

Chapter NR 210

SEWAGE TREATMENT WORKS

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NR 210.01 Purpose. The purpose of this chapter is to establish effluent limitations for publicly owned treatment works and privately owned domestic sewage treatment works pursuant to s. 147.04(3) and (5), Stats.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 210.05 Well injection prohibited. Underground injection of any pollutant, surface drainage or clear water waste through a well is prohibited. The definitions of "injection" and "well" contained in s. NR 214.03 are applicable to this section.

History: Cr. Register, December, 1982, No. 324, eff. 1-1-83.

NR 210.09 Disinfection. (1) Continuous disinfection shall be provided to reduce the risk of a public health hazard.

(a) Where disinfection is required, the geometric mean of the fecal coliform bacteria for effluent samples collected in a period of 30 consecutive days shall not exceed 400 per 100 milliliters.

(b) Chlorine, when used as an effluent disinfectant shall not exceed 0.5 milligrams per liter of total residual chlorine in the effluent when discharged.

(c) The effluent limitations described in pars. (a) and (b) shall be met on or before July 1, 1982.

(2) Stabilization lagoon treatment systems as defined in s. NR 110.28 are exempt from the disinfection requirement. However, when the department determines that short circuiting within such a system might cause a potential risk to public health due to the lack of adequate detention time, requirements for disinfection may be imposed in specific cases. Aerated lagoon treatment systems as described in s. NR 110.28 shall disinfect as required by this section.

(3) If a permittee demonstrates to the satisfaction of the department that the costs exceed the benefits derived from the disinfection of secondary or higher level of treated effluent, the department may waive or modify the requirements for disinfection. The owner must submit to the department for its review, specific data to justify any modification requested in the requirements.

History: Cr. Register, March, 1978, No. 267, eff. 4-1-78.

NR 210.10 Effluent limitations. (1) Publicly owned treatment works and privately owned domestic sewage treatment works shall no later than July 1, 1977, achieve as a minimum all of the following effluent limitations except as provided under subs. (2), (3), and (4) below.

Register, April, 1986, No. 364

(a) *Biochemical oxygen demand (5 day)*. 1. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 milligrams per liter.

2. The arithmetic mean of the values for effluent samples collected in a period of 7 consecutive days shall not exceed 45 milligrams per liter.

3. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15% of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85% removal).

4. Chemical oxygen demand (COD) or total organic carbon (TOC) may be substituted for biochemical oxygen demand (BOD) when a long-term BOD:COD or BOD:TOC correlation has been demonstrated.

(b) *Suspended solids*. 1. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 milligrams per liter.

2. The arithmetic mean of the values for effluent samples collected in a period of 7 consecutive days shall not exceed 45 milligrams per liter.

3. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15% of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85% removal).

(c) *pH*. The effluent pH shall be within the limits of 6.0 to 9.0 unless the treatment works:

1. Demonstrates that inorganic chemicals are not added as part of the treatment process, and

2. In the case of a publicly owned treatment works, demonstrates that contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0.

(d) *Other pollutants*. Permits may be issued to publicly owned treatment works which impose effluent limitations applicable to pollutants other than biochemical oxygen demand, suspended solids, pH, and fecal coliform bacteria. Such limitations will reflect and take into consideration pretreatment requirements that may be imposed upon specific industrial discharges to the given publicly owned treatment works and such pretreatment requirements will take into account levels of reductions which will be attainable by the given publicly owned treatment works.

(2) Special conditions for publicly owned treatment works. (a) *Combined sewers*. Secondary treatment may not be capable of meeting the percentage removal requirements of sub. (1) (a)3. and (b)3. of this section during wet weather in treatment works which receive flows from combined sewers (sewers which are designed to transport both storm water and sanitary sewage). For such treatment works, the decision shall be made on a case-by-case basis as to whether any attainable percentage removal level can be defined, and if so, what that level should be.

(b) *Industrial wastes*. For certain industrial categories the limitations for the discharge to waters of the state of biochemical oxygen demand and suspended solids permitted by applicable effluent limitations may be

less stringent than those set forth in sub. (1) (a)1 and (b)1. In cases where wastes from such an industrial category are introduced into a publicly owned treatment works, the limitations for biochemical oxygen demand and suspended solids in sub. (1) (a)1 and (b)1 may be adjusted upwards provided that:

1. the permitted discharge of such pollutants, attributable to the industrial category, will not be greater than that permitted by directly applicable effluent limitations if such industrial category were to discharge directly into the waters of the state, and

2. the flow or loading of such pollutants introduced by the industrial category exceeds 10% of the design flow or loading of the publicly owned treatment works. When such an adjustment is made, the limitations for biochemical oxygen demand or suspended solids in sub. (1) (a)2 and (b)2 shall be adjusted proportionally.

(3) Certain conditions will upset a secondary treatment process resulting in a temporary increase in pollutant discharge in excess of that attainable by secondary treatment. Procedures for notice and review of such upset incidents will be specified in issued permits.

(4) More stringent effluent limitations than those of subs. (1) and (2) above may be imposed where necessary to meet water quality standards for water receiving the treated discharge.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. (1)(c), r. (1)(d), renun. (1)(e) to be (1)(d), Register, June, 1977, No. 258, eff. 7-1-77.

NR 210.11 Monitoring. (1) Except as provided in sub. (2) of this section, discharges from sewage treatment works subject to the provisions of this chapter, other than from aerated lagoons and stabilization ponds, shall be monitored daily for pH and twice weekly for fecal coliform bacteria using grab samples and, for classes of such works as defined in ch. NR 114.

(a) Daily for BOD₅ and suspended solids using a 24-hour composite sample in Class I and Class II treatment works, and

(b) Three times weekly for BOD₅ and suspended solids using a 3 hour composite sample in Class III and Class IV treatment works.

(2) The department may in issuing WPDES permits for such Class III and Class IV treatment works specify either more or less frequent monitoring than set forth in sub. (1) above if it determines that such monitoring is necessary or adequate to characterize the effluent and to insure compliance with effluent limitations of the permit or water quality standards in the receiving water.

(3) Discharges from aerated lagoons subject to the provisions of this chapter shall as a minimum be monitored daily for pH and weekly for BOD₅, suspended solids, and fecal coliform bacteria using grab samples.

(4) Discharges from stabilization ponds subject to the provisions of this chapter shall as a minimum be monitored weekly for pH, twice monthly for BOD₅ and suspended solids, and twice quarterly for fecal coliform bacteria using grab samples.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

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NR 210.12 Emergency power. (1) All treatment works subject to the provisions of this chapter shall by July 1, 1977, have either an alternate power source or standby generating units for treatment units and main lift stations to provide at least primary clarification and disinfection at all times, or shall demonstrate to the department that adequate holding facilities exist to prevent the discharge of raw sewage from main lift stations and the treatment plant during periods of power outage.

(2) The department may require that treatment works discharging to critical stream segments provide an alternate power source or standby generating units sufficient to operate all treatment units at all times, or demonstrate to the department that adequate holding facilities exist to prevent the discharge of inadequately treated sewage during periods of power outage.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; am. Register, June, 1977, No. 258, eff. 7-1-77.

NR 210.13 Analytical methods. (1) Methods used for analysis of effluent samples shall be as set forth in ch. NR 219 unless alternative methods are specified in the WPDES discharge permit.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 210.14 Requirements for certified or registered laboratory. Bacteriological analyses of groundwater samples, and all radiological analyses, shall be performed by the state laboratory of hygiene or at a laboratory certified or approved by the department of health and social services. Other laboratory test results submitted to the department under this chapter shall be performed by a laboratory certified or registered under ch. NR 149. The following tests are excluded from this requirement:

- (1) Temperature,
- (2) Turbidity,
- (3) Bacteria tests in wastewater effluent,
- (4) pH,
- (5) Chlorine residual,
- (6) Specific conductance,
- (7) Physical properties of soils and sludges,
- (8) Nutrient tests of soils and sludges,
- (9) Flow measurements.

Note: The requirement in this section to submit data from a certified or registered laboratory is effective on August 28, 1986.

History: Cr. Register, April, 1986, No. 364, eff. 8-28-86.