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NR 60



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

L. P. Voigt  
Secretary

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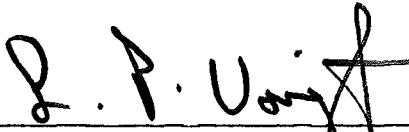
IN REPLY REFER TO: \_\_\_\_\_

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 copy of Natural Resources Board Order No. W-64-74 was duly approved and adopted by this Department on January 24, 1975. I further certify that said copy has been compared by me with the original on file in this Department and that the 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 Village of Shorewood Hills, this 16th day of April, 1975.

  
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L. P. Voigt, Secretary

(SEAL)

STATE OF WISCONSIN NATURAL RESOURCES BOARD

.....  
IN THE MATTER of creating Chapter NR 60 .  
of the Wisconsin Administrative Code .  
pertaining to public inland lake pro- .  
tection and rehabilitation. .  
.....

W-64-74

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD

CREATING RULES

Pursuant to the authority vested in the State of Wisconsin Natural Resources Board by Chapter 33 and section 227.027, Wisconsin Statutes, the State of Wisconsin Natural Resources Board hereby creates the following rules:

Chapter NR 60  
PUBLIC INLAND LAKE  
PROTECTION AND REHABILITATION

- |   |   |
|---|---|
| NR 60.01 Scope and applicability        | NR 60.04 Financial assistance for feasibility study   |
| NR 60.02 Definitions                    | NR 60.05 Severability   |
| PART I: Feasibility studies             | PART II (Reserved for rules for project planning and approval and financial assistance for implementation.) |
| NR 60.03 Feasibility study requirements |   |

NR 60.01 Scope and applicability. This chapter contains rules necessary to administer the program of public inland lake protection and rehabilitation established by chapter 33, Wis. Stats. These rules apply to projects undertaken by lake protection and rehabilitation districts which involve an application for state technical or financial aid. In addition, this chapter will apply if the department determines that an activity requiring a water regulation permit under chapter 30 is an integral part of a lake protection or rehabilitation project.

NR 60.02 Definitions. As used in this chapter:

(1) Best available map means a map or aerial photograph having a scale which is sufficient to clearly depict the information requested and which is currently available or could be prepared at a reasonable cost.

(2) Council means the inland lakes protection and rehabilitation council created by section 15.347 (8), Wis. Stats.

(3) Department means the department of natural resources.

(4) Direct drainage basin means that portion of the lake's total basin which is not drained to an upgradient lake or impoundment.

(5) District or lake district means a public inland lake protection and rehabilitation district formed in accordance with the provisions of chapter 33, Wis. Stats.

(6) Municipality means any city, village or town.

(7) Public inland lake or lake means a lake, reservoir or flowage, or portion thereof, within the boundaries of the state that is accessible to the public by contiguous public lands or easements giving public access.

#### PART I: FEASIBILITY STUDIES

NR 60.03 Feasibility study requirements. (1) General. A feasibility study is required as an integral part of any lake management plan designed to protect or rehabilitate the lake. An application for technical assistance in establishing the specific feasibility study requirements must be filed with the department according to the procedures in subsection (2). Each feasibility study must be approved by the department in order to insure sufficient information for determining the feasibility of alternative remedial measures, including costs; the relative permanence of alternative measures; baseline data for measuring subsequent changes, and the potential for long-term control of the causes of degradation.

(2) Application for technical assistance in designing a feasibility study.

(a) An application for technical assistance for designing feasibility studies must be submitted by May 1, 1975 and January 1 of succeeding years as a pre-

requisite to receiving financial assistance for a feasibility study. The application must be made on forms provided by the department and contain the following information:

1. A copy of the resolution or county board order establishing the district, including a map showing the boundaries;

2. The names of the members of the district board of commissioners or if applicable, the governing body of a municipality;

3. An estimate of the total equalized valuation of the property within the district;

4. The best available map which shows the direct drainage basin including basin boundaries and floodplain boundaries where delineated; total area and percentage of areas in agriculture, woodlands, urban development, wetlands, uplands and public lands and beaches (approximate); public access in feet or percentage of shoreline and public parking areas indicated on map; names and population of cities and villages in basin, and the names and location of all streams, including lake outlets;

5. The best available soils map of the drainage basin;

6. A lake map showing the number and location of permanent homes and seasonal dwellings on the lakeshore designating those served by a municipal sewerage system; identification of all streams flowing into and out of the lake, and a general description of the lake bottom types (e.g.: muck, marl, sand, gravel);

7. Where applicable, a description of the water level control structure and its location;

8. Any relevant background data available including a compilation of existing water quality data; a description of the fishery, including species: the occurrence of fish winterkills; the history of lake management efforts such as herbicide application, fish stocking, aeration, and sand blanketing;

9. Copies of local ordinances which regulate public access to or use of the lake;

10. Any information indicating the degree of local interest and commitment to future management;

11. A statement of lake problems and objectives as perceived.

(b) The information contained in the application for technical assistance will serve as a basis for determining specific requirements of the feasibility study and also eligibility for financial assistance under NR 60.04.

(c) The department will notify the applicant of the specific feasibility study requirements including cost information on the study within 30 days of receipt of the completed application, except for those applications which require additional field investigations to complete the study design.

(3) Specific feasibility study requirements. (a) General. All studies shall meet the specific requirements set forth in this subsection unless written approval of the department is obtained waiving such requirements. The department may waive or modify the requirements of this section if it finds that:

1. Existing data is available which adequately provides the information required;

2. Data from adjacent drainage basins or obtained from locations within the direct drainage basin can be applied to avoid duplication and produce comparable information;

3. Inherent limitations or factors exist in a district which cause specific requirements of this section to be inapplicable or unnecessary.

(b) Maps. The following maps shall be obtained or prepared as part of any feasibility study:

1. A map depicting hydrologic features and delineating the entire surface watershed boundaries of the lake for which a project is being considered. The scale shall be adequate to clearly depict significant features, but in no case shall a map smaller than 8½ x 11 inches be accepted.

2. Dated base maps of the direct drainage basin shall be provided which:

a. have a scale of at least 1 inch = 1 mile;

b. depict hydrologic features, roads, buildings and other significant physical features;

c. contain topographic information with a contour interval of less than 25 feet;

d. delineate existing land use areas;

e. indicate the location and type of actual, potential, and prior significant sources of nutrients and sediments as well as known planned facilities which could constitute such a source. (Note: sewage treatment plants, storm sewers, industrial effluent, feedlots, eroding areas are examples.);

f. include soil type, slope range and description; erosion rates and K values.

3. A lake map which includes an area depth curve, a volume depth curve, water level elevations and location of the datum point.

(c) Materials budget. The following materials budget data shall be included in the feasibility study:

1. An estimate of the hydrologic budget for the study period must be submitted with an analysis and comparison of extreme and typical years. The budget shall be

derived from the following data which shall be included in the feasibility study:

- a. the results of measurement or gaging of continuously flowing inlet and outlet streams;
- b. an estimation of the amount of input from intermittent streams including storm sewers;
- c. an estimate of direct precipitation based on nearest U.S. department of commerce, weather service station;
- d. an estimate of groundwater exchange with the lake. (Note: If the groundwater influx is more than 25% of the total inflow, a detailed groundwater analysis may be required by the department.)

2. Nutrient budgets and an estimate of sedimentation rates in accordance with accepted methods shall be determined to document actual and potential detrimental effects on the lake and to provide a basis for determining the potential for controlling those effects. The following are specific requirements:

- a. A sufficient number of surface water samples shall be collected at the inlet(s) and outlet(s) to determine nutrient content. Sampling shall be conducted so that (1) no sample represents more than 10% of the total annual inflow of nitrogen and phosphorous and (2) no more than 10% of the total annual runoff occurs between any 2 samples.

- b. Determination of groundwater nutrient levels as required.

- c. The following minimum parameters shall be measured in all nutrient sampling (unfiltered samples): total and reactive phosphorus; total and inorganic nitrogen; and other parameters as required.

- d. Measurements shall be made to determine total residue, total fixed residue and filterable residue.

- e. Calculations shall be made which show the loading rates for phosphorus, nitrogen and solids (residue).

(d) Lake water quality characterization. The water quality of the lake shall be characterized to determine existing trophic conditions and the need for protection or rehabilitation and to establish a data base for future use in lake management. The following requirements shall be met:

1. The department will specify a sufficient number of sites to characterize the major water masses in the lake. The department will also specify the sampling depths and number of samples necessary at sampling sites to establish vertical profiles characterizing water quality.

2. The vertical profiles for determining water quality shall include, as a minimum, the parameters in table 1 and shall be determined during early and late winter and summer, and during spring and fall overturn or as required by the department. Transparency shall be measured weekly during open water periods and less frequently during ice cover.

Table 1

<u>Parameter</u>	<u>Method</u>
Transparency	Secchi disc (at least 20 cm in diameter)
Temperature	Profile recorded every 3-4 ft.
Dissolved oxygen	Chemical (Winkler) or electrometric
Nitrogen (total and inorganic)	Accepted methods
Phosphorus (total)	Accepted methods
Total alkalinity	Accepted methods
Specific electrical conductivity	Accepted methods
pH	Accepted methods
Chlorophyll a	Accepted methods
Primary production	Accepted methods

3. The distribution and relative abundance of aquatic plants shall be mapped during the period of maximum abundance, normally July or August. This may be accomplished by ground observations or remote sensing techniques. The department may also require identification and other information on filamentous and planktonic species of algae.



4. All available information on point and nonpoint sources of nutrients and sediments in the direct drainage basin is to be compiled and analyzed to determine their actual and potential effect on the lake. (Note: as examples, sewage treatment plants, septic tank and industrial effluents, feedlots, storm sewers and highly erodable areas.)

(e) Accepted testing methods. Unless other methods are approved or required by the department, testing methods required by the department are those contained in standard methods for the examination of water and wastewater, 13th edition, 1971. Copies may be inspected at the offices of the department of natural resources, the secretary of state and the revisor of statutes, and may be obtained for personal use from the american public health association, 1015 Eighteenth street, Washington, D.C.

(4) Progress reports and certification of completion. (a) To assure that the feasibility study is carried out in accordance with the requirements prescribed by the department, progress reports will be required which describe the accomplishments to date with a tabulation of data obtained. The progress reports shall be submitted quarterly beginning on the date when the study is started. Different or additional dates may be required by the department if quarterly reports are incompatible with the specific feasibility study authorized.

(b) The department will review the progress reports and may require any changes necessary to bring the feasibility study work into conformance with the feasibility study authorized.

(c) The feasibility study may be modified for any phase of work not completed if data obtained during the study reveals that an original requirement is unnecessary or that additional information is necessary.

(d) No project planning shall begin until the department has received the final feasibility study report and has certified it completed. A feasibility study will not be certified as completed if it has not met the requirements specified by the department.

NR 60.04 Financial assistance for feasibility study. (1) Application for financial assistance. Districts must file applications for financial assistance for feasibility study by May 1, 1975, concurrently with the application for technical assistance. In succeeding years, applications for financial assistance must be submitted by March 15. The application must be on forms supplied by the department and shall include:

- (a) Name of lake district;
- (b) Date application for technical assistance submitted;
- (c) Amount of aid requested;
- (d) Approximate starting date;
- (e) Other information deemed necessary by the department.

Completed applications shall be mailed to the office of inland lake renewal, department of natural resources, box 450, Madison, Wisconsin 53701.

(2) Department action on application. The department shall notify the district of its decision to grant or deny aid for feasibility study by June 15, 1975 and by April 1 of succeeding years. Priority for and amount of aid granted will be determined in accordance with the procedure in subsection (3). If aid is denied, the department shall indicate in writing the reasons for denial.

A district requesting financial assistance shall accept or reject a grant offer within 30 days after being notified of the offer by the department.

(3) Priority and amount of grant. The priority for receiving and the amount of assistance for feasibility studies covered by these rules shall be determined according to the following provisions:

(a) Priority. Any district may apply for financial assistance to undertake a feasibility study of a public inland lake within its boundaries. Applications will be ranked by the department based on adequacy of public access, including public lands and beaches; potential nonriparian use; degree of local commitment, and other factors considered relevant by the department. The method of ranking applications will be developed in conjunction with the inland lakes protection and rehabilitation council and the natural resources board. Feasibility study grants will be made in the order of ranking and the number will be limited by the funds available.

(b) Grant amount. Grant awards made under these rules will be on a cost-sharing basis as determined by the amount of funds available for study and priorities established by the department on the recommendation of the council. Allowable costs include reasonable cost of the work required as part of the specific feasibility study described in NR 60.03 (3). Grant offers may be limited by the maximum amount the department considers to be the reasonable cost of the total feasibility study. The district shall apply to the department in order to receive a greater amount. If the department approves the request, the grant agreement will be modified in accordance with NR 60.04 (4) (d). Nor shall the total study cost exceed 10% of the state funds available in any one year. In addition, whenever the district's share will exceed \$5,000, the department will require proof that such expenditure has been approved by the annual meeting of the district.

(4) Grant agreement. The grant agreement shall contain the following provisions:

(a) Distribution of the aids shall be made in 2 installments. An initial installment shall be paid into a fund established by the district within 20 days after the district accepts the grant offer. The initial installment shall not exceed 50% of the total feasibility study aids unless the department determines that a greater amount is justified by the requirements of the particular feasibility study. In no case shall the initial installment exceed 75% of the total grant. The remainder of the grant will be paid after receipt and approval of the final feasibility study report required by NR 60.03 (4) (d) and any required audits.

(b) A starting date and schedule for completion will be specified by the department. Changes in these dates must be approved by the department.

(c) Every grant awarded under this section shall contain a provision that the recipient in using the funds shall not discriminate against any person because of religion, sex, race, color or national origin.

(d) The foregoing conditions may not be waived or modified by the parties to the grant agreement. Any other terms, including the amount of aid, may be modified or changed if agreed upon in writing by all parties to the agreement.

(5) Termination of the grant. Any grant may be terminated by the department for any of the following reasons:

(a) The violation of any term or condition of the grant agreement by the grantee, or;

(b) The willful or bad faith refusal of any grantee to comply with the feasibility study requirements specified by the department under NR 60.03 (2) and (3), or;

(c) Any material misrepresentations made by the recipient on the application for financial assistance or the application for technical assistance required by NR 60.03 (2).

NR 60.05 Severability. If any provision of these rules is invalid, or if the application thereof to any person or circumstance is invalid, such invalidity shall not affect other provisions or applications which can be given effect without the invalid provision or application.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on January 24, 1975.

The rules contained herein shall take effect upon publication.

Dated at Madison, Wisconsin April 15, 1975

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By L. P. Voigt  
L. P. Voigt, Secretary

(SEAL)