows:

$$\text{Baseline Load} = (\text{BPT}) (\text{Production})$$

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Where BPT = The final best practicable waste treatment effluent limitations for the point source as provided in chs. NR 284 and 285, expressed as pounds of BOD<sub>5</sub> per ton of production. If chs. NR 284 and 285 do not apply, the best practicable waste treatment effluent limitations as determined under ch. NR 217, shall apply.

Production = The annual average off-machine production during 1978 expressed as tons per day.

(c) The baseline load for each publicly-owned point source located between milepoints 235.4 and 271.1 shall be calculated as follows:

Baseline Load = (Q) (8.34) (C)

Where Q = 0.55 million gallons per day for publicly-owned point sources located between milepoints 235.4 and 250.0

4.0 million gallons per day for publicly-owned point sources located between milepoints 250.0 and 260.0.

9.2 million gallons per day for publicly-owned point sources located between milepoints 260.0 and 265.0.

0.1 million gallons per day for publicly-owned point sources located between milepoints 265.0 and 271.1.

Where 8.34 = Conversion factor

Where C = 30 milligrams per liter concentration of BOD<sub>5</sub> for publicly-owned point sources located between milepoints 235.4 and 250.0; and publicly-owned point sources located between milepoints 265.0 and 271.1.

45 milligrams per liter concentration of BOD<sub>5</sub> for publicly-owned point sources located between milepoints 250.0 and 260.0.

60 milligrams per liter concentration of BOD<sub>5</sub> for publicly-owned point sources located between milepoints 260.0 and 265.0.

(d) The baseline load for each nonpublicly-owned point source with best practicable waste treatment effluent limitations of less than 500 pounds per day located between milepoints 271.1 and 235.4 shall be calculated as follows: