

(a) Dissolved solids. Not to exceed 500 mg/1 as a monthly average value, nor exceed 750 mg/1 at any time.

(b) The intake water supply will be such that by appropriate treatment and adequate safeguards it will meet the Public Health Service Drinking Water Standards 1962.

**Note:** Copies of Public Health Service Drinking Water Standards, 1962 are available for inspection at the office of the department of natural resources, secretary of state's office and the office of the revisor of statutes, and may be obtained for personal use from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

(c) Concentrations of other constituents must not be hazardous to health.

**History:** Cr. Register, September, 1973, No. 213, eff. 10-1-73: am. (3), Register, December, 1977, No. 264, eff. 1-1-78.

**NR 102.03 Guidelines for application of standards.** (1) **INTERPRETATION.** It is the goal of the department of natural resources that, wherever attainable, surface waters in Wisconsin shall provide for the protection and propagation of fish and aquatic life and provide for recreational uses in and on the water by July 1, 1983. The surface water quality criteria and use classifications set forth herein are the standards to be achieved by July 1, 1977. In those cases where the water quality currently conforms to the criteria set forth in this chapter, such waters shall be maintained at that or a higher quality. In those cases where the criteria are not currently being met, because of inadequate waste treatment or insufficient stream flow, waste control measures must be employed to satisfy the criteria in accordance with the stated objectives. This includes treatment better than best practicable control technology where required to meet the criteria. At this time, variances are provided from the surface water quality criteria where existing conditions (natural background, combined sewers, sludge banks, insufficient stream flow, etc.) are such that the criteria may not be met by applying technology beyond best practicable treatment. It is anticipated that the application of best available control technology will achieve the 1983 water quality goals of the department in all surface waters. If the 1983 water quality goal cannot be achieved by the application of the best available control technology, more stringent control measures may be required to attain and maintain the stated criteria without variance. However, if it is determined that there is no reasonable relationship between the economic and social cost of achieving such limitations, including any economic and social dislocation in any affected community or communities, and the social and economic benefits to be obtained by achieving such water quality, variances from the 1983 water quality criteria goal shall be provided.

(2) **ANTIDEGRADATION.** No waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the department that such a change is justified as a result of necessary economic and social development, provided that no new or increased effluent interferes with or becomes injurious to any assigned uses made of or presently possible in such waters.

(3) **STREAMFLOW.** Water quality standards do not assure quantity and natural quality. The standards shall apply at all times except (a) during periods when flows are less than the average minimum 7-day low flow which occurs once in 10 years (7-day Q<sub>10</sub>), and (b) in channels which

convey a treated effluent to natural surface waters. In determining the 7-day  $Q_{10}$  flow, consideration will be given to streams subject to hydraulically altered flow regimes.

(4) **MIXING ZONES.** Water quality standards must be met at every point outside of a mixing zone. The size of the mixing zone cannot be uniformly prescribed, but shall be based on such factors as effluent quality and quantity, available dilution, temperature, current, type of outfall, channel configuration and restrictions to fish movement. As a guide to the delineation of a mixing zone, the following shall be taken into consideration:

(a) Limiting mixing zones to as small an area as practicable, and conforming to the time exposure responses of aquatic life.

(b) Providing passageways in rivers for fish and other mobile aquatic organisms.

(c) Where possible, mixing zones being no larger than 25% of the cross-sectional area or volume of flow of the stream and not extending more than 50% of the width.

(d) For contaminants other than heat, the 96-hour  $TL_m$  to indigenous fish and fish food organisms not being exceeded at any point in the mixing zone.

(e) Mixing zones not exceeding 10% of a lake's total surface area.

(f) Mixing zones not interfering with spawning or nursery areas, migratory routes, nor mouths of tributary streams.

(g) Mixing zones not overlapping, but where they do, taking measures to prevent adverse synergistic effects.

(5) **EXEMPTIONS.** The thermal mixing zone provisions of this chapter are not applicable to municipal waste and water treatment plants, to vessels, or to discharges to enclosed harbors.

(6) **RESOURCE MANAGEMENT EXEMPTIONS.** Application of chemicals for water resource management purposes in accordance with statutory provisions is not subject to the requirements of the standards except in case of water used for public water supply.

(7) **ANALYTICAL PROCEDURES.** Methods of sample preservation and analysis shall conform with "Standard Methods for the Examination of Water and Wastewater", 13th Edition, 1971, prepared and edited by the American Public Health Association, American Waterworks Association and Water Pollution Control Federation, or by other methods acceptable to the department of natural resources and not contrary to the requirements of the federal government. The criteria in the Radiation Protection Code, Wis. Adm. Code section H 57.15 shall apply to the disposal and permissible concentrations of radioactive substances.

**Note:** Copies of the above publications are available for inspection at the office of the department of natural resources, secretary of state's office and the office of the revisor of statutes, and may be obtained for personal use from American Public Health Association, Inc., 1790 Broadway, New York, N.Y. 10019.

**History:** Cr. Register, September, 1973, No. 213, eff. 10-1-73; renum. (5) and (6) to be (6) and (7), cr. (5), Register, July, 1975, No. 235, eff. 8-1-75.

