



NR 102 to 104 Received 8/29/73
2:00 p.m. Gary J. Dulson

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

L. P. Voigt
Secretary

BOX 450
MADISON, WISCONSIN 53701

IN REPLY REFER TO: _____

STATE OF WISCONSIN)
)
DEPARTMENT OF NATURAL RESOURCES) SS

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, L. P. Voigt, Secretary of the Department of Natural Resources, and custodian of the official records of said Department, do hereby certify that the annexed rules and regulations relating to Chapters NR 102, NR 103 and NR 104, Wisconsin Administrative Code, Water Quality Standards, were duly approved and adopted by this Department on August 16, 1973.

I further certify that said copy has been compared by me with the original on file in this Department and that same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at Pyare Square Building in the City of Madison, this 28th day of August, 1973.

L. P. Voigt, Secretary

(Department Seal)

STATE OF WISCONSIN NATURAL RESOURCES BOARD

IN THE MATTER of repealing and recreating
Chapters NR 102, NR 103 and NR 104 of the
Wisconsin Administrative Code

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WQ-18-73

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
REPEALING AND RECREATING RULES

Pursuant to authority vested in the State of Wisconsin Natural Resources Board by section 144.025(2)(b), Wisconsin Statutes, the Natural Resources Board hereby repeals and recreates rules as follows:

SECTION 1. Chapters NR 102, NR 103 and NR 104 of the Wisconsin Administrative Code are hereby repealed and recreated to read:

NATURAL RESOURCES

POLICY STATEMENT WITH REFERENCE TO CHAPTERS NR 102 TO NR 104

PREAMBLE

Water quality standards are statements of the characteristics of a water which must be maintained to make it suitable for specified uses. The standards, when applied to specific waters, such as a lake or stretch of river, are meaningful for achieving, maintaining or upgrading, and documenting the quality of the water. In addition to the water quality standards, other measures may be implemented to control pollution of surface waters.

The standards are based on available scientific knowledge and are the present goal. The ultimate goal shall be to permit use of all the water resources of the state for multiple purposes including aesthetic, agriculture, aquatic and wildlife, industry, potable water supply, hydropower, navigation, and recreation.

It is the purpose of these rules and regulations to designate the uses for which the various waters of the State of Wisconsin shall be maintained and protected; to prescribe the water quality required to sustain the designated uses; and to indicate methods to implement, achieve, and maintain the prescribed water quality. The Department of Natural Resources will determine what must be done in each case to obtain the necessary water quality and the time schedule which may be set realistically to achieve it. As technology permits, classification of waters will be reevaluated to reflect these advances.

The Federal Water Pollution Control Act of 1965 required that each state adopt water quality criteria and a plan for applying them to interstate waters within the state. Standards for interstate waters were adopted and became effective on June 1, 1967.

Chapter 144, Wisconsin Statutes, authorizes and directs the adopting of rules setting standards of water quality. It recognizes that different standards may be required for different waters or portions thereof. The intent is set forth: "...standards of quality shall be such as to protect the public interest, which include the protection of the public health and welfare and the present and prospective future use of such waters for public and private water supplies; propagation of fish and aquatic life and wildlife, domestic and recreational purposes, and agricultural, commercial, industrial, and other legitimate uses. In all cases where the potential uses of water are in conflict, water quality standards shall be interpreted to protect the general public interest." Standards for intra-state waters were adopted and became effective on September 1, 1968.

In establishing such standards, consideration has been given to their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial and other legitimate uses.

The objective of the Federal Water Pollution Control Act Amendments of 1972 is to restore and maintain the chemical, physical and biological integrity of the nation's waters. In order to achieve this objective, it is the national goal that the discharge of pollutants into navigable waters be eliminated by 1985. Furthermore, it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish and wildlife and provides for recreation in and on the water be achieved by July 1, 1983. The Amendments further require the establishment of water quality standards for all waters consistent with the applicable requirements of the Act.

Present and possible uses of interstate waters or sections therein have been determined with respect to: Municipal, industrial, cooling, irrigation, wildlife and stock water supply; tolerant, facultative and intolerant fishery; whole and partial body contact; aesthetics, hydropower, commercial shipping and waste assimilation. The standards and water use designations are subject to revisions as more data and information become available.

Implementation

Wisconsin legislation requires the formulating, periodic updating and carrying out of long-range comprehensive plans to guide the development, management, and protection of water resources. Statutes authorize issuance and adoption of rules with regard to available systems, and methods and means for preventing and abating water pollution. Penalties are provided for not complying with the law, rules, permits and orders. Assessments for fish damages and fines will continue to be used to curb discharges of deleterious substances and to handle intermittent pollution problems. A permit program in conformity with Section 402(b) Federal Water Pollution Control Act Amendments of 1972 is being initiated, and when adopted will be used to implement effluent requirements and the water quality standards. Wisconsin has been systematically making pollution surveys and monitoring the surface water quality of all surface waters. Funds have been made available for this purpose.

State and federal financial assistance programs encourage municipalities to construct new or improved pollution prevention and abatement facilities. Legislation provides that industry may acquire land by condemnation for construction of waste disposal facilities. Tax laws permit writing off waste treatment plant construction costs in the year of expenditure and exemption of these facilities from real estate tax.

Chapter NR 102

WATER QUALITY STANDARDS FOR
WISCONSIN SURFACE WATERS

NR 102.01	Definitions	NR 102.04	Enforcement
NR 102.02	Categories of standards	NR 102.05	Lake Michigan thermal standards
NR 102.03	Guidelines for application of standards	NR 102.06	Mississippi River thermal standards

NR 102.01 Definitions.

(1) Mean Tolerance Level (TL_m) - The concentration of a substance at which there is a 50 percent mortality rate of bio-assay test organisms in a stated exposure time.

(2) Mixing Zone - A region in which a discharge of different characteristics than the receiving water is in transit and progressively diluted from the source to the receiving system.

(3) Natural Conditions - Normal daily and seasonal variations in climatic and atmospheric conditions, and the existing physical and chemical characteristics of a water or the course in which it flows.

(4) Natural Temperature - Normal existing temperature of a surface water including daily and seasonal changes outside the zone of influence of any artificial inputs.

(5) Resource Management - The application of control techniques to enhance or preserve a surface water in accordance with statutory provisions and in the general public interest.

(6) Sanitary Survey - A thorough investigation and evaluation of a surface water including bacteriological sampling to determine the extent and cause of any bacterial contamination.

(7) Surface Waters - All natural and artificial named and unnamed lakes and all naturally flowing streams within the boundaries of the state, but not including cooling lakes, farm ponds and facilities constructed for the treatment of wastewaters (the term waters as used in this chapter means surface waters).

(8) Unauthorized Concentrations of Substances - Pollutants or other chemicals introduced into surface waters without prior permit or knowledge of the department, but not including accidental or unintentional spills.

(9) Best Practicable Control Technology - That level of treatment established by the Department under s. 147.04 (2) (a), Wisconsin Statutes, for categories and classes of point sources to be achieved by not later than July 1, 1977.

(10) Best Available Control Technology - That level of treatment established by the Department under s. 147.04 (2) (b) (1), Wisconsin Statutes, for categories and classes of point sources to be achieved by not later than July 1, 1983.

NR 102.02 Categories of standards: To preserve and enhance the quality of waters, standards are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all waters including the mixing zone and the effluent channel meet the following conditions at all times and under all flow conditions:

(a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

(b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

(c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

(d) Substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

It should be recognized that these standards will be revised as new information or advancing technology indicate that revisions are in the public interest. Water used for hydropower and commercial shipping depends mainly on quantity, depth and elevation; consequently, no specific quality standards for these uses have been prepared.

(1) STANDARDS FOR FISH AND AQUATIC LIFE. Except for natural conditions, all waters classified for fish and aquatic life shall meet the following criteria:

(a) Dissolved oxygen: Except for waters classified as trout streams in NR 102.01(1)(f), the dissolved oxygen content in surface waters shall not be lowered to less than 5 mg/l at any time.

(b) Temperature: 1. There shall be no temperature changes that may adversely affect aquatic life.

2. Natural daily and seasonal temperature fluctuations shall be maintained.

3. The maximum temperature rise at the edge of the mixing zone above the existing natural temperature shall not exceed 5° F for streams and 3° F for lakes.

4. The temperature shall not exceed 89° F for warm water fish.

(c) pH: The pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

(d) Unauthorized concentrations of substances are not permitted that alone or in combination with other materials present are toxic to fish or other aquatic life. Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish and other biota shall be resolved in accordance with the methods specified in "Water Quality Criteria," Report of the National Technical Advisory Committee to the Secretary of the Interior, April 1, 1968. The committee's recommendations will also be used as guidelines in other aspects where recommendations may be applicable.

Note: Copies of the above publication 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.

(e) Streams classified as trout waters by the department of natural resources (Wisconsin Trout Streams, Publication 213-72) shall not be altered from natural background by effluents that influence the stream environment to such an extent that trout populations are adversely affected.

(1) There shall be no significant artificial increases in temperature where natural trout reproduction is to be protected.

(2) Dissolved oxygen in classified trout streams shall not be artificially lowered to less than 6.0 mg/l at any time, nor shall the dissolved oxygen be lowered to less than 7.0 mg/l during the spawning season.

(3) The dissolved oxygen in Great Lakes tributaries used by stocked salmonids for spawning runs shall not be lowered below natural background during the period of habitation.

(2) STANDARDS FOR RECREATIONAL USE. A sanitary survey and/or evaluation to assure protection from fecal contamination is the chief criterion in determining the suitability of a surface water for recreational use. In addition, the following bacteriological guidelines are set forth:

(a) The membrane filter fecal coliform count shall not exceed 200 per 100 ml as a geometric mean based on not less than 5 samples per month, nor exceed 400 per 100 ml in more than 10 percent of all samples during any month.

(3) STANDARDS FOR PUBLIC WATER SUPPLY. In addition to the standards for fish and aquatic life and recreational use, waters used as a public water supply shall meet the following criteria at sites where water is withdrawn for treatment and distribution as a potable water:

(a) Dissolved solids. Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l 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) Other. Concentrations of other constituents must not be hazardous to health.

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 seven-day low flow which occurs once in 10 years (7-day Q_{10}), 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 percent of the cross-sectional area or volume of flow of the stream and not extending more than 50 percent 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 percent 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) 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.

(6) 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. Administrative 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.

NR 102.04 Enforcement. Financial assistance, industrial incentives, increased surveillance, orders, and permits will be means used to achieve and maintain the adopted water quality standards. Reasonable time schedules to comply with orders and permit conditions depend on the circumstances. All

Financial assistance, industrial incentives, increased surveillance, orders, and permits will be means used to achieve and maintain the adopted water quality standards. Reasonable time schedules to comply with orders and permit conditions depend on the circumstances. All

municipal sewage treatment plants shall provide a minimum of secondary treatment and effluent disinfection. Communities with a population of 2,500 and over in the lakes Michigan and Superior basins shall achieve an 85 percent reduction of phosphorus on an annual basis, and there shall be a commensurate removal from industrial wastes containing more than 2 mg/l of total phosphorus and having an annual phosphorus discharge greater than 8,750 pounds. Any wastewater discharger--regardless of population, volume or type of waste discharge, or geographic location--may be required to remove excess amounts of phosphorus where such discharges are causing overfertilization of surface waters. A permit program is being initiated in accordance with the Federal Water Pollution Control Act Amendments of 1972 regarding treatment and monitoring requirements for waste discharges to waters of the state. All industrial plants discharging wastes to surface waters are required to provide, as a minimum, an effluent quality established in accordance with the Federal Water Pollution Control Act Amendments of 1972.

NR 102.05 Lake Michigan thermal standards. For Lake Michigan and Green Bay the following thermal standards are established so as to minimize effects on the aquatic biota in the receiving waters:

(1)(a) Thermal discharges shall not raise the receiving water temperature more than 3° F. above the existing natural temperature at the boundary of mixing zones established by the department.

(b) In addition to the limitation set forth in subsection (1)(a), but excepting the Milwaukee Harbor, Port Washington Harbor and the mouth of the Fox River, thermal discharges shall not raise the temperature of the receiving waters at the boundary of the established mixing zones above the following limits:

January -----	45° F.	July-----	80° F.
February -----	45°	August -----	80°
March -----	45°	September -----	80°
April -----	55°	October -----	65°
May -----	60°	November -----	60°
June -----	70°	December -----	50°

(2) All owners utilizing, maintaining or presently constructing sources of thermal discharges exceeding a daily average of 500 million BTU per hour shall:

(a) Submit monthly reports of temperature and flow data on forms prescribed by the department.

(b) On or before February 1, 1974 complete an investigation and study of the environmental and ecological impact of such discharge in a manner approved by the department. After a review of the ecological and environmental impact of the discharge, mixing zones shall be established by the department.

(3) Any plant or facility, the construction of which is commenced after February 1, 1972, and prior to August 1, 1974, shall be so designed as to avoid significant thermal discharge to Lake Michigan. Any plant or facility, the construction of which is commenced on or after August 1, 1974, shall be so designed that the thermal discharges therefrom to Lake Michigan comply with mixing zones established by the department under subsection 1(a). In establishing a mixing zone, the department will consider ecological and environmental information obtained from the studies conducted pursuant to subsection 2(b) and any requirements of the Federal Water Pollution Control Act Amendments of 1972.

(4) The department may require the reduction of thermal discharges to Lake Michigan regardless of interim measures undertaken by the source owners in compliance with this rule if environmental damage appears imminent or existent.

(5) The provisions of this rule are not applicable to municipal waste and water treatment plants and vessels.

NR 102.06 Mississippi River thermal standards. In addition to the standards for fish and aquatic life, the monthly average of the maximum daily temperature in the Mississippi River outside the mixing zone shall not exceed the following limits:

January -----	40° F	July -----	84° F
February -----	40°	August -----	84°
March -----	54°	September -----	82°
April -----	65°	October -----	73°
May -----	75°	November -----	58°
June -----	84°	December -----	48°

Chapter NR 103

INTERSTATE WATERS--USES AND
DESIGNATED STANDARDS

NK 103.01	Wisconsin-Illinois waters	NR 103.05	Wisconsin-Michigan waters
NR 103.02	Wisconsin-Minnesota-Iowa-Illinois waters	NR 103.06	Wisconsin-Michigan-Illinois-Indiana waters
NR 103.03	Wisconsin-Minnesota waters	NR 103.07	Trout waters
NR 103.04	Wisconsin-Minnesota-Michigan waters	NR 103.08	Fish reproduction
		NR 103.09	Revision of designated uses

NR 103.01 Wisconsin-Illinois waters. (1) The Des Plaines River, Piskasaw Creek, Nippersink Creek and Turtle Creek upstream of the Rock-Walworth county line are used for wildlife and stock watering, waste assimilation, warm water fishery and recreation. Dutch Gap Canal and Trevor Creek have similar uses excepting waste assimilation. The main stems of these streams shall meet the requirements for recreational use and fish and aquatic life.

(2) The Fox River is used for recreation, waste assimilation, industrial supply, fishing and irrigation. Water quality in the Fox River shall meet the standards for recreational use and fish and aquatic life.

(3) Benet/Shangrila, Cross and Elizabeth Lakes are located on the Wisconsin-Illinois boundary and used for fishing and recreation. Their water quality shall meet the requirements for fish and aquatic life and recreational use.

(4) The Rock River and Sugar River are used for waste assimilation, recreation, fish and aquatic life, irrigation, stock and wildlife watering and hydropower. Their waters shall meet water quality standards for recreational use and fish and aquatic life.

(5) Turtle Creek below the Rock-Walworth county line, Raccoon Creek, East Fork Raccoon Creek, East Fork Galena River, Spafford Creek, Menominee River, Pecatonica River and Galena River are used for recreation, stock and wildlife watering, waste assimilation and fish and aquatic life. Richland Creek and East Branch Richland Creek, Apple River and West Fork Apple River, Sinsinawa River, Little Menominee River and a tributary of the East Fork Galena River have similar uses excepting waste assimilation. Water quality of these streams shall meet standards for recreational use and fish and aquatic life.

(6) Honey Creek is used for waste assimilation, stock and wildlife watering, recreation and fish and aquatic life. A section from the Wisconsin-Illinois state line upstream to the Clarno-Cadiz town line shall meet the requirements for recreational use and fish and aquatic life.

(7) Variance. The sector of Honey Creek above the Clarno-Cadiz town line shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time. The membrane filter fecal coliform count in this sector shall not exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month, nor exceed 2,000 per ml in more than 10 percent of all samples during any month.

NR 103.02 Wisconsin-Minnesota-Iowa-Illinois waters. The Mississippi River is used for commercial and recreational fishing, industrial and cooling water supply, boating, hunting, commercial shipping and waste assimilation. Water quality shall meet the standards and requirements for recreational use and fish and aquatic life.

NR 103.03 Wisconsin-Minnesota waters. (1) The St. Croix River has high scenic and aesthetic value and is used for recreation, fishing, hydropower, commercial shipping, stock and wildlife water supply, and waste assimilation. An anticipated use involves industrial and cooling water supply. Its water quality shall meet the standards and requirements for recreational use and fish and aquatic life. The standards for public water supply shall be met downstream from the north line of Polk county.

(2) Upper Tamarack River, East Branch Hay Creek and West Branch Hay Creek are used for recreation, fishing, and stock and wildlife water supply. Their water quality shall meet the requirements for recreation and fish and aquatic life.

(3) The St. Louis River adjoining Wisconsin is used for recreation, fishing, waste assimilation and commercial shipping. It is anticipated that a future use in the Lower St. Louis River will include cooling and industrial water supply. The St. Louis River water quality shall meet standards for recreational use and fish and aquatic life.

(4) Black River and Black Lake, Nemadji River and South Fork Nemadji River, Mud Creek, Clear Creek, Pokegama River and Red River are used for fishing, stock and wildlife water supply and recreation. Water quality of these streams shall meet the standards and requirements for recreation and fish and aquatic life. A section of Black River is classified for trout.

NR 103.04 Wisconsin-Minnesota-Michigan waters. Lake Superior is used for recreation, commercial and recreational fishing, shipping, municipal water supply, industrial and cooling water, and waste assimilation. Lake Superior open waters shall meet the criteria and requirements for public water

supplies. All waters of Lake Superior shall meet the standards for recreational use and fish and aquatic life.

NR 103.05 Wisconsin-Michigan waters. (1) The Montreal River is used for hydropower, recreation, wildlife and stock watering, waste assimilation and has aesthetic value. Its waters shall meet the standards and requirements for recreational use and fish and aquatic life.

(2) Several waters cross the Wisconsin-Michigan line including Wester Creek, Black River tributaries, McDonald Creek tributaries, Bena Lake Inlet, Harris Creek, Moraine Creek, Oxbow Lake Inlet, Unnamed Creek between Little Presque Isle Lake and Twin Island Lake, South and East Branch Presque Isle River, tributary to Palmer Lake, Johnston Springs Outlet, Lobischer Creek and Elvoy Creek and the following lakes:

- | | |
|----------------------------------|----------------------|
| (a) Unnamed (T44N, R5E, Sec. 18) | (k) West Bay |
| (b) Moraine | (l) Mamie |
| (c) Stateline | (m) Big Bateau |
| (d) Basin | (n) Mill |
| (e) Little Presque Isle | (o) Crystal |
| (f) Roach | (p) Eleanor |
| (g) Tenderfoot | (q) Lac Vieux Desert |
| (h) Plum | (r) Norwood |
| (i) Crampton | (s) Smokey |
| (j) Big | |

Uses of these waters include fishing, recreation, aesthetic, and stock and wildlife watering. Their water quality shall meet the requirements and standards for recreation and fish and aquatic life. The Black River tributaries and Elvoy Creek are classified as trout waters.

(3) The Brule and Menominee Rivers are used for hydropower production and the latter stream is used for waste assimilation and industrial water supply. Fishing, recreation, aesthetic values and stock, and wildlife watering are common to both. The Brule River is classified as a trout stream and it shall meet the requirements for recreation and the standards for trout waters. Water quality requirements and standards on the Menominee River shall meet the standards for recreational use and fish and aquatic life.

(4) Green Bay is used for public water supply, recreation, commercial and recreational fishing, industrial and cooling water, and waste assimilation. The waters of Green Bay, except as provided below, shall meet the standards for fish and aquatic life and recreational use.

(5) Variance. Green Bay waters southeasterly from the navigation channel and southerly from the north line of Brown County shall from January 1 to April 1 annually meet the standards for recreational use and fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time.

NR 103.06 Wisconsin-Michigan-Illinois-Indiana waters. Lake Michigan is used for recreation, commercial and recreational fishing, shipping, public water supply, waste assimilation, and industrial and cooling water. All Lake Michigan waters shall meet the standards for public water supplies and the standards for recreational use and fish and aquatic life, in addition to the thermal criteria contained in sec. 102.04.

NR 103.07 Trout waters. Trout waters include the open waters of lakes Superior and Michigan as well as those classified by the department of natural resources. They must be given special protection as required by the fish and aquatic life standards.

NR 103.08 Fish reproduction. Standards adequate to maintain fish reproduction shall be maintained in the open waters of Lake Superior and Lake Michigan and in all other interstate waters which are designated by the department as of primary importance in the public interest for the maintenance of fish reproduction.

NR 103.09 Revision of designated uses. Modification of the uses and designated standards established in this chapter may be initiated by the department, by petition of any interested person, or by the natural resources board, subject to the provisions of chapter 227, Wis. Stats.

Chapter NR 104

INTRASTATE WATERS--USES AND DESIGNATED STANDARDS

NR 104.01	General intrastate use classification	NR 104.05	Variances and additions applicable in the north central district
NR 104.02	Variances and additions applicable in the southern district	NR 104.06	Variances and additions applicable in the west central district
NR 104.03	Variances and additions applicable in the southeast district	NR 104.07	Variances and additions applicable in the northwest district
NR 104.04	Variances and additions applicable in the lake michigan district		

NR 104.01 General Intrastate Use Classification. (1) Surface waters within the boundaries of the state shall meet the standards for fish and aquatic life and recreational use with the variances and additions listed below in sections NR 104.02 to NR 104.07.

(2) The long-range goal of Wisconsin water quality standards is to permit the use of water resources for all lawful purposes. It is equally a goal of the standards to restore and maintain the waters of the state as suitable for public water supply, whole body contact recreation, and the reproduction of game fish and minnows. Standards and use classifications which are presently inconsistent with the long-range goals are interim standards and use classifications and will be progressively upgraded until the goals are attained.

NR 104.02 Variances and additions applicable in the southern district. Intrastate surface waters in the southern district include those in Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, LaFayette, Richland, Rock, and Sauk counties.

(1) VARIANCE. The following surface waters in the southern district shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10 percent of all samples during any month:

- (a) Badfish Creek from the east limits of the village of Oregon to the Dane-Rock county line.
- (b) West Branch of Sugar River from the south city limits of Mount Horeb to the east limits of the town of Blue Mounds in Dane county.
- (c) Brewery Creek from state highway 23 in the city of Mineral Point to the junction with the Mineral Point Branch.

(2) ADDITION. The public water supply standard shall be met on the Wisconsin River in section 8, town 10 north, range 7 east.

NR 104.03 Variances and additions applicable in the southeast district. Intrastate surface waters in the southeast district include those in Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha counties.

(1) VARIANCE. The following surface waters in the southeast district shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10 percent of all samples during any month:

- (a) Underwood Creek in Milwaukee and Waukesha Counties below Juneau Boulevard.
- (b) Barnes Creek in Kenosha County.
- (c) Pike Creek, a tributary of the Pike River, in Kenosha County.
- (d) Pike River in Racine County.
- (e) Indian Creek in Milwaukee County.
- (f) Honey Creek in Milwaukee County.
- (g) Menomonee River in Milwaukee County below the confluence with Honey Creek.
- (h) Kinnikinnick River in Milwaukee County.
- (i) Lincoln Creek in Milwaukee County.
- (j) Sussex Creek in Waukesha County.

(2) VARIANCE. The following surface waters in the southeast district shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10 percent of all samples during any month, nor shall the temperature exceed 89° F at any time at the edge of the mixing zones established by the Department under section NR 102.03(4):

- (a) Milwaukee River in Milwaukee County downstream from the North Avenue Dam.
- (b) South Menomonee Canal and Burnham Canal in Milwaukee County.

NR 104.04 Variances and additions applicable in the lake michigan district. Intrastate surface waters in the lake michigan district include those in Brown, Calumet, Door, Florence, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara and Winnebago counties.

(1) VARIANCE. The Fox River from the upper dam at Appleton downstream to the Village of Wrightstown shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 3.0 mg/l during any consecutive 8 hours of a 24-hour period nor to less than 5.0 mg/l for the remainder of the day. When natural conditions at the outlet of Lake Winnebago do not permit compliance with the above criteria, the dissolved oxygen of the water flowing from the lake in the Menasha Channel shall not be lowered more than 2.0 mg/l in the section of the Fox River from the upper dam at Appleton downstream to Wrightstown.

(2) VARIANCE. The Fox River below the Village of Wrightstown downstream to the mouth shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 2.0 mg/l at any time.

(3) VARIANCE. The Oconto River from the bridge in Oconto Falls to the county highway 'J' bridge shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 3.0 mg/l at any time.

(4) ADDITION. The public water supply standard shall be met in the following surface waters:

- (a) Lake Winnebago.
- (b) Fox River from Lake Winnebago downstream to the upper dam in the city of Appleton.
- (c) West Branch Wolf River at Neopit.
- (d) Rainbow Lake in Waupaca county.

NR 104.05 Variances and additions applicable in the north central district. Intrastate surface waters in the north central district include those in Adams, Forest, Juneau, Langlade, Lincoln, Marathon, Oneida, Portage, Vilas, and Wood counties.

(1) VARIANCE. The Wisconsin River from the Rhinelander Dam downstream to Crescent Creek shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 3.0 mg/l at any time.

(2) VARIANCE. The Wisconsin River from the Rothschild Dam downstream to state highway '34' shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 3 mg/l at any time.

(3) VARIANCE. The Wisconsin River from the state highway '73' bridge at Nekoosa downstream to state highway '82' bridge shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 2 mg/l from January 1 to April 15 annually.

(4) VARIANCE. Mill Creek from Wood County Highway 'E' downstream to the Wood-Portage county line shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2.0 mg/l at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10 percent of all samples during any month.

(5) VARIANCE. Scotch Creek above Marathon County Highway 'S' shall meet the standards for fish and aquatic life except that the dissolved oxygen shall not be lowered to less than 2 mg/l at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10 percent of all samples during any month.

(6) ADDITION. The public water supply standard shall be met in Lake Nepco in Wood county.

NR 104.06 Variances and additions applicable in the west central district. Intrastate surface waters in the west central district include those in Barron, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, La Crosse, Monroe, Pepin, Pierce, Polk, St. Croix, Trempealeau and Vernon counties.

(1) ADDITION. The public water supply standard shall be met in the following surface waters:

(a) Black River at Neillsville.

(b) Town Creek at Black River Falls.

NR 104.07 Variances and additions applicable in the northwest district. Intrastate surface waters in the northwest district include those in Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor and Washburn counties.

(1) VARIANCE. The Flambeau River from the upper dam at Park Falls downstream to the Crowley Dam shall meet the standards for fish and aquatic life and recreational use except that the dissolved oxygen shall not be lowered to less than 3.0 mg/l at any time.

(2) ADDITION. The public water supply standard shall be met in the following surface waters:

(a) Lake Lavina in Iron county.

(b) Little Rib Lake in Taylor county.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on August 16, 1973.

The rules contained herein shall take effect upon publication.

Dated at Madison, Wisconsin 8/28/73.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By _____
L. P. Voigt, Secretary

(SEAL)