MINNESOTA STATE REGISTER

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Minnesota State Register

Judicial Notice Shall Be Taken of Material Published in the Minnesota State Register

The Minnesota State Register is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in Minnesota Statutes, Chapter 14, and Minnesota Rules, Chapter 1400. It contains:

- **Proposed Rules**
- **Adopted Rules**
- **Exempt Rules**
- **Expedited Rules**
- **Withdrawn Rules**
- **Executive Orders of the Governor**
- **Appointments**
- **Proclamations**
- **Vetoed Rules**
- **Commissioners' Orders**
- **Revenue Notices**
- **Official Notices**
- **State Grants and Loans**
- **Contracts for Professional, Technical and Consulting Services**
- **Non-State Public Bids, Contracts and Grants**

Printing Schedule and Submission Deadlines

Vol. 51 Issue Number	Publish Date	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical- Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
#9	Monday 31 August	Noon Tuesday 25 August	Noon Thursday 20 August
#10	Tuesday 8 September	Noon Tuesday 1 September	Noon Thursday 27 August
#11	Monday 14 September	Noon Tuesday 8 September	Noon Thursday 3 September
#12	Monday 21 September	Noon Tuesday 15 September	Noon Thursday 10 September

PUBLISHING NOTICES: We need to receive your submission ELECTRONICALLY in Microsoft WORD format. Submit ONE COPY of your notice via e-mail to: sean.plemmons@state.mn.us. State agency submissions must include a "State Register Printing Order" form, and, with contracts, a "Contract Certification" form. Non-State Agencies should submit ELECTRONICALLY in Microsoft WORD, with a letter on your letterhead stationery requesting publication and date to be published. Costs are $14 per tenth of a page (columns are seven inches wide). One typewritten, double-spaced page = 6/10s of a page in the State Register, or $84. About 1.5 pages typed, double-spaced, on 8-1/2"x11" paper = one typeset page in the State Register. Contact editor with questions (651) 201-3204, or e-mail: sean.plemmons@state.mn.us.

SUBSCRIPTION SERVICES: E-mail subscriptions are available by contacting the editor at sean.plemmons@state.mn.us. Send address changes to the editor or at the Minnesota State Register, 50 Sherburne Avenue, Suite 309, Saint Paul, MN 55155.

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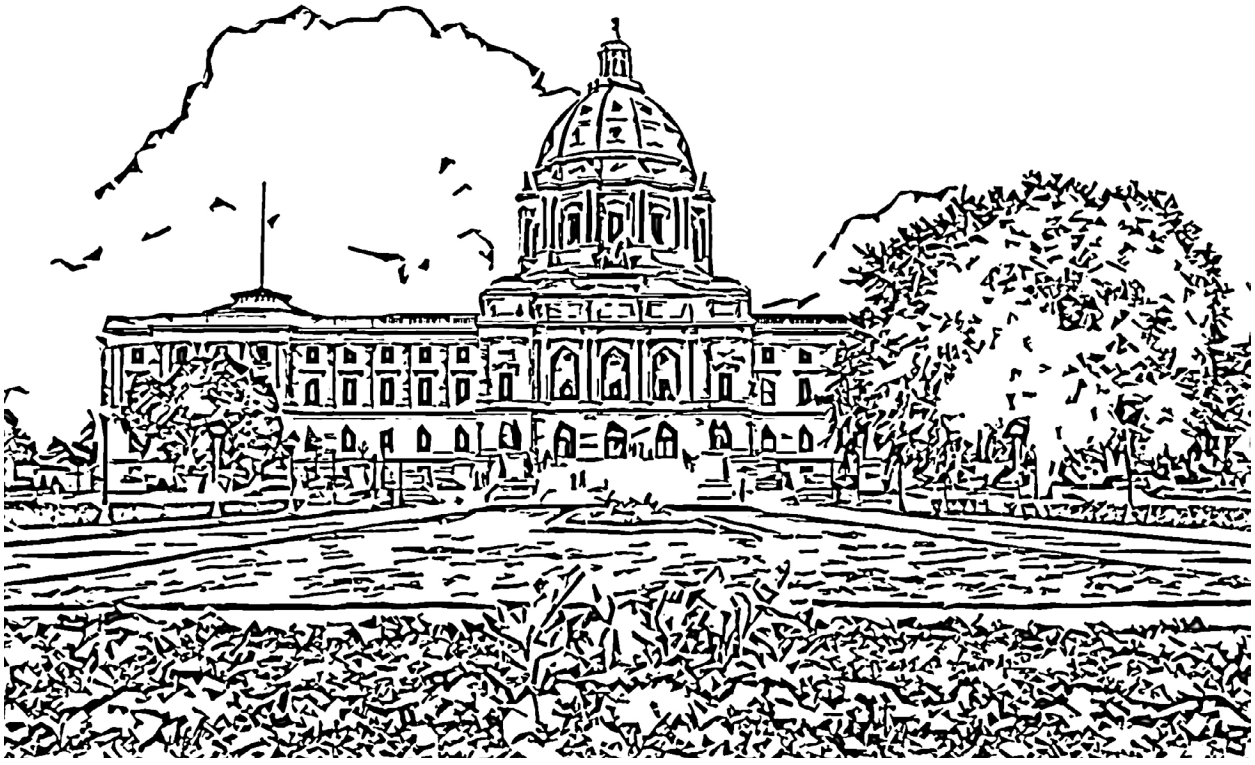
Front Cover Artwork: *A statue of Paul Bunyan in Akeley, Minn. reaches out his hand for all to see on a bright, sunny day.*
Photo by Sean Plemmons



Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). A subject matter index is updated weekly and is available upon request from the editor. For copies or subscriptions to the State Register, contact the editor at 651-201-3204 or email at sean.plemmons@state.mn.us

Volume 51 - Minnesota Rules

(Rules Appearing in Vol. 50 Issues #27-52 are in Vol. 50, #52 - Monday 29 June 2026)

Volume 51, #8

Monday 6 July - Monday 24 August

Proposed Rules

Comments on Planned Rules or Rule Amendments. An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (*Minnesota Statutes* §§ 14.101). It does this by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

Rules to be Adopted After a Hearing. After receiving comments and deciding to hold a public hearing on the rule, an agency drafts its rule. It then publishes its rules with a notice of hearing. All persons wishing to make a statement must register at the hearing. Anyone who wishes to submit written comments may do so at the hearing, or within five working days of the close of the hearing. Administrative law judges may, during the hearing, extend the period for receiving comments up to 20 calendar days. For five business days after the submission period the agency and interested persons may respond to any new information submitted during the written submission period and the record then is closed. The administrative law judge prepares a report within 30 days, stating findings of fact, conclusions and recommendations. After receiving the report, the agency decides whether to adopt, withdraw or modify the proposed rule based on consideration of the comments made during the rule hearing procedure and the report of the administrative law judge. The agency must wait five days after receiving the report before taking any action.

Rules to be Adopted Without a Hearing. Pursuant to *Minnesota Statutes* § 14.22, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing. An agency must first solicit **Comments on Planned Rules** or **Comments on Planned Rule Amendments** from the public. The agency then publishes a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register*. If, during the 30-day comment period, 25 or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of §§ 14.1414.20, which state that if an agency decides to hold a public hearing, it must publish a notice of intent in the *State Register*.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Minnesota Pollution Control Agency (MPCA)

Proposed Permanent Rules Relating to Lake Water Quality; Notice of Intent to Adopt Rules with a Hearing

Proposed Amendments to Rules Governing Water Quality Standards for Lake Aquatic Life and Recreation, Minnesota Rules Chapter 7050; Revisor's ID Number R-04740; Court of Administrative Hearings docket number 23-9003-39503

Introduction and Overview. The Minnesota Pollution Control Agency (MPCA) intends to adopt amendments to Minnesota Rules (Minn. R.) chapter 7050, Waters of the State, after a public hearing following the procedures in the rules of the Court of Administrative Hearings, Minn. R. parts 1400.2200 to 1400.2240, and the Administrative Procedure Act, Minnesota Statutes (Minn. Stat.) sections 14.131 to 14.20. The purposes of this rule, known as the Lakes Water Quality Standards (WQS) rule, are to adopt eutrophication standards for shallow or mixed lakes in the northern nutrient region, adopt nutrient and oxythermal standards to protect cold-water fish habitat, and adopt a tiered aquatic life use (TALU) framework. The MPCA also intends to make several housekeeping revisions, including correcting an error in the river eutrophication standards and moving lake designations in Minn. R. 7050.0470 into documents incorporated by reference.

This notice provides you the opportunity to submit your comments on this rule to the assigned Administrative Law

Judge either orally at the hearing or in writing at any time before the close of the hearing record. The Subject of Rules section provides further description of these proposed rules. If the proposed rules affect you in any way, the MPCA encourages you to participate in the rulemaking process.

View the Alternative Format/Accommodation and MPCA Contact Person sections of this notice for information on requesting this document in an alternative format.

You may submit written pre-hearing comments on the proposed rules until **4:30 p.m. on October 8, 2026**. There will be an additional comment period after the hearing; see the Public Comment section for more information.

Public Hearing. The MPCA will hold a virtual public hearing on the above-named rules on **Monday, November 2, 2026, beginning at 3:00 p.m**. The hearing will continue until all interested or affected persons are heard, or until 6:00 p.m., whichever is earlier. Additional hearing days will be scheduled if necessary.

You can participate in the virtual hearing, which will be conducted by Administrative Law Judge Suzanne Todnem from the Court of Administrative Hearings, via WebEx by using this link along with the associated access code and password:

For a video and audio connection, join the hearing through an internet connection:

- Web link: ***Webex Meeting Link***
- Meeting Number (access code): 2491 876 5329
- Password: hPaVqyeT353

For audio-only connection, join the virtual hearing by telephone:

- Call: 1-415-655-0003 (this is not a toll-free number)
- Access code: 2491 876 5329
- Password: 47287938

All interested or affected persons will have an opportunity to participate by submitting either oral or written comments, statements, or arguments. You may submit a statement without attending the hearing; refer to the Public Comment section for instructions.

If the public hearing is postponed or rescheduled, the MPCA will send a notice of such a change by GovDelivery as well as by email to the recipients listed in the SONAR's Required Notice and Additional Notice Plan sections, and post the notice of such a change on its website at ***https://www.pca.state.mn.us/get-engaged/lake-aquatic-life-and-recreation***.

Administrative Law Judge. Judge Suzanne Todnem will conduct the hearing and can be reached by contacting William Moore, Rules Coordinator in person at the Court of Administrative Hearings, 600 N. Robert Street, Saint Paul MN 55101; by U.S. Mail at P.O. Box 64620, Saint Paul MN 55164-0620; by phone at 651-361-7893; or by email at ***william.t.moore@state.mn.us***. Please refer to the Public Comment section for instructions on submitting comments.

Subject of Rules. The proposed rule amendments in this project cover three main topics discussed in Minn. R. chapter 7050 (Waters of the State). This chapter is about WQS governing lake aquatic life and recreational uses in Minnesota. The major goals of this rulemaking include 1) updating eutrophication standards for shallow or polymictic lakes in the northern nutrient region, 2) adopting nutrient and oxythermal habitat standards to protect cold-water fish habitat and updating use designations for cold-water lakes, and 3) adopting a TALU framework for lakes. In addition to these amendments, the MPCA is also proposing several housekeeping revisions, including correcting an error in the river eutrophication standards and moving lake designations in Minn. R. 7050.0470 into documents incorporated by reference (with the draft documents available for review at ***https://www.pca.state.mn.us/get-engaged/incorporations-by-reference***).

The MPCA has determined that it is appropriate to assign different eutrophication standards to dimictic lakes and

polymictic (shallow) lakes in the Northern Lakes and Forests and Northern Minnesota Wetlands ecoregions. MPCA staff determined this pattern to be the result of differences in mixing type, lake morphology, and watershed features and developed different criteria for dimictic and polymictic lakes for chlorophyll-a to protect aquatic life and recreational endpoints. Using these chlorophyll-a thresholds, Agency staff also developed criteria for total phosphorus and Secchi depth using updated models.

Additionally, the MPCA is proposing changes to the existing standards for cold-water lake habitats and to change the list of lakes managed as cold water habitats. This will include the adoption of oxythermal habitat standards for lake trout, lake whitefish, and cisco lakes; new lake eutrophication standards for lake whitefish and cisco lakes; and revised eutrophication standards for lake trout and stream trout lakes. In addition, these revisions include changes to the list of lakes designated as Class 2A.

Lastly, the MPCA is proposing a TALU framework for Minnesota lakes. This framework is similar to the aquatic life use framework adopted for Minnesota streams. The proposed TALU framework consists of fish biological criteria for high-quality or Exceptional Use lakes. Under this framework, lakes meeting Exceptional Use goals would be assigned more stringent biological goals, which would need to be maintained.

Statutory Authority. Minn. Stat. §115.03, subd. 1(b)-(c), authorizes the MPCA to establish WQS, and Minn. Stat. §115.44 grants the MPCA authority to group designated waters of the state into classes.

Publication of Proposed Rules. A copy of the proposed rules is published with this Notice in the *State Register*. The proposed rules may also be viewed electronically on the MPCA's rulemaking webpage at ***https://www.pca.state.mn.us/get-engaged/lake-aquatic-life-and-recreation***, as well as ***https://minnesotaoah.granicusideas.com/***. To obtain a paper copy of the proposed rules or other rulemaking documents for the cost of reproduction (one copy per request), please contact the MPCA Contact Person listed below.

Statement of Need and Reasonableness. The Statement of Need and Reasonableness (SONAR) contains a summary of the justification for the proposed rules, a description of who will be affected by the proposed rules, and an estimate of the probable cost of the proposed rules. The SONAR is available to the public and may be viewed electronically at ***https://www.pca.state.mn.us/get-engaged/lake-aquatic-life-and-recreation*** as well as ***https://minnesotaoah.granicusideas.com/***. To obtain a paper copy of the SONAR or other rulemaking documents for the cost of reproduction (one copy per request), please contact the MPCA Contact Person listed below.

MPCA Contact Person. The MPCA contact person is Rule Coordinator Katie Izzo at the Minnesota Pollution Control Agency, 520 Lafayette Road, Saint Paul MN 55155-4194; telephone 651-757-2595; and email ***katie.izzo@state.mn.us***. You may also call the MPCA at 651-296-6300 or 1-800-657-3864; use your preferred relay service. **Please note that comments must be submitted according to the instructions in the Public Comment section of this Notice; the MPCA cannot take rulemaking comments by phone or email.**

Public Comment. You and all interested or affected persons, including individuals and representatives of associations or other interested groups, will have an opportunity to participate. The Administrative Law Judge will accept your statements orally at the hearing or in writing at any time before the close of the hearing record, and consider all comments equally regardless of how they are submitted. All evidence that you present should relate to the proposed rules. If the proposed rules affect you in any way, the MPCA encourages you to participate.

You can submit written comments to the Administrative Law Judge by any of the following methods:

1. electronic submittal via the Court of Administrative Hearings' eComments website at ***https://minnesotaoah.granicusideas.com/***;

2. U.S. Mail or in-person delivery to the attention of Judge Todnem regarding docket number 23-9003-39503. By mail: P.O. Box 64620, Saint Paul MN 55164-0620. In person: 600 N. Robert Street, Saint Paul MN 55101; or

3. fax to the attention of Judge Todnem regarding docket number 23-9003-39503, at 651-539-0310.

You can review frequently asked questions about the eComments website at ***https://mn.gov/oah/assets/ecomments-faq_tcm19-82012.pdf***.

- **Pre-hearing:** You may submit pre-hearing comments until **4:30 p.m. on October 8, 2026**; this deadline will allow MPCA staff to prepare a response in time for presentation at the public hearing.
- **Post-hearing:** You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order this five-day comment period extended for a longer period but for no more than 20 calendar days, and Judge Todnem will address the post-hearing comment period length at the hearing.
- **Rebuttal period:** After the post-hearing comment period, there is a rebuttal period of five working days during which the MPCA and any interested person may respond in writing to any comments or information already submitted. No one may submit new evidence during the five-day rebuttal period.

The Court of Administrative Hearings must receive all comments and responses submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. All comments or responses received are public data and will be available for review on the eComments website immediately, and on the MPCA's website at ***https://www.pca.state.mn.us/get-engaged/lake-aquatic-life-and-recreation*** as soon as Agency staff can update it.

Hearing Procedure. The rule hearing procedure is governed by Minn. Stat. sections 14.131 to 14.20, and by the rules of the Court of Administrative Hearings (Minn. R. parts 1400.2000 to 1400.2240). You may direct questions about the rule hearing procedure to the Administrative Law Judge through William Moore, the Court of Administrative Hearings Rules Coordinator listed above.

Modifications. The MPCA may modify the proposed rules either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted during the public comment and rule hearing process. The adopted rules may not be substantially different than these proposed rules unless the Agency follows the procedure under Minn. R., part 1400.2110. If the final rules are identical to the rules originally published in the *State Register*, the Agency will publish a notice of adoption in the *State Register*; if the final rules are different from the proposed rules, the MPCA must publish a copy of the changes in the *State Register*.

Adoption Procedure After the Hearing. After the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the MPCA adopts the rules and the rules are filed with the Secretary of State, or register to receive notice of future MPCA rule proceedings, by requesting this at the hearing or by writing to the MPCA Contact Person listed above.

Lobbyist Registration. Minn. Stat. chapter 10A requires each lobbyist to register with the state's Campaign Finance and Public Disclosure Board. You may direct questions about this requirement to the Campaign Finance and Public Disclosure Board at Centennial Building Suite #190, 658 Cedar St., Saint Paul MN 55155, phone 651-539-1180 or 1-800-657-3889.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, Braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the MPCA Contact Person at the address or telephone number listed above.

Order. I order that the rulemaking hearing be held at the date, time, and location listed above.

Date: August 18, 2026

Katrina Kessler, Commissioner
Minnesota Pollution Control Agency

7050.0150 DETERMINING WATER QUALITY, BIOLOGICAL AND PHYSICAL CONDITIONS, AND COMPLIANCE WITH STANDARDS.

[For text of subparts 1 to 3, see Minnesota Rules]

Subp. 4. **Definitions.** For the purposes of this chapter and chapter 7053, the following terms have the meanings given them.

[For text of items A to J, see Minnesota Rules]

K. "Dimictic lake" means a lake that mixes twice a year, in the spring and fall, and is stratified during the summer and winter.

~~K.~~ L. "Ecoregion" means an area of relative homogeneity in ecological systems based on similar soils, land use, land surface form, and potential natural vegetation. Minnesota ecoregions are shown on the map in part 7050.0468.

~~L.~~ M. "Eutrophication" means the increased productivity of the biological community in water bodies in response to increased nutrient loading. Eutrophication is characterized by increased growth and abundance of algae and other aquatic plants, reduced water transparency, reduction or loss of dissolved oxygen, and other chemical and biological changes. The acceleration of eutrophication due to excess nutrient loading from human sources and activities, called cultural eutrophication, causes a degradation of water quality and possible loss of beneficial uses.

~~M.~~ N. "Eutrophication standard" means the combination of indicators of enrichment and indicators of response as described in subpart 5. The indicators upon which the eutrophication standard for specific water bodies are based are as provided under subparts 5a to 5c.

O. "Geometry ratio" means a measure of a lake's geometric characteristics used as evidence to determine if a lake is polymictic or dimictic. The calculation used to determine lake stratification type for the purpose of assessing eutrophication standards in Minnesota is calculated as the fourth root of lake surface area (m^2) divided by maximum depth (m) ($A_0^{0.25}$/Zmax, where A_0 is lake surface area and Zmax is maximum depth).

~~N.~~ P. "Hydraulic residence time" means the time water resides in a basin or, alternately, the time it would take to fill the basin if it were empty.

~~O.~~ Q. "Impaired water" or "impaired condition" means a water body that does not meet applicable water quality standards or fully support applicable beneficial uses, due in whole or in part to water pollution from point or nonpoint sources, or any combination thereof.

~~P.~~ R. "Index of biotic integrity," "index of biological integrity, " or "IBI" means an index developed by measuring attributes of an aquatic community that change in quantifiable and predictable ways in response to human disturbance, representing the health of that community.

~~Q.~~ S. "Lake" means an enclosed basin filled or partially filled with standing fresh water with a maximum depth greater than 15 feet. Lakes may have no inlet or outlet, an inlet or outlet, or both an inlet and outlet.

~~R.~~ T. "Lake morphometry" means the physical characteristics of the lake basin that are reasonably necessary to determine the shape of a lake, such as maximum length and width, maximum and mean depth, area, volume, and shoreline configuration.

U. "Lentic water" means a standing water body, such as a lake, pond, wetland, swamp, or bog.

~~S.~~ V. "Lotic water" means a flowing or moving water body such as a stream, river, or ditch.

~~T.~~ W. "Mixing status" means the frequency of complete mixing of the lake water from surface to bottom, which is determined by whether temperature gradients are established and maintained in the water column during the summer season.

~~U.~~ X. "Measurable increase" or "measurable impact" means a change in trophic status that can be discerned above the normal variability in water quality data using a weight of evidence approach. The change in trophic status does not require a demonstration of statistical significance to be considered measurable. Mathematical models may be used as a tool in the data analysis to help predict changes in trophic status.

~~V.~~ Y. "Natural causes" means the multiplicity of factors that determine the physical, chemical, or biological conditions that would exist in a water body in the absence of measurable impacts from human activity or influence.

~~W.~~ Z. "Normal aquatic biota" and "normally present" mean a healthy aquatic community expected to be present in the water body in the absence of pollution of the water, consistent with any variability due to natural hydrological, substrate, habitat, or other physical and chemical characteristics. Expected presence is based on comparing the aquatic community in the water body of interest to the aquatic community in representative reference water bodies.

~~X.~~ AA. "Nuisance algae bloom" means an excessive population of algae that is characterized by obvious green or blue-green pigmentation in the water, floating mats of algae, reduced light transparency, aesthetic degradation, loss of recreational use, possible harm to the aquatic community, or possible toxicity to animals and humans. Algae blooms are measured through tests for chlorophyll-a, observations of Secchi disk transparency, and observations of impaired recreational and aesthetic conditions by the users of the water body, or any other reliable data that identifies the population of algae in an aquatic community.

BB. "Oxythermal habitat" means a measure of temperature and dissolved oxygen in a water column of a lake where both dissolved oxygen and temperature are suitable to support aquatic life.

~~Y.~~ CC. "Periphyton" means algae on the bottom of a water body. In rivers or streams, these forms are typically found attached to logs, rocks, or other substrates, but when dislodged the algae will become part of the seston.

DD. "Polymictic lake" means a lake with frequent mixing of the water column during the ice-free period.

~~Z.~~ EE. "Readily available and reliable data and information" means chemical, biological, and physical data and information determined by the commissioner to meet the quality assurance and quality control requirements in subpart 8, that are not more than ten years old from the time they are used for the assessment. A subset of data in the ten-year period, or data more than ten years old can be used if credible scientific evidence shows that these data are representative of current conditions.

~~AA.~~ FF. "Reference water body" means a water body minimally or least impacted by point or nonpoint sources of pollution that is representative of water bodies of a similar surface water body type and within a geographic region such as an ecoregion or watershed. Reference water bodies are used as a base for comparing the quality of similar water bodies in the same geographic region.

~~BB.~~ GG. "Reservoir" means a body of water in a natural or artificial basin or watercourse where the outlet or flow is artificially controlled by a structure such as a dam. Reservoirs are distinguished from river systems by having a hydraulic residence time of at least 14 days. For purposes of this item, residence time is determined using a flow equal to the $122Q_{10}$ for the months of June through September.

~~CC.~~ HH. "River nutrient region" means the geographic basis for regionalizing the river eutrophication criteria as described in Heiskary, S. and K. Parson, Regionalization of Minnesota's Rivers for Application of River Nutrient Criteria, Minnesota Pollution Control Agency (2013), which is incorporated by reference. The document is not subject to frequent change and is available through the Minitex interlibrary loan system.

~~DD.~~ II. "Secchi disk" means a tool that is used to measure the transparency of lake water. A Secchi disk is an eight-inch weighted disk on a calibrated rope, either white or with quadrants of black and white. To measure water transparency with a Secchi disk, the disk is viewed from the shaded side of a boat. The depth of the water at the point where the disk reappears upon raising it after it has been lowered beyond visibility is recorded.

~~EE.~~ JJ. "Secchi disk transparency" means the transparency of water as measured by a Secchi disk, a Secchi tube, or a transparency tube.

~~FF.~~ KK. "Secchi tube" means a tool that is used to measure the transparency of stream or river water. A Secchi tube is a clear plastic tube, one meter in length and 1-3/4 inch in diameter, with a mini-Secchi disk on a string. To measure water transparency, the tube is filled with water collected from a stream or river and, looking into the tube from the top, the weighted Secchi disk is lowered into the tube by a string until it disappears and then raised until it reappears, allowing the user to raise and lower the disk within the same water sample numerous times. The depth of the water at the midpoint between disappearance and reappearance of the disk is recorded in centimeters, which are marked on the side of the tube. If the Secchi disk is visible when it is lowered to the bottom of the tube, the transparency reading is recorded as "greater than 100 centimeters."

~~GG.~~ LL. "Seston" means particulate matter suspended in water bodies and includes plankton and organic and inorganic matter.

~~HH.~~ MM. "Shallow lake" means an enclosed basin filled or partially filled with standing fresh water with a maximum depth of 15 feet or less or with 80 percent or more of the lake area shallow enough to support emergent and submerged rooted aquatic plants (the littoral zone). It is uncommon for shallow lakes to thermally stratify during the summer. The quality of shallow lakes will permit the propagation and maintenance of a healthy indigenous aquatic community and they will be suitable for boating and other forms of aquatic recreation for which they may be usable. Shallow lakes are differentiated from wetlands and lakes on a case-by-case basis. Wetlands are defined in part 7050.0186, subpart 1a.

~~II.~~ NN. "Summer-average" means a representative average of concentrations or measurements of nutrient enrichment factors, taken over one summer season.

~~JJ.~~ OO. "Summer season" means a period annually from June 1 through September 30.

~~KK.~~ PP. "Transparency tube" means a tool that is used to measure the transparency of stream or river water. A transparency tube is a graduated clear plastic tube, 24 inches or more in length by 1-1/2 inches in diameter, with a stopper at the bottom end. The inside surface of the stopper is painted black and white. To measure water transparency, the tube is filled with water from a surface water; the water is released through a valve at the bottom end until the painted surface of the stopper is just visible through the water column when viewed from the top of the tube. The depth, in centimeters, is noted. More water is released until the screw in the middle of the painted symbol on the stopper is clearly visible; this depth is noted. The two observed depths are averaged to obtain a transparency measurement.

~~LL.~~ QQ. "Trophic status or condition" means the productivity of a lake as measured by the phosphorus content, algae abundance, and depth of light penetration.

~~MM.~~ RR. "Use attainability analysis" means a structured scientific assessment of the physical, chemical, biological, and economic factors affecting attainment of the uses of water bodies. A use attainability analysis is required to remove a designated use specified in section 101(a)(2) of the Clean Water Act that is not an existing use. The allowable reasons for removing a designated use are described in Code of Federal Regulations, title 40, section 131.10 (g).

~~NN.~~ SS. "Water body" means a lake, reservoir, wetland, or a geographically defined portion of a river or stream.

~~OO.~~ TT. "Water body type" means a group of water bodies with similar natural physical, chemical, and biological attributes, where the characteristics are similar among water bodies within each type and distinct from water bodies of other types.

[For text of subpart 5, see Minnesota Rules]

Subp. 5a. **Impaired condition; lakes~~, shallow lakes,~~ and reservoirs.**

A. For lakes~~, shallow lakes,~~ and reservoirs, a finding of an impaired condition must be supported by data showing:

[For text of subitems (1) and (2), see Minnesota Rules]
[For text of items B and C, see Minnesota Rules]
[For text of subparts 5b and 5c, see Minnesota Rules]

Subp. 6. **Impairment of biological community and aquatic habitat.** In evaluating whether the narrative standards in subpart 3, which prohibit serious impairment of the normal aquatic biota and the use thereof, material alteration of the species composition, material degradation of stream beds, and the prevention or hindrance of the propagation and migration of aquatic biota normally present, are being met, the commissioner will consider all readily available and reliable data and information for the following factors of use impairment:

[For text of items A to C, see Minnesota Rules]

D. a quantitative or qualitative assessment of habitat quality, determined by an assessment of:

[For text of subitems (1) to (5), see Minnesota Rules]

(6) types of land use in the watershed; ~~and~~

(7) oxythermal habitat; and

~~(7)~~ (8) other scientifically accepted and valid factors of habitat quality; and

E. any other scientifically objective, credible, and supportable factors.

A finding of an impaired condition must be supported by data for the factors listed in at least one of items A to C. The biological quality of any given surface water body will be assessed by comparison to the biological conditions determined by the commissioner using a biological condition gradient model or a set of reference water bodies which best represents the most natural condition for that surface water body type within a geographic region.

[For text of subparts 7 and 8, see Minnesota Rules]

7050.0220 SPECIFIC WATER QUALITY STANDARDS BY ASSOCIATED USE CLASSES.

[For text of subparts 1 to 5, see Minnesota Rules]

Subp. 5a. **Cool and warm water aquatic life and habitat and associated use classes.** Water quality standards applicable to use classes 2B, 2Be, 2Bg, 2Bm, or 2D; 3; 4A and 4B; and 5 surface waters. See part 7050.0225, subpart 2, for class 3 and 5 standards applicable to wetlands. The water quality standards in part 7050.0222, subpart 4, that apply to class 2B also apply to classes 2Be, 2Bg, and 2Bm. In addition to the water quality standards in part 7050.0222, subpart 4, the biological criteria defined in part 7050.0222, subpart 4d, apply to classes 2Be, 2Bg, and 2Bm.

A. MISCELLANEOUS SUBSTANCE, CHARACTERISTIC, OR POLLUTANT

2B&D CS	2B&D MS	2B&D FAV	4A IR	4B LS	5 AN

[For text of subitems (1) to (5), see Minnesota Rules]

(6) Eutrophication standards for lakes~~, shallow lakes,~~ and reservoirs (phosphorus, total, µg/L; chlorophyll-a, µg/L; Secchi disk transparency, meters)

See part 7050.0222, subparts4 and 4a	--	--	--	--	--

[For text of subitems (7) to (20), see Minnesota Rules]

[For text of items B to H, see Minnesota Rules]

[For text of subparts 6 to 7, see Minnesota Rules]

7050.0222 SPECIFIC WATER QUALITY STANDARDS FOR CLASS 2 WATERS OF THE STATE; AQUATIC LIFE AND RECREATION.

[For text of subpart 1, see Minnesota Rules]

Subp. 2. **Class 2A waters; aquatic life and recreation.** The quality of class 2A surface waters shall be such as to permit the propagation and maintenance of a healthy community of coldwater aquatic biota, and their habitats according to the definitions in subpart 2c. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface waters is also protected as a source of drinking water. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Acenaphthene	µg/L	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/L	0.38	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	3.8	HH	800*	1,600*	Tox
Aluminum, total	µg/L	87	Tox	748	1,496	Tox
Ammonia un-ionized as N	µg/L	16	Tox	--	--	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

$$f = \frac{1}{10^{(pk_a - pH)} + 1} \times 100$$

where: f = the percent of total ammonia in the un-ionized state

$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)

T = temperature in degrees Kelvin (273.16° Kelvin = 0° Celsius)

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	5.5	HH	90	180	Tox
Arsenic, total	µg/L	2.0	HH	360	720	Tox
Atrazine (c)	µg/L	3.4	HH	323	645	Tox
Benzene (c)	µg/L	5.1	HH	4,487*	8,974*	Tox
Bromoform	µg/L	33	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.828)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.1349)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	1.8	3.9	8.6	14	19
FAV µg/L	3.6	7.8	17	27	37

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Carbon tetrachloride (c)	µg/L	1.9	HH	1750*	3500*	Tox
Chlordane (c)	ng/L	0.073	HH	1200*	2400*	Tox
Chloride	mg/L	230	Tox	860	1720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	53	HH	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					
CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	2.8	HH	436	872	Tox
Color value	Pt/Co	30	NA	--	--	NA
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.620[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23
MS µg/L	9.2	18	34	50	65
FAV µg/L	18	35	68	100	131

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Cyanide, free	µg/L	5.2	Tox	22	45	Tox
DDT (c)	ng/L	0.11	HH	550*	1100*	Tox
1,2-Dichloroethane (c)	µg/L	3.5	HH	45,050*	90,100*	Tox
Dieldrin (c)	ng/L	0.0065	HH	1,300*	2,500*	Tox
Di-2-ethylhexyl phthalate (c)	µg/L	1.9	HH	--*	--*	NA
Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
Endosulfan	µg/L	0.0076	HH	0.084	0.17	Tox
Endrin	µg/L	0.0039	HH	0.090	0.18	Tox
Escherichia (E.) coli	See below	See below	HH	See below	See below	NA

Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

Eutrophication standards for aquatic life assigned to class 2A lakes and reservoirs.

Designated lake trout lakes in all ecoregions (lake trout lakes support ~~natural~~ populations of lake trout, Salvelinus namaycush):

Phosphorus, total	µg/L	~~12~~ 7	NA	--	--	NA
Chlorophyll-a	µg/L	3	NA	--	--	NA
Secchi disk transparency	meters	No less than ~~4.8~~ 3.5	NA	--	--	NA

Designated lake whitefish lakes in all ecoregions (lake whitefish lakes support populations of lake whitefish, Coregonus clupeaformis):

Phosphorus, total	µg/L	12	NA	--	--	NA
Chlorophyll-a	µg/L	5	NA	--	--	NA
Secchi disk transparency	meters	No less than 2.8	NA	--	--	NA

Designated cisco lakes in the Northern Lakes and Forests and Northern Minnesota Wetlands Ecoregions (cisco lakes support populations of cisco, Coregonus artedi):

Phosphorus, total	µg/L	20	NA	--	--	NA
Chlorophyll-a	µg/L	9	NA	--	--	NA
Secchi disk transparency	meters	No lessthan 1.8	NA	--	--	NA

Designated cisco lakes in all other ecoregions (cisco lakes support populations of cisco, Coregonus artedi):

Phosphorus, total	µg/L	25	NA	--	--	NA
Chlorophyll-a	µg/L	12	NA	--	--	NA
Secchi disk transparency	meters	No less than 1.3	NA	--	--	NA

Designated stream trout lakes in all ecoregions~~, except lake trout lakes~~ (stream trout lakes support or are managed for stream trout species, such as brook trout, rainbow trout, and brown trout, or trout hybrids, such as splake):

Phosphorus, total	µg/L	~~20~~ 15	NA	--	--	NA
Chlorophyll-a	µg/L	6	NA	--	--	NA
Secchi disk transparency	meters	No less than 2.5	NA	--	--	NA

Eutrophication standards for recreation assigned to class 2A lakes and reservoirs. Lakes and reservoirs in the Northern Lakes and Forest and Northern Minnesota Wetlands Ecoregions:

Phosphorus, total	µg/L	20	NA	--	--	NA
Chlorophyll-a	µg/L	9	NA	--	--	NA
Secchi disk transparency	meters	No less than 1.8	NA	--	--	NA

Lakes and reservoirs in the North Central Hardwood Forest Ecoregion:

Phosphorus, total	µg/L	40	NA	--	--	NA
Chlorophyll-a	µg/L	14	NA	--	--	NA
Secchi disk transparency	meters	No less than 1.4	NA	--	--	NA

Additional narrative eutrophication standards for class 2A lakes and reservoirs are found under subpart 2a.

Eutrophication standards for class 2A rivers and streams.

North River Nutrient Region:		
Phosphorus, total	µg/L	less than or equal to 50
Chlorophyll-a (seston)	µg/L	less than or equal to 7
Diel dissolved oxygen flux	mg/L	less than or equal to 3.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.5

Central River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 18
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.0

South River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 150
Chlorophyll-a (seston)	µg/L	less than or equal to 35
Diel dissolved oxygen flux	mg/L	less than or equal to 4.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 3.0

Additional narrative eutrophication standards for class 2A rivers and streams are found under subpart 2b.

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.10	HH	260*	520*	Tox
Heptachlor epoxide (c)	ng/L	0.12	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.061	HH	--*	--*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19
MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Lindane (c) (Hexachlorocyclohexane, gamma-)	µg/L	0.0087	HH	1.0*	2.0*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox
Mercury, totalin edible fish	mg/kgppm	0.2	HH	NA	NA	NA
Methylene chloride (c) Dichloromethane)	µg/L	45	HH	13,875*	27,749*	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	65	HH	409	818	Tox
Nickel, total	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS shall not exceed the human health-based standard of 297 µg/L. For waters with total hardness values less than 212 mg/L, the CS in µg/L is toxicity-based and shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	297	297
MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Oil	µg/L	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	--	--	NA

7.0 mg/L as a daily minimum. This dissolved oxygen standard requires compliance with the standard 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$.

Oxythermal habitat (T_{DO3})	°C	See below	NA	--	--	NA

An average T_{DO3} (temperature at 3 mg/L of dissolved oxygen) sufficient to support coldwater fish species must be maintained during the summer season. The following are specific to lakes supporting different coldwater fish species: 8.8°C for designated lake trout (Salvelinus namaycush) lakes. 17.2°C for designated lake whitefish (Coregonus clupeaformis) lakes. 21.2°C for designated cisco (Coregonus artedi) lakes.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	0.93	HH	equation	equation	Tox

The MS and FAV vary with pH and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	0.93	0.93	0.93	0.93	0.93
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
pH, minimum	su	6.5	NA	--	--	NA
pH, maximum	su	8.5	NA	--	--	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.014	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	0.12	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	0.12	0.12	0.12	0.12	0.12
MS µg/L	1.0	2.0	6.7	13	22
FAV µg/L	1.2	4.1	13	27	44

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Temperature	°C or°F	No material increase	NA	--	--	NA
1,1,2,2-Tetrachloroethane (c)	µg/L	1.1	HH	1,127*	2,253*	Tox
Tetrachloroethylene (c)	µg/L	3.8	HH	428*	857*	Tox
Thallium, total	µg/L	0.28	HH	64	128	Tox
Toluene	µg/L	253	Tox	1,352	2,703	Tox
Toxaphene (c)	ng/L	0.31	HH	730*	1,500*	Tox
1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
1,1,2-Trichloroethylene (c)	µg/L	25	HH	6,988*	13,976*	Tox
2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox
Total suspended solids (TSS)	mg/L	10	NA	--	--	NA
TSS standards for class 2A may be exceeded for no more than ten percent of the time. This standard applies April 1 through September 30						
Vinyl chloride (c)	µg/L	0.17	HH	--*	--*	NA
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

[For text of subparts 2a and 2b, see Minnesota Rules]

Subp. 2c. **Beneficial use definitions for ~~lotic~~ coldwater aquatic life and habitats (class 2A).**

A. Subitems (1) to (5) apply to the beneficial uses in items B and C:

[For text of subitem (1), see Minnesota Rules]

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish IBI for lotic habitats as defined in Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); ~~or~~

(b) the macroinvertebrate IBI for lotic habitats as defined in Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017)~~.~~; or

(c) the fish IBI for lentic habitats as defined in Manual of Instructions for Lake Survey (2017) and Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual (2022).

(3) Water body types ~~for streams and rivers~~ are defined in the documents referenced in subitem (2).

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(b) Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(c) Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/~~

~~minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; ~~and~~

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking.~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(e) Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(f) Manual of Instructions for Lake Survey, Minnesota Department of Natural Resources (2017). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(g) Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual, Minnesota Department of Natural Resources (2022). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; and

(h) Development of Fish-Based Indices of Biological Integrity for Minnesota Lakes, Bacigalupi et al. (2021). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference.

(5) The beneficial use subclass designators "e" and "g" are added to the class 2A designator as specific additional designators. The additional subclass designators do not replace the class 2A designator. All requirements for class 2A coldwater ~~stream and river~~ habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for class 2Ae or class 2Ag coldwater ~~stream and river~~ habitats in part 7050.0222. ~~These subclass designators are applied to lotic waters only.~~

B. "Exceptional coldwater aquatic life and habitat" or "class 2Ae" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of coldwater aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

C. "General coldwater aquatic life and habitat" or "class 2Ag" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of coldwater aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

Subp. 2d. **Biological criteria for ~~lotic~~ coldwater aquatic life and habitats (class 2A).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern coldwater streams	Exceptional	2Ae	Fish	82
	General	2Ag	Fish	50
Northern coldwater streams	Exceptional	2Ae	Fish	60
	General	2Ag	Fish	35
Northern coldwater streams	Exceptional	2Ae	Macroinvertebrates	52

Water Body Type	Tier	Class	Assemblage	Biocriterion
	General	2Ag	Macroinvertebrates	32
Southern coldwater streams	Exceptional	2Ae	Macroinvertebrates	72
	General	2Ag	Macroinvertebrates	43
Deep, complex lakes	Exceptional	2Ae	Fish	64
	General	2Ag	Fish	45
Deep, moderately complex lakes	Exceptional	2Ae	Fish	59
	General	2Ag	Fish	38
Moderately deep lakes	General	2Ag	Fish	24
Shallow lakes	General	2Ag	Fish	36

The biological criteria for lotic coldwater aquatic life and habitats (class 2A) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

Subp. 3. **Class 2Bd waters.** The quality of class 2Bd surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water aquatic biota and their habitats according to the definitions in subpart 3c. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface waters is also protected as a source of drinking water. The applicable standards are given below. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Acenaphthene	µg/L	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/L	0.38	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	4.2	HH	800*	1,600*	Tox
Aluminum, total	µg/L	125	Tox	1,072	2,145	Tox
Ammonia un-ionized as N	µg/L	40	Tox	--	--	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

$$f = 1/(10^{(pka-pH)} + 1) \times 100$$

where: f = the percent of total ammonia in the un-ionized state

$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)

T = temperature in degrees Kelvin (273.16° Kelvin = 0° Celsius)

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	5.5	HH	90	180	Tox
Arsenic, total	µg/L	2.0	HH	360	720	Tox
Atrazine (c)	µg/L	3.4	HH	323	645	Tox
Benzene (c)	µg/L	6.0	HH	4,487*	8,974*	Tox
Bromoform	µg/L	41	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-1.685)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-0.9919)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	15	33	73	116	160
FAV µg/L	31	67	146	231	319

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Carbon tetrachloride (c)	µg/L	1.9	HH	1,750*	3,500*	Tox
Chlordane (c)	ng/L	0.29	HH	1,200*	2,400*	Tox
Chloride	mg/L	230	Tox	860	1,720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	53	HH	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					
CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	2.8	HH	436	872	Tox
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.620[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23
MS µg/L	9.2	18	34	50	65
FAV µg/L	18	35	68	100	131

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Cyanide, free	µg/L	5.2	Tox	22	45	Tox
DDT (c)	ng/L	1.7	HH	550*	1,100*	Tox
1,2-Dichloroethane (c)	µg/L	3.8	HH	45,050*	90,100*	Tox
Dieldrin (c)	ng/L	0.026	HH	1,300*	2,500*	Tox
Di-2-ethylhexyl phthalate (c)	µg/L	1.9	HH	--*	--*	NA
Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
Endosulfan	µg/L	0.029	HH	0.28	0.56	Tox
Endrin	µg/L	0.016	HH	0.090	0.18	Tox
Escherichia (E.) coli	See below	See below	HH	See below	See below	NA

Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**

Eutrophication standards for class 2Bd lakes~~, shallow lakes,~~ and reservoirs. Dimictic Lakes~~, Shallow Lakes,~~ and Reservoirs in Northern Lakes and ~~Forest Ecoregion~~ Forests and Northern Minnesota Wetlands Ecoregions:

Phosphorus, total	µg/L	~~30~~ 20	NA	--	--	NA
Chlorophyll-a	µg/L	9	NA	--	--	NA
Secchi disk transparency	meters	Not less than ~~2.0~~ 1.8	NA	--	--	NA

Dimictic Lakes and Reservoirs in North Central Hardwood ~~Forest~~ Forests Ecoregion:

Phosphorus, total	µg/L	40	NA	--	--	NA
Chlorophyll-a	µg/L	14	NA	--	--	NA
Secchi disk transparency	meters	Not less than 1.4	NA	--	--	NA

Dimictic Lakes and Reservoirs in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions:

Phosphorus, total	µg/L	65	NA	--	--	NA
Chlorophyll-a	µg/L	22	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.9	NA	--	--	NA

Polymictic Lakes in Northern Lakes and Forests and Northern Minnesota Wetlands Ecoregions:

Phosphorus, total	µg/L	32	NA	--	--	NA
Chlorophyll-a	µg/L	18	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.9	NA	--	--	NA

~~Shallow~~ Polymictic Lakes in North Central Hardwood ~~Forest~~ Forests Ecoregion:

Phosphorus, total	µg/L	60	NA	--	--	NA
Chlorophyll-a	µg/L	20	NA	--	--	NA
Secchi disk transparency	meters	Not less than 1.0	NA	--	--	NA

~~Shallow~~ Polymictic Lakes in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions:

Phosphorus, total	µg/L	90	NA	--	--	NA
Chlorophyll-a	µg/L	30	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.7	NA	--	--	NA

Additional narrative eutrophication standards for class 2Bd lakes~~, shallow lakes,~~ and reservoirs are found under subpart 3a.

Eutrophication standards for class 2Bd rivers and streams.

North River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 50
Chlorophyll-a (seston)	µg/L	less than or equal to 7
Diel dissolved oxygen flux	mg/L	less than or equal to 3.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.5

Central River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 18
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.0

South River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 150
Chlorophyll-a (seston)	µg/L	less than or equal to 35
Diel dissolved oxygen flux	mg/L	less than or equal to 4.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 3.0

Additional narrative eutrophication standards for class 2Bd rivers and streams are found under subpart 3b.

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.39	HH	260*	520*	Tox
Heptachlor epoxide (c)	ng/L	0.48	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.24	HH	--*	--*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19
MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Lindane (c) (Hexachlorocyclohexane, gamma-)	µg/L	0.032	HH	4.4*	8.8*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Mercury, totalin edible fish tissue	mg/kgppm	0.2	HH	NA	NA	NA
Methylene chloride (c) (Dichloromethane)	µg/L	46	HH	13,875*	27,749*	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	81	Tox	409	818	Tox
Nickel, total	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS shall not exceed the human health-based standard of 297 µg/L. For waters with total hardness values less than 212 mg/L, the CS in µg/L is toxicity-based and shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	297	297
MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Oil	µg/L	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	--	--	NA

5.0 mg/L as a daily minimum. This dissolved oxygen standard may be modified on a site-specific basis according to part 7050.0220, subpart 7, except that no site-specific standard shall be less than 5 mg/L as a daily average and 4 mg/L as a daily minimum. Compliance with this standard is required 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	1.9	HH	equation	equation	Tox

The MS and FAV vary with pH and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	1.9	1.9	1.9	1.9	1.9
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
pH, minimum	su	6.5	NA	--	--	NA
pH, maximum	su	9.0	NA	--	--	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.029	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	1.0	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	1.0	1.0	1.0	1.0	1.0
MS µg/L	1.0	2.0	6.7	13	22
FAV µg/L	1.2	4.1	13	27	44

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Temperature	°F	See below	NA	--	--	NA

5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperatures, except in no case shall it exceed the daily average temperature of 86°F.

1,1,2,2-Tetrachloroethane (c)	µg/L	1.5	HH	1,127*	2,253*	Tox
Tetrachloroethylene (c)	µg/L	3.8	HH	428*	857*	Tox
Thallium, total	µg/L	0.28	HH	64	128	Tox
Toluene	µg/L	253	Tox	1,352	2,703	Tox
Toxaphene (c)	ng/L	1.3	HH	730*	1,500*	Tox
1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
1,1,2-Trichloroethylene (c)	µg/L	25	HH	6,988*	13,976*	Tox
2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox
Total suspended solids (TSS)						
North River Nutrient Region	mg/L	15	NA	-	-	NA
Central River Nutrient Region	mg/L	30	NA	-	-	NA
South River Nutrient Region	mg/L	65	NA	-	-	NA
Red River mainstem - headwaters to border TSS standards for the class 2Bd North, Central, and South River Nutrient Regions and the Red River mainstem may be exceeded for no more than ten percent of the time. This standard applies April 1 through September 30	mg/L	100	NA	-	-	NA
Total suspended solids (TSS), summer average						
Lower Mississippi River mainstem - Pools 2 through 4	mg/L	32	NA	-	-	NA
Lower Mississippi River mainstem below Lake Pepin TSS standards for the class 2Bd Lower Mississippi River may be exceeded for no more than 50 percent of the time. This standard applies June 1 through September 30	mg/L	30	NA	-	-	NA

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Vinyl chloride (c)	µg/L	0.18	HH	--*	--*	NA

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

Subp. 3a. **Narrative eutrophication standards for class 2Bd lakes~~, shallow lakes,~~ and reservoirs.**

A. Eutrophication standards applicable to lakes~~, shallow lakes,~~ and reservoirs that lie on the border between two ecoregions or that are in the Red River Valley (also referred to as Lake Agassiz Plains), Northern Minnesota Wetlands, or Driftless Area Ecoregion must be applied on a case-by-case basis. The commissioner shall use the standards applicable to adjacent ecoregions as a guide.

[For text of item B, see Minnesota Rules]

C. It is the policy of the agency to protect all lakes~~, shallow lakes,~~ and reservoirs from the undesirable effects of cultural eutrophication. Lakes~~, shallow lakes,~~ and reservoirs with a baseline quality better than the numeric eutrophication standards in subpart 3 must be maintained in that condition through the strict application of all relevant federal, state, and local requirements governing antidegradation, the discharge of nutrients from point and nonpoint sources, and the protection of lake~~, shallow lake,~~ and reservoir resources, including, but not limited to:

[For text of subitems (1) to (7), see Minnesota Rules]

D. Lakes~~, shallow lakes,~~ and reservoirs with a baseline quality that is poorer than the numeric eutrophication standards in subpart 3 must be considered to be in compliance with the standards if the baseline quality is the result of natural causes. The commissioner shall determine baseline quality and compliance with these standards using data and the procedures in part 7050.0150, subpart 5.

[For text of item E, see Minnesota Rules]

[For text of subpart 3b, see Minnesota Rules]

Subp. 3c. **Beneficial use definitions for ~~lotic~~ warm or cool water aquatic life and habitats (class 2Bd).**

A. Subitems (1) to (5) apply to the beneficial uses in items B to D:

[For text of subitem (1), see Minnesota Rules]

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish IBI as defined in Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); ~~or~~

(b) the macroinvertebrate IBI as defined in Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017)~~.~~; or

(c) the fish IBI for lentic habitats as defined in Manual of Instructions for Lake Survey (2017) and Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual (2022).

(3) Water body types ~~for streams and rivers~~ are defined in the documents referenced in subitem (2).

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(b) Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(c) Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; ~~and~~

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking.~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(e) Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(f) Manual of Instructions for Lake Survey, Minnesota Department of Natural Resources (2017). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(g) Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual, Minnesota Department of Natural Resources (2022). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; and

(h) Development of Fish-Based Indices of Biological Integrity for Minnesota Lakes, Bacigalupi et al. (2021). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference.

(5) The beneficial use subclass designators "e," "g," and "m" are added to the class 2Bd designator as specific additional designators. The additional subclass designators do not replace the class 2Bd designator. All requirements for class 2Bd warm or cool water ~~stream and river~~ habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for class 2Bde, class 2Bdg, or class 2Bdm warm or cool water ~~stream and river~~ habitats in part 7050.0222. ~~These~~ The "m" subclass ~~designators are~~ designator is applied to lotic waters only.

B. "Exceptional cool and warm water aquatic life and habitat, also protected as a source for drinking water" or "class 2Bde" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

C. "General cool and warm water aquatic life and habitat, also protected as a source for drinking water" or "class 2Bdg" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

[For text of item D, see Minnesota Rules]

Subp. 3d. **Biological criteria for ~~lotic~~ warm or cool water aquatic life and habitats (class 2Bd).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern rivers	Exceptional	2Bde	Fish	71
	General	2Bdg	Fish	49
Southern streams	Exceptional	2Bde	Fish	66
	General	2Bdg	Fish	50
	Modified	2Bdm	Fish	35
Southern headwaters	Exceptional	2Bde	Fish	74
	General	2Bdg	Fish	55
	Modified	2Bdm	Fish	33
Northern rivers	Exceptional	2Bde	Fish	67
	General	2Bdg	Fish	38
Northern streams	Exceptional	2Bde	Fish	61
	General	2Bdg	Fish	47
	Modified	2Bdm	Fish	35
Northern headwaters	Exceptional	2Bde	Fish	68
	General	2Bdg	Fish	42
	Modified	2Bdm	Fish	23
Low gradient	Exceptional	2Bde	Fish	70
	General	2Bdg	Fish	42
	Modified	2Bdm	Fish	15
Northern forest rivers	Exceptional	2Bde	Macroinvertebrates	77
	General	2Bdg	Macroinvertebrates	49
Prairie and southern forest rivers	Exceptional	2Bde	Macroinvertebrates	63
	General	2Bdg	Macroinvertebrates	31
High-gradient northern forest streams	Exceptional	2Bde	Macroinvertebrates	82
	General	2Bdg	Macroinvertebrates	53

Water Body Type	Tier	Class	Assemblage	Biocriterion
Low-gradient northern forest streams	Exceptional	2Bde	Macroinvertebrates	76
	General	2Bdg	Macroinvertebrates	51
	Modified	2Bdm	Macroinvertebrates	37
High-gradient southern streams	Exceptional	2Bde	Macroinvertebrates	62
	General	2Bdg	Macroinvertebrates	37
	Modified	2Bdm	Macroinvertebrates	24
Low-gradient southern forest streams	Exceptional	2Bde	Macroinvertebrates	66
	General	2Bdg	Macroinvertebrates	43
	Modified	2Bdm	Macroinvertebrates	30
Low-gradient prairie streams	Exceptional	2Bde	Macroinvertebrates	69
	General	2Bdg	Macroinvertebrates	41
	Modified	2Bdm	Macroinvertebrates	22
Deep, complex lakes	Exceptional	2Ae	Fish	64
	General	2Ag	Fish	45
Deep, moderately complex lakes	Exceptional	2Ae	Fish	59
	General	2Ag	Fish	38
Moderately deep lakes	General	2Ag	Fish	24
Shallow lakes	General	2Ag	Fish	36

The biological criteria for lotic warm or cool water aquatic life and habitats (class 2Bd) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

Subp. 4. **Class 2B waters.** The quality of class 2B surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water aquatic biota, and their habitats according to the definitions in subpart 4c. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface water is not protected as a source of drinking water. The applicable standards are given below. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Acenaphthene	µg/l	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/l	0.89	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	59	Tox	800	1,600	Tox
Aluminum, total	µg/L	125	Tox	1,072	2,145	Tox

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Ammonia un-ionized as N	µg/L	40	Tox	--	--	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

$$f = 1/(10^{(pka-pH)} + 1) \times 100$$

where: f = the percent of total ammonia in the un-ionized state
$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)
T = temperature in degrees Kelvin (273.16° Kelvin = 0° Celsius)

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	31	Tox	90	180	Tox
Arsenic, total	µg/L	53	HH	360	720	Tox
Atrazine (c)	µg/L	10	Tox	323	645	Tox
Benzene (c)	µg/L	98	HH	4,487	8,974	Tox
Bromoform	µg/L	466	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-1.685)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-0.9919)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	15	33	73	116	160
FAV µg/L	31	67	146	231	319

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Carbon tetrachloride (c)	µg/L	5.9	HH	1,750*	3,500*	Tox
Chlordane (c)	ng/L	0.29	HH	1,200*	2,400*	Tox
Chloride	mg/L	230	Tox	860	1,720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	155	Tox	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					
CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	5.0	Tox	436	872	Tox
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.6200[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23
MS µg/L	9.2	18	34	50	65
FAV µg/L	18	35	68	100	131

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Cyanide, free	µg/L	5.2	Tox	22	45	Tox
DDT (c)	ng/L	1.7	HH	550*	1,100*	Tox
1,2-Dichloroethane (c)	µg/L	190	HH	45,050*	90,100*	Tox
Dieldrin (c)	ng/L	0.026	HH	1,300*	2,500*	Tox
Di-2-ethylhexyl phthalate (c)	µg/L	2.1	HH	--*	--*	NA
Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
Endosulfan	µg/L	0.031	HH	0.28	0.56	Tox
Endrin	µg/L	0.016	HH	0.090	0.18	Tox
Escherichia (E.) coli	See below	See below	HH	See below	See below	NA

Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**

Eutrophication standards for class 2B lakes~~, shallow lakes,~~ and reservoirs. Dimictic Lakes~~, Shallow Lakes,~~ and Reservoirs in Northern Lakes and ~~Forest~~ Forests and Northern Minnesota Wetlands Ecoregions:

Phosphorus, total	µg/L	~~30~~ 20	NA	--	--	NA
Chlorophyll-a	µg/L	9	NA	--	--	NA
Secchi disk transparency	meters	Not less than ~~2.0~~ 1.8	NA	--	--	NA

Dimictic Lakes and Reservoirs in North Central Hardwood ~~Forest~~ Forests Ecoregion:

Phosphorus, total	µg/L	40	NA	--	--	NA
Chlorophyll-a	µg/L	14	NA	--	--	NA
Secchi disk transparency	meters	Not less than 1.4	NA	--	--	NA

Dimictic Lakes and Reservoirs in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions:

Phosphorus, total	µg/L	65	NA	--	--	NA
Chlorophyll-a	µg/L	22	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.9	NA	--	--	NA

Polymictic Lakes in Northern Lakes and Forests and Northern Minnesota Wetlands Ecoregions:

Phosphorus, total	µg/L	32	NA	--	--	NA
Chlorophyll-a	µg/L	18	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.9	NA	--	--	NA

~~Shallow~~ Polymictic Lakes in North Central Hardwood ~~Forest~~ Forests Ecoregion:

Phosphorus, total	µg/L	60	NA	--	--	NA
Chlorophyll-a	µg/L	20	NA	--	--	NA
Secchi disk transparency	meters	Not less than 1.0	NA	--	--	NA

~~Shallow~~ Polymictic Lakes in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions:

Phosphorus, total	µg/L	90	NA	--	--	NA
Chlorophyll-a	µg/L	30	NA	--	--	NA
Secchi disk transparency	meters	Not less than 0.7	NA	--	--	NA

Additional narrative eutrophication standards for class 2B lakes~~, shallow lakes,~~ and reservoirs are found in subpart 4a.

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

Eutrophication standards for class 2B rivers and streams.

North River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 50
Chlorophyll-a (seston)	µg/L	less than or equal to 7
Diel dissolved oxygen flux	mg/L	less than or equal to 3.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.5

Central River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 18
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.0

South River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 150
Chlorophyll-a (seston)	µg/L	less than or equal to ~~40~~ 35
Diel dissolved oxygen flux	mg/L	less than or equal to ~~5.0~~ 4.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to ~~3.5~~ 3.0

Site-specific standards for specified river reaches or other waters are:

Mississippi River Navigational Pool 1 (river miles 854.1 to 847.7 reach from ~~Fridley~~ Upper St. Anthony Falls to Ford Lock and Dam No. 1 in St. Paul):

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 35

Mississippi River Navigational Pool 2 (river miles 847.7 to 815.2 reach from Ford Lock and Dam No. 1 to Hastings Lock and Dam No. 2):

Phosphorus, total	µg/L	less than or equal to 125
Chlorophyll-a (seston)	µg/L	less than or equal to 35

Mississippi River Navigational Pool 3 (river miles 815.2 to 796.9 reach from Hastings Lock and Dam No. 2 to Red Wing Lock and Dam No. 3):

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 35

Mississippi River Navigational Pool 4 (river miles 796.9 to 752.8 reach from Red Wing Lock and Dam No. 3 to Alma Lock and Dam No. 4)~~.~~: Lake Pepin occupies majority of Pool 4 and Lake Pepin site-specific standards are used for this pool.

Mississippi River Navigational Pools 5 to 8 (river miles 752.8 to 679.1 Alma Lock and Dam No. 4 to Genoa Lock and Dam No. 8):

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 35

Lake Pepin:

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 28

Crow Wing River from confluence of Long Prairie River to the mouth of the Crow Wing River at the Mississippi River:

Phosphorus, total	µg/L	less than or equal to 75
Chlorophyll-a (seston)	µg/L	less than or equal to 13
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.7

Crow River from the confluence of the North Fork of the Crow River and South Fork of the Crow River to the mouth of the Crow River at the Mississippi River:

Phosphorus, total	µg/L	less than or equal to 125
Chlorophyll-a (seston)	µg/L	less than or equal to 27
Diel dissolved oxygen flux	mg/L	less than or equal to 4.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.5

Additional narrative eutrophication standards for class 2B rivers and streams are found in subpart 4b.

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.39	HH	260*	520*	Tox

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Heptachlor epoxide (c)	ng/L	0.48	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.24	HH	--*	--*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19
MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Lindane (c) (Hexachlorocyclobenzene, gamma-)	µg/L	0.036	HH	4.4*	8.8*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox
Mercury, totalin edible fish tissue	mg/kgppm	0.2	HH	NA	NA	NA
Methylene chloride (c) (Dichloromethane)	µg/L	1,940	HH	13,875	27,749	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	81	Tox	409	818	Tox
Nickel, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/l)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	399	509
MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Oil	µg/l	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	--	--	NA

5.0 mg/L as a daily minimum. This dissolved oxygen standard may be modified on a site-specific basis according to part 7050.0220, subpart 7, except that no site-specific standard shall be less than 5 mg/L as a daily average and 4 mg/L as a daily minimum. Compliance with this standard is required 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$. This standard applies to all class 2B waters except for:

(1) those portions of the Mississippi River from the outlet of the Metro Wastewater Treatment Works in Saint Paul (River Mile 835) to Lock and Dam No. 2 at Hastings (River Mile 815). For this reach of the Mississippi River, the standard is not less than 5 mg/L as a daily average from April 1 through November 30, and not less than 4 mg/L at other times; and

(2) the portion of the Minnesota River from the outlet of the Blue Lake wastewater treatment works (River Mile 21) to the mouth at Fort Snelling. For the specified reach of the Minnesota River, the standard is not less than 5 mg/L as a daily average year round.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with pH and are calculated using the following equations:

For waters with pH values greater than 6.95, the CS shall not exceed the human health-based standard of 5.5 µg/L.

For waters with pH values less than 6.96, the CS in µg/L shall not exceed the toxicity-based standard of exp.(1.005[pH]-5.290)

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	3.5	5.5	5.5	5.5	5.5
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
pH, minimum	su	6.5	NA	--	--	NA
pH, maximum	su	9.0	NA	--	--	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.029	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	1.0	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	1.0	1.0	1.0	1.0	1.0
MS µg/L	1.0	2.0	6.7	13	22
FAV µg/L	1.2	4.1	13	27	44

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Temperature	°F	See below	NA	--	--	NA

5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperatures, except in no case shall it exceed the daily average temperature of 86°F.

1,1,2,2-Tetrachloroethane (c)	µg/L	13	HH	1,127	2,253	Tox
Tetrachloroethylene (c)	µg/L	8.9	HH	428	857	Tox
Thallium, total	µg/L	0.56	HH	64	128	Tox
Toluene	µg/L	253	Tox	1,352	2,703	Tox
Toxaphene (c)	ng/L	1.3	HH	730*	1,500*	Tox
1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
1,1,2-Trichloroethylene (c)	µg/L	120	HH	6,988	13,976	Tox
2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox

Total suspended solids (TSS)						
North River Nutrient Region	mg/L	15	NA	--	--	NA
Central River Nutrient Region	mg/L	30	NA	--	--	NA
South River Nutrient Region	mg/L	65	NA	--	--	NA
Red River mainstem - headwaters to border TSS standards for the class 2B North, Central, and South River Nutrient Regions and the Red River mainstem may be exceeded for no more than ten percent of the time. This standard applies April 1 through September 30	mg/L	100	NA	--	--	NA
Total suspended solids (TSS), summer average						
Lower Mississippi River mainstem - Pools 2 through 4	mg/L	32	NA	--	--	NA
Lower Mississippi River mainstem below Lake Pepin TSS standards for the class 2B Lower Mississippi River may be exceeded for no more than 50 percent of the time. This standard applies June 1 through September 30	mg/L	30	NA	--	--	NA

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Vinyl chloride (c)	µg/L	9.2	HH	--*	--*	NA
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

Subp. 4a. **Narrative eutrophication standards for class 2B lakes~~, shallow lakes,~~ and reservoirs.**

A. Eutrophication standards applicable to lakes~~, shallow lakes,~~ and reservoirs that lie on the border between two ecoregions or that are in the Red River Valley (also referred to as Lake Agassiz Plains), Northern Minnesota Wetlands, or Driftless Area Ecoregion must be applied on a case-by-case basis. The commissioner shall use the standards applicable to adjacent ecoregions as a guide.

[For text of item B, see Minnesota Rules]

C. It is the policy of the agency to protect all lakes~~, shallow lakes,~~ and reservoirs from the undesirable effects of cultural eutrophication. Lakes~~, shallow lakes,~~ and reservoirs with a baseline quality better than the numeric eutrophication standards in subpart 4 must be maintained in that condition through the strict application of all relevant federal, state, and local requirements governing antidegradation, the discharge of nutrients from point and nonpoint sources, and the protection of lake~~, shallow lake,~~ and reservoir resources, including, but not limited to:

[For text of subitems (1) to (7), see Minnesota Rules]

D. Lakes~~, shallow lakes,~~ and reservoirs with a baseline quality that is poorer than the numeric eutrophication standards in subpart 4 must be considered to be in compliance with the standards if the baseline quality is the result of natural causes. The commissioner shall determine baseline quality and compliance with these standards using data and the procedures in part 7050.0150, subpart 5.

[For text of item E, see Minnesota Rules]

[For text of subpart 4b, see Minnesota Rules]

Subp. 4c. **Beneficial use definitions for ~~lotic~~ warm or cool water aquatic life and habitats (class 2B).**

A. Subitems (1) to (5) apply to the beneficial uses in items B to D:

[For text of subitem (1), see Minnesota Rules]

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish IBI as defined in Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); ~~or~~

(b) the macroinvertebrate IBI as defined in Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017)~~.~~; or

(c) the fish IBI for lentic habitats as defined in Manual of Instructions for Lake Survey (2017) and Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual (2022).

[For text of subitem (3), see Minnesota Rules]

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(b) Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(c) Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; ~~and~~

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's website at ~~www.pca.state.mn.us/regulations/minnesota-rulemaking.~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(e) Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(f) Manual of Instructions for Lake Survey, Minnesota Department of Natural Resources (2017). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference;

(g) Lake Index of Biological Integrity (IBI) Nearshore Sampling Manual, Minnesota Department of Natural Resources (2022). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference; and

(h) Development of Fish-Based Indices of Biological Integrity for Minnesota Lakes, Bacigalupi et al. (2021). The document is available on the agency's website at https://www.pca.state.mn.us/get-engaged/incorporations-by-reference.

(5) The beneficial use subclass designators "e," "g," and "m" are added to the class 2B designator as specific additional designators. The additional subclass designators do not replace the class 2B designator. All requirements for class 2B warm or cool water ~~stream and river~~ habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for class 2Be, class 2Bg, or class 2Bm warm or cool water ~~stream and river~~ habitats in part 7050.0222. ~~These~~ The "m" subclass ~~designators are~~ designator is applied to lotic waters only.

B. "Exceptional cool and warm water aquatic life and habitat" or "class 2Be" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

C. "General cool and warm water aquatic life and habitat" or "class 2Bg" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012) for streams and rivers and in Biological Condition Gradient (BCG) Assessment Models for Lake Fish Communities of Minnesota, Gerritsen and Stamp (2014) for lakes.

[For text of item D, see Minnesota Rules]

Subp. 4d. **Biological criteria for ~~lotic~~ warm or cool water aquatic life and habitats (class 2B).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern rivers	Exceptional	2Be	Fish	71
	General	2Bg	Fish	49
Southern streams	Exceptional	2Be	Fish	66
	General	2Bg	Fish	50
	Modified	2Bm	Fish	35
Southern headwaters	Exceptional	2Be	Fish	74
	General	2Bg	Fish	55
	Modified	2Bm	Fish	33
Northern rivers	Exceptional	2Be	Fish	67
	General	2Bg	Fish	38
Northern streams	Exceptional	2Be	Fish	61
	General	2Bg	Fish	47
	Modified	2Bm	Fish	35
Northern headwaters	Exceptional	2Be	Fish	68
	General	2Bg	Fish	42
	Modified	2Bm	Fish	23
Low gradient	Exceptional	2Be	Fish	70
	General	2Bg	Fish	42
	Modified	2Bm	Fish	15
Northern forest rivers	Exceptional	2Be	Macroinvertebrates	77
	General	2Bg	Macroinvertebrates	49
Prairie and southern forest rivers	Exceptional	2Be	Macroinvertebrates	63
	General	2Bg	Macroinvertebrates	31
High-gradient northern forest streams	Exceptional	2Be	Macroinvertebrates	82
	General	2Bg	Macroinvertebrates	53

Water Body Type	Tier	Class	Assemblage	Biocriterion
Low-gradient northern forest streams	Exceptional	2Be	Macroinvertebrates	76
	General	2Bg	Macroinvertebrates	51
	Modified	2Bm	Macroinvertebrates	37
High-gradient southern streams	Exceptional	2Be	Macroinvertebrates	62
	General	2Bg	Macroinvertebrates	37
	Modified	2Bm	Macroinvertebrates	24
Low-gradient southern forest streams	Exceptional	2Be	Macroinvertebrates	66
	General	2Bg	Macroinvertebrates	43
	Modified	2Bm	Macroinvertebrates	30
Low-gradient prairie streams	Exceptional	2Be	Macroinvertebrates	69
	General	2Bg	Macroinvertebrates	41
	Modified	2Bm	Macroinvertebrates	22
Deep, complex lakes	Exceptional	2Ae	Fish	64
	General	2Ag	Fish	45
Deep, moderately complex lakes	Exceptional	2Ae	Fish	59
	General	2Ag	Fish	38
Moderately deep lakes	General	2Ag	Fish	24
Shallow lakes	General	2Ag	Fish	36

The biological criteria for lotic warm or cool water aquatic life and habitats (class 2B) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

[For text of subparts 5 to 9, see Minnesota Rules]

7050.0460 WATERS SPECIFICALLY CLASSIFIED; EXPLANATION OF LISTINGS IN PART 7050.0470.

[For text of subparts 1 and 2, see Minnesota Rules]

Subp. 3. **Abbreviations and symbols.** The listings in part 7050.0470 include the following abbreviations and symbols:

T., R., S. means township, range, and section, respectively.

An asterisk (*) preceding the name of the water body means the water body is an outstanding resource value water.

[month/day/year/letter code] ~~following the name of the outstanding resource value water in brackets~~ is the effective date the water resource was designated as an outstanding resource value water. The letter code (P or R) indicates the applicable discharge restrictions in part 7050.0265, subpart 6 or 7, or 7050.0270, subpart 5 or 6. The letter code P corresponds to the prohibited discharges provision in part 7050.0265, subpart 7, or 7050.0270, subpart 6. The letter code R corresponds to the restricted discharges provision in part 7050.0265, subpart 6, or 7050.0270, subpart 5.

[WR] ~~following the name of the water body~~ means the water body is a designated ~~as a~~ wild rice water in part

7050.0470, subpart 1.

[LAT] means the water body is a designated lake trout (Salvelinus namaycush) lake in part 7050.0470.

[LKW] means the water body is a designated lake whitefish (Coregonus clupeaformis) lake in part 7050.0470.

[TLC] means the water body is a designated cisco (Coregonus artedi) lake in part 7050.0470.

[SRT] means the water body is a designated stream trout lake in part 7050.0470.

Class 2Bd waters are class 2B waters also protected for domestic consumption purposes (class 1). Applicable standards for class 2Bd waters are listed in part 7050.0222, subparts 3 and 3a.

7050.0470 CLASSIFICATIONS FOR SURFACE WATERS IN MAJOR DRAINAGE BASINS.

Subpart 1. **Lake Superior basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Lake Superior basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Lake Superior basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data). For an explanation of listings and abbreviations, see part 7050.0460.

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 04010101 Lake Superior - North (November 2025);

(2) 04010102 Lake Superior - South (November 2025);

(3) 04010201 St. Louis River (November 2025);

(4) 04010202 Cloquet River (November 2025); and

(5) 04010301 Nemadji River (November 2025).

~~(1) *Alder Lake, 16-0114-00, [11/5/84P] (T.64, R.1E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(2) *Alton Lake, 16-0622-00, [11/5/84P] (T.62, 63, R.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(3) Artichoke Lake, 69-0623-00, [WR] (T.52, R.17, S.17, 18, 19, 20): 2B, 3, 4A, 4B, 5, 6;~~

~~(4) Bath Lake, 16-0164-00, (T.62, R.1W, S.5, 6; T.63, R.1W, S.31, 32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(5) Bean Lake (lower Twin), 38-0409-00, (T.56, R.8W, S.25, 26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(6) Bear Lake (see Twin Lake, upper);~~

~~(7) Bearskin Lake, East, 16-0146-00, (T.64, R.1E, 1W): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(8) *Bearskin Lake, West, 16-0228-00, [3/7/88R] (T.64, 65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(9) *Bench Lake, 16-0063-00, [11/5/84P] (T.64, 2E, S.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(10) Benson Lake, 38-0018-00, (T.58, R.6W, S.29): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(11) *Birch Lake, 16-0247-00, [3/7/88R] (T.65, R.1, 2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(12) *Black Lake, 58-0001-00, [3/7/88P] (T.45, R.15): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(13) Bluebill Lake, 38-0261-00, [WR] (T.59, R.7, S.15): 2B, 3, 4A, 4B, 5, 6;~~

~~(14) Bogus Lake, 16-0050-00, (T.62, R.2E, S.12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(15) Bone Lake, 38-0065-00, (T.61, R.6W, S.13, 14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(16) Bow Lake, 16-0211-00, (T.64, R.1W, S.15): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(17) Boys Lake, 16-0044-00, (T.62, R.2E, S.5, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(18) Breda Lake, 69-0037-00, [WR] (T.56, R.12, S.16): 2B, 3, 4A, 4B, 5, 6;~~

~~(19) Briar Lake, 69-0128-00, (T.53, R.13W, S.14, 15, 23): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(20) *Brule Lake, 16-0348-00, [11/5/84P] (T.63, R.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(21) Cabin Lake, 38-0260-00, [WR] (T.59, R.7, S.13, 14, 23, 24): 2B, 3, 4A, 4B, 5, 6;~~

~~(22) Canton Mine Pit Lake, 69-1294-00, (T.58, R.16, S.2, 3): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(23) Caribou Lake, 16-0360-00, [WR] (T.60, R.3W, S.1, 2, 11, 12; T.61, R.3W, S.35, 36): 2B, 3, 4A, 4B, 5, 6;~~

~~(24) Carrot Lake, 16-0071-00, (T.64, R.2E, S.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(25) Cedar Lake, 69-0431-00, (T.58, R.15W, S.20): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(26) Chester Lake, 69-0033-00, (T.64, R.3E, S.32, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(27) Christine Lake, 16-0373-00, [WR] (T.61, R.3W, S.28, 29, 32): 2B, 3, 4A, 4B, 5, 6;~~

~~(28) Clearwater Lake (Clear Lake), 69-0397-00, (T.52, R.15W, S.23): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(29) *Clearwater Lake (Emby Lake), 16-0139-00, [11/5/84P] (T.65, R.1E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(30) Colby Lake, 69-0249-00, (T.58, R.14): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(31) *Cone Lake, 16-0412-00, North, [11/5/84P] (T.63, 64, R.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(32) Corona Lake, 09-0048-00, (T.48, R.19W, S.11, 12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(33) Corsica Mine Pit Lake, 69-1316-00, (T.58, R.16, S.18): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(34) Crosscut Lake, 38-0257-00, (T.59, R.7W, S.7, 18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(35) *Crystal Lake, 16-0090-00, [11/5/84P] (T.64, R.1E, 2E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

(36) *Daniels Lake, 16-0150-00, [11/5/84P] (T.65, R.1E, 1W): 1B, 2A, 3, 4A, 4B, 5, 6;

(37) *Davis Lake, 16-0435-00, [11/5/84P] (T.64, R.3): 1B, 2A, 3, 4A, 4B, 5, 6;

(38) Devilfish Lake, 16-0029-00, (T.64, R.3E): 1B, 2A, 3, 4A, 4B, 5, 6;

(39) Divide (Towhey) Lake, 38-0256-00, (T.59, R.7W, S.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;

(40) Duke Lake, 16-0111-00, (T.63, R.1E, S.30): 1B, 2A, 3, 4A, 4B, 5, 6;

(41) *Duncan Lake, 16-0232-00, [11/5/84P] (T.65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;

(42) *Dunn Lake, 16-0245-00, [11/5/84P] (T.65, R.1, 2): 1B, 2A, 3, 4A, 4B, 5, 6;

(43) East Lake, 38-0020-00, (T.59, R.6W, S.1, 2): 1B, 2A, 3, 4A, 4B, 5, 6;

(44) *Echo Lake, 38-0028-00, [3/7/88R] (T.59, R.6, S.14, 15, 22, 23): 1B, 2A, 3, 4A, 4B, 5, 6;

(45) Elbow Lake, Little, 69-1329-00, (T.57, R.18W, S.9, 10, 16): 1B, 2A, 3, 4A, 4B, 5, 6;

(46) Embarrass Mine Pit (Sabin Lake or Lake Mine), 69-0429-00, (T.58, R.15W, S.5, 6): 1B, 2A,; 3, 4A, 4B, 5, 6

(47) Esther Lake, 16-0023-00, (T.63, R.3E, S.6; T.64, R.3E, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;

(48) *Fan Lake (West Lily), 16-0084-00, [11/5/84P] (T.65, R.2E): 1B, 2Bd, 3, 4A, 4B, 5, 6;

(49) Feather Lake, 16-0905-00, (T.61, R.5W, S.35): 1B, 2A, 3, 4A, 4B, 5, 6;

(50) Flour Lake, 16-0147-00, (T.64, R.1E, 1W): 1B, 2A, 3, 4A, 4B, 5, 6;

(51) Fourmile Lake, 16-0639-00, [WR] (T.60, R.5W, S.4, 8, 9, 10, 16, 17): 2B, 3, 4A, 4B, 5, 6;

(52) Fowl Lake, North, 16-0036-00, (T.64, 65, R.3E): 1B, 2Bd, 3, 4A, 4B, 5, 6;

(53) Fowl Lake, South, 16-0034-00, (T.64, 65, R.3E): 1B, 2Bd, 3, 4A, 4B, 5, 6;

(54) Fraser Mine Pit Lake, (T.58, R.20, S.23): 1C, 2Bd, 3, 4A, 4B, 5, 6, until the city of Chisholm no longer uses Fraser Mine Pit Lake as a water supply source for its public water system, and then the classification is identified in part 7050.0415, subpart 4;

(55) *Gadwall Lake (Gadwell Lake), 16-0060-00, [11/5/84P] (T.64, R.2E, S.3): 1B, 2A, 3, 4A, 4B, 5, 6;

(56) *Gaskin Lake, 16-0319-00, [11/5/84P] (T.64, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;

(57) *Gogebic Lake, 16-0087-00, [11/5/84P] (T.65, R.2E, S.30, 31): 1B, 2A, 3, 4A, 4B, 5, 6;

(58) Goldeneye (Duck) Lake, 38-0029-00, (T.59, R.6W, S.15): 1B, 2A, 3, 4A, 4B, 5, 6;

(59) *Greenwood Lake, 16-0077-00, [3/7/88R] (T.64, R.2E): 1B, 2A, 3, 4A, 4B, 5, 6;

(60) Hay Lake, 69-0435-00, [WR] (T.59, R.15, S.8): 2B, 3, 4A, 4B, 5, 6;

(61) Hungry Jack Lake, 16-0227-00, (T.64, 65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;

~~(62) Jim Lake (Jerry Lake), 16-0135-00, (T.64, R.1E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(63) Judson Mine Pit, 69-1295-00, (T.58, R.19W, S.20, 29): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(64) Junco Lake, 16-0159-00, (T.62, R.1W, S.11, 12, 13): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(65) *Kemo Lake, 16-0188-00, [3/7/88R] (T.63, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(66) Kimball Lake, 16-0045-00, (T.62, R.2E, S.7, 8, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(67) Leo Lake, 16-0198-00, (T.64, R.1W, S.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(68) Lieung (Lieuna) Lake, 69-0123-00, [WR] (T.53, R.13, S.3, 4, 9, 10): 2B, 3, 4A, 4B, 5, 6;~~

~~(69) *Lily Lakes (Vaseux Lake and Fan Lake), 16-0083-00 and 16-0084-00, [11/5/84P] (T.65, R.2E): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(70) Lima Lake, 16-0226-00, (T.64, R.1W, S.35): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(71) *Lizz Lake, 16-0199-00, [11/5/84P] (T.64, R.1W, S.7, 18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(72) Loaine (Sand) Lake, 69-0016-00, (T.54, R.12W, S.16, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(73) Loft Lake, 16-0031-00, (T.64, R.3E, S.21): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(74) Long Lake, 69-0044-00, [WR] (T.57, R.12, S.4, 5; T.58, R.12, S.32, 33): 2B, 3, 4A, 4B, 5, 6;~~

~~(75) Margaret Lake, 16-0896-00, (T.64, R.3E, S.27, 28, 33, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(76) Marsh Lake, 16-0488-00, [WR] (T.62, R.4W, S.22, 23, 27, 28): 2B, 3, 4A, 4B, 5, 6;~~

~~(77) McFarland Lake, 16-0027-00, (T.64, R.3E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(78) Mesabi (Missabe) Mountain Mine Pit Lake, 69-1292-00, (T.58, R.17, S.8): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(79) Mink Lake, 16-0046-00, (T.62, R.2E, S.8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(80) Mirror Lake, 69-0234-00, (T.52, R.14W, S.19, 30): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(81) *Misquah Lake, 16-0225-00, [11/5/84P] (T.64, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(82) Moore Lake, 16-0489-00, [WR] (T.62, R.4W, S.23, 24): 2B, 3, 4A, 4B, 5, 6;~~

~~(83) Moosehorn Lake, 16-0015-00, (T.63, R.3E, S.36; T.63, R.4E, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(84) *Moose Lake, 16-0043-00, [11/5/84P] (T.65, R.2E, 3E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(85) Morton Mine Pit Lake, 69-1310-00, (T.57, R.21, S.10, 11, 14): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(86) *Moss Lake, 16-0234-00, [3/7/88R] (T.65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(87) *Mountain Lake, 16-0093-00, [11/5/84P] (T.65, R.1E, 2E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(88) Muckwa Lake, 16-0105-00, (T.63, R.1E, S.21, 28): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(89) *Mulligan Lake, 16-0389-00, [11/5/84P] (T.63, R.3W, S.1, 12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(90) Musquash Lake, 16-0104-00, (T.63, R.1E, S.20, 28, 29): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(91) Normanna Lake, 69-0122-00, (T.52, R.13W, S.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(92) Northern Light Lake, 16-0089-00, [WR] (T.63, R.2E, S.29, 30, 31, 32, 33; T.63, R.1E, S.25): 2B, 3, 4A, 4B, 5, 6;~~

~~(93) Olga Lake, 16-0024-00, (T.63, R.3E, S.6; T.64, R.3E, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(94) Olson Lake, 16-0158-00, (T.62, R.1W, S.9, 16): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(95) *Onega Lake (Omega Lake), 16-0353-00, [11/5/84P] (T.64, R.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(96) *Otto Lake, lower (South Otto), 16-0323-00, [11/5/84P] (T.64, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(97) Pancore (Lost) Lake, 16-0475-00, (T.61, R.4W, S.22, 27): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(98) Papoose Lake, 69-0024-00, [WR] (T.55, R.12, S.9): 2B, 3, 4A, 4B, 5, 6;~~

~~(99) *Partridge Lake, 16-0233-00, [11/5/84P] (T.65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(100) *Pemmican Lake, 16-0085-00, [11/5/84P] (T.65, R.2E, S.22): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(101) *Pike Lake, West, 16-0086-00, [11/5/84P] (T.65, R.2E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(102) Pine Lake, 16-0194-00, (T.63, R.1W, S.35, 36): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(103) *Pine Lake, 16-0041-00, [11/5/84P] (T.64, 65, R.1E, 2E, 3E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(104) Pine Mountain Lake, 16-0108-00, (T.63, R.1E, S.26, 27, 34, 35): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(105) Poplar Lake, 16-0239-00, (T.64N, R.1, 2W): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(106) *Ptarmigan Lake, 16-0183-00, [11/5/84P] (T.63, R.1, S.20, 29): 1B 2Bd, 3, 4A, 4B, 5, 6;~~

~~(107) *Ram Lake, 16-0174-00, [11/5/84P] (T.63, R.1W, S.9, 10): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(108) Rice Lake, 16-0453-00, [WR] (T.61 R.3W, S.7; T.61, R.4W, S.2, 11, 12): 2B, 3, 4A, 4B, 5, 6;~~

~~(109) *Rose Lake, 16-0230-00, [11/5/84P] (T.65, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(110) Round Island Lake, 38-0417-00 [WR] (T.59, R.8, S.12): 2B, 3, 4A, 4B, 5, 6;~~

~~(111) Round Lake, 69-0048-00, [WR] (T.58, R.12, S.25, 26): 2B, 3, 4A, 4B, 5, 6;~~

~~(112) St. James Mine Pit, 69-0428-00, (T.58, R.15W, S.3, 4): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(113) Saint Mary's Lake, 69-0651-00, (T.57, R.17, S.9, 16, 17): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(114) *Sawbill Lake, 16-0496-00, [11/5/84P] (T.62, 63, R.4): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(115) Section 8 Lake, 38-0258-00, (T.59, R.7W, S.8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(116) Seven Beaver Lake, 69-0002-00, [WR] (T.58, R.11, 12): 2B, 3, 4A, 4B, 5, 6;~~

~~(117) Shady, North, Lake, 16-0076-00, (T.64, R.2E, S.21, 22): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(118) Shoe Lake, 16-0080-00, (T.64, 2E, S.30): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(119) Sled Lake, 16-0897-00, (T.63, R.1W, S.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(120) *Sock Lake, 16-0335-00, [11/5/84P] (T.65, R.2W, S.26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(121) Sonju Lake, 38-0248-00, (T.58, R.7W, S.27, 28): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(122) *South Lake, 16-0244-00, [11/5/84P] (T.65, R.1, 2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(123) Spring Hole Lake, 69-1372-00, (T.55, R.14W, S.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(124) *State Lake, 16-0293-00, [11/5/84P] (T.63, 64, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(125) Steer Lake, 38-0920-00, (T.60, R.6W, S.32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(126) Stone Lake, 69-0686-00, [WR] (T.55, R.17, S.6; T.55, R.18, S.1; T.56, R.17, S.31; T.56, R.18, S.36): 2B, 3, 4A, 4B, 5, 6;~~

~~(127) Stone Lake (Skibo Lake), 69-0046-00, [WR] (T.58, R.12, S.17, 19, 20): 2B, 3, 4A, 4B, 5, 6;~~

~~(128) Stone Lake (Murphy Lake or Tommila Lake), 69-0035-00, [WR] (T.56, R.12, S.13, 24): 2B, 3, 4A, 4B, 5, 6;~~

~~(129) *Superior, Lake, excluding the portions identified in subitem (130) 16-0001-00, [11/5/84R] (T.49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, R.14W-7E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(130) *Superior, Lake, 16-0001-00, [3/9/98P] (those portions of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(131) Swamp River (Reservoir), 16-0901-00, [WR] (T.63, R.4E, S.4; T.64, R.4E, S.33): 2B, 3, 4A, 4B, 5, 6;~~

~~(132) *Swan Lake, 16-0268-00, [11/5/84P] (T.63, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(133) Talus Lake, 16-0187-00, (T.63, R.1W, S.26, 27): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(134) Thompson Lake, 16-0160-00, (T.62, R.1W, S.19, 20, 29, 30): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(135) Thrasher Lake, 16-0192-00, (T.63, R.1W, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(136) Thrush Lake, 16-0191-00, (T.63, R.1W, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(137) *Topper Lake, 16-0336-00, [11/5/84P] (T.65, R.2W, S.27): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(138) *Trout Lake, 16-0049-00, [3/7/88R] (T.62, R.2E): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(139) *Trout Lake, Little, 16-0170-00, [11/5/84P] (T.63, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(140) Turnip Lake, 16-0132-00, (T.64, R.1E, S.24): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(141) Twin Lake, lower, 69-0967-02, (T.50, R.14W, S.28, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(142) Twin Lake, upper, 69-0967-01, (T.50, R.14W, S.28, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(143) *Twin Lake, upper (Bear Lake), 38-0408-00, [3/7/88R] (T.56, R.8, S.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(144) unnamed lake, 16-0903-00, (T.63, R.3E, S.20, 21, 28, 29): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(145) unnamed lake, 16-0908-00, (T.63, R.1W, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(146) *unnamed lake, 16-0237-00, [11/5/84P] (T.63, R.1, S.19, 30; T.63, R.2, S.24, 25): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(147) *Vale Lake, 16-0061-00, [11/5/84P] (T.64, R.2E, S.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(148) Vaseux Lake (East Lily), see Lily Lakes;~~

~~(149) *Vista Lake, 16-0224-00, [11/5/84P] (T.64, R.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(150) *Wanihigan Lake (Trap Lake), 16-0349-00, [11/5/84P] (T.63, 64, R.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(151) *Wee Lake, 16-0183-00, [11/5/84P] (T.62, R.4W, S.13): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(152) *Wench Lake, 16-0398-00, [11/5/84P] (T.63, R.3W, S.7, 18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(153) White Pine Lake, 16-0369-00, [WR] (T.61, R.3W, S.19, 20, 29, 30): 2B, 3, 4A, 4B, 5, 6; and~~

~~(154) *Winchell Lake, 16-0354-00, [11/5/84P] (T.64, R.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6.~~

[For text of items C and D, see Minnesota Rules]

Subp. 2. **Lake of the Woods basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Lake of the Woods basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Lake of the Woods basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 09030001 Rainy River - Headwaters (November 2025);

(2) 09030002 Vermilion River (November 2025);

(3) 09030003 Rainy River - Rainy Lake (November 2025);

(4) 09030005 Little Fork River (November 2025);

(5) 09030006 Big Fork River (November 2025);

(6) 09030007 Rapid River (November 2025);

(7) 09030008 Rainy River - Lower (November 2025); and

(8) 09030009 Lake of the Woods (November 2025).

~~(1) *Adams Lake, 38-0153-00, [11/5/84P] (T.64, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(2) *Agamok Lake, 38-0011-00, [11/5/84P] (T.65, R.5, 6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(3) *Ahmakose Lake, 38-0365-00 [11/5/84P] (T.64, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(4) *Ahsub Lake, 38-0516-00, [11/5/84P] (T.64, R.8W, S.27, 28): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(5) *Alpine Lake, 16-0759-00, [11/5/84P] (T.65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(6) *Alruss Lake, 69-0005-00, [11/5/84P] (T.64, R.11W, S.7; T.64, R.12W, S.12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(7) *Amoeber Lake, 38-0227-00, [11/5/84P] (T.65, R.6, 7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(8) *Arkose Lake, 38-0382-00, [11/5/84P] (T.64, 65, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(9) *Ashdick Lake (Caribou Lake), 38-0210-00, [11/5/84P] (T.66, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(10) *Basswood Lake, 38-0645-00, [11/5/84P] (T.64, 65, R.9, 10): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(11) *Bat Lake, 16-0752-00, [11/5/84P] (T.64, 65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(12) *Beartrack Lake, 69-0480-00, [11/5/84P] (T.67, R.15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(13) *Beaver Lake (Elbow Lake), 38-0223-00, [11/5/84P] (T.63, 64, R.6, 7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(14) Beaver Hut Lake, 38-0737-00, (T.61, R.10W, S.30, 31; T.61, R.11, S.25, 36): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(15) Beetle Lake, 38-0551-00, (T.60, R.9W, S.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(16) Big Lake, 69-0190-00, (T.64, 65, R.13): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(17) *Bingshick Lake, 16-0627-00, [11/5/84P] (T.65, R.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(18) *Brandt Lake (Brant Lake), 16-0600-00, [11/5/84P] (T.65, R.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(19) *Burntside Lake, 69-0118-00, [3/7/88R] (T.63, 64, R.12, 13, 14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(20) Camp Four (Wessman) Lake, 69-0788-00, (T.59, R.19W, S.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(21) *Camp Lake, 38-0789-00, [11/5/84P] (T.64, R.11): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(22) *Caribou Lake, 31-0620-00, [3/7/88R] (T.58, R.26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(23) *Cash Lake, 16-0438-00, [11/5/84P] (T.64, R.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(24) Cedar Lake, 38-0810-00, (T.63, R.11, 12): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(25) Chant Lake, 69-0172-00, (T.63, R.13W, S.10): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(26) *Cherokee Lake, 16-0524-00, [11/5/84P] (T.63, 64, R.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(27) *Cherry Lake, 38-0166-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(28) *Conchu Lake, 38-0720-00, [11/5/84P] (T.63, R.10W, S.21, 22): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(29) *Crab Lake (includes West Crab Lake, 69-0297-00), 69-0220-00, [11/5/84P] (T.63, R.13, 14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(30) Crab Lake, 16-0357-00, (T.65, R.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(31) Crane Lake, 69-0616-00, (T.67, 68, R.16, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(32) *Crooked Lake, 16-0723-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(33) *Crooked Lake, 38-0817-00, [11/5/84P] (T.66, R.11, 12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(34) *Cruiser Lake (Trout Lake), 69-0832-00, [11/5/84P] (T.69, 70, R.19): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(35) Cub Lake, 69-1318-00, (T.61, R.14W, S.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(36) Dan Lake, 38-0853-00, (T.63, R.10W, S.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(37) Deepwater Lake, 69-0858-00, (T.59, R.20W, S.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(38) Dry Lake, 69-0064-00, (T.63, R.12W, S.9): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(39) Dry Lake, Little, 69-1040-00, (T.63, R.12W, S.9): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(40) *Eddy Lake, 38-0187-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(41) Eikela Lake, 38-0677-00, (T.60, R.10W, S.22): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(42) Ennis Lake, 38-0634-00, (T.64, R.9W, S.33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(43) Erskine Lake, 31-0311-00, (T.61, R.24W, S.2, 3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(44) *Ester Lake (Gnig Lake), 38-0207-00, [11/5/84P] (T.65, 66, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(45) *Eugene Lake, 69-0473-00, [11/5/84P] (T.67, R.15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(46) *Explorer Lake (South Three Lake), 38-0399-00, [11/5/84P] (T.64, R.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(47) Extortion Lake, 16-0450-00, (T.65, R.3W, S.31, 32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(48) Fall Lake, 38-0811-00, (T.63, 64, R.11, 12): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(49) Farm Lake, 38-0779-00, (T.62, 63, R.11): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(50) *Fat Lake, 69-0481-00, [11/5/84P] (T.67, R.15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(51) *Fay Lake, 16-0783-00, [11/5/84P] (T.65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(52) Fenske Lake, 69-0085-00, (T.64, R.12, S.29, 30, 32): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(53) *Fern Lake, 16-0716-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(54) *Fern Lake, West, 16-0718-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(55) *Finger Lake, 69-0348-00, [11/5/84P] (T.67, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(56) *Fishdance Lake, 38-0343-00, [11/5/84P] (T.63, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(57) *Found Lake, 38-0620-00, [11/5/84P] (T.64, R.9W, S.10, 15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(58) *Fraser Lake, 38-0372-00, [11/5/84P] (T.64, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(59) *French Lake, 16-0755-00, [11/5/84P] (T.64, 65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(60) *Frost Lake, 16-0571-00, [11/5/84P] (T.64, R.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(61) *Gabimichigami Lake, 16-0811-00, [11/5/84P] (T.64, 65, R.5, 6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(62) *Ge-Be-On-Equat Lake, 69-0350-00, [11/5/84P] (T.67, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(63) *Gijikiki Lake (Cedar Lake), 38-0209-00, [11/5/84P] (T.65, 66, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(64) *Gillis Lake, 16-0753-00, [11/5/84P] (T.64, 65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(65) Glacier Pond No. 1, 38-0712-00, (T.63, R. 10W, S.11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(66) Glacier Pond No. 2, 38-0712-02, (T.63, R.10W, S.11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(67) *Gordon Lake, 16-0569-00, [11/5/84P] (T.64, R.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(68) Gull Lake, 16-0632-00, (T.66, R.4, 5): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(69) *Gun Lake, 69-0487-00, [11/5/84P] (T.67, 68, R.15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(70) *Gunflint Lake, 16-0356-00, [3/7/88R] (T.65, R.2, 3, 4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(71) Gunflint Lake, Little, 16-0330-00, (T.65, R.2): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(72) Gypsy Lake, 38-0665-00, (T.60, R.10W, S.6, 7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(73) Hanson Lake, 69-0189-00, (T.64, R.13W, S.36): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(74) *Hanson Lake, 38-0206-00, [11/5/84P] (T.65, 66, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(75) High Lake, 69-0071-00, (T.63, R.12W, S.3, 4, 5; T.64, R.12W, S.33, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(76) Hogback (Twin or Canal) Lake, 38-0057-01 and 38-0057-02, (T.60, R.6W, S.31): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(77) *Holt Lake, 38-0178-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(78) *Howard Lake, 16-0789-00, [11/5/84P] (T.65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(79) *Hustler Lake, 69-0343-00, [11/5/84P] (T.66, 67, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(80) *Ima Lake (Slate Lake), 38-0400-00, [11/5/84P] (T.64, R.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(81) Indian Lake, 38-0440-00, (T.60, R.8W, S.35): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(82) *Jacob (Louis) Lake, 69-0077-00, [11/5/84P] (T.64, R.12W, S.11, 12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(83) James (Jammer) Lake, 69-0734-00, (T.60, R.18W, S.27): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(84) Jasper Lake, 38-0641-00, (T.63, 64, R.9, 10): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(85) *Jasper Lake, 16-0768-00, [11/5/84P] (T.65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(86) *Johnson Lake, 69-0691-00, [3/7/88R] (T.67, 68, R.17, 18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(87) Jouppi Lake, 38-0909-00, (T.59, R.8W, S.14, 22, 23): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(88) Judd Lake, 38-0615-00, (T.63, R.9W, S.4, 5; T.64, R.9W, S.32, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(89) *Kabetogama Lake, 69-0845-00, [11/5/84P] (T.69, 70, R.19, 20, 21, 22): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(90) *Karl Lake, 16-0461-00, [11/5/84P] (T.64, R.3, 4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(91) *Kek Lake, Little, 38-0228-00, [11/5/84P] (T.65, R.6, 7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(92) *Kekekabic Lake, 38-0226-00, [11/5/84P] (T.64, 65, R.6, 7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(93) *Knife Lake, 38-0404-00, [11/5/84P] (T.65, R.6, 7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(94) *Lake of the Clouds Lake (Dutton Lake), 38-0169-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(95) Lake of the Woods, 39-0002-00, (T.161, 162, 163, 164, 165, 166, 167, 168, R.30, 31, 32, 33, 34, 35, 36): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(96) Lake Vermilion, 69-0378-00, (T.61, 62, 63, R.14, 15, 16, 17, 18): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(97) *Larson Lake, 31-0317-00, [3/7/88R] (T.61, R.24W, S.16, 21): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(98) Little Long Lake, 69-0066-00, (T.63, R.12): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(99) *Long Island Lake, 16-0460-00, [11/5/84P] (T.64, R.3, 4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(100) *Loon Lake, 16-0448-00, [3/7/88R] (T.65, R.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(101) *Loon Lake, 69-0470-00, [11/5/84P] (T.66, 67, R.15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(102) *Lunar Lake (Moon Lake), 38-0168-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(103) *Lynx Lake, 69-0383-00, [11/5/84P] (T.66, R.14, 15): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(104) *Magnetic Lake, 16-0463-00, [3/7/88R] (T.65, R.3, 4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(105) *Makwa Lake (Bear Lake), 38-0147-00, [11/5/84P] (T.64, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(106) *Marble Lake, 38-0109-00, [11/5/84P] (T.64, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(107) *Mavis Lake, 16-0528-00, [11/5/84P] (T.64, R.4W, S.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(108) *Mayhew Lake, 16-0337-00, [3/7/88R] (T.65, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(109) *Meditation Lake, 16-0583-00, [11/5/84P] (T.65, R.4W, S.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(110) *Mesaba Lake, 16-0673-00, [11/5/84P] (T.63, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(111) Miner's Mine Pit, 69-1293-00, (T.63, R.12W, S.26, 27, 28): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(112) *Missing Link Lake, 16-0529-00, [11/5/84P] (T.64, R.4W, S.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(113) *Missionary Lake (East Three Lake), 38-0398-00, [11/5/84P] (T.64, R.7, 8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(114) *Moose Lake, 38-0644-00, [11/5/84P] (T.64, R.9, 10): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(115) *Mora Lake, 16-0732-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(116) *Mukooda Lake, 69-0684-00, [11/5/84P] (T.68, R.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(117) *Namakan Lake, 69-0693-00, [11/5/84P] (T.69, 70, R.17, 18, 19): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(118) *Neglige Lake, 38-0492-00, [11/5/84P] (T.64, R.8W, S.1, 2, 11, 12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(119) Nickel (Nichols) Lake, 31-0470-00, (T.59, R.25W, S.12): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(120) Norberg Lake, 69-1312-00, (T.61, R.14W, S.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(121) *North Lake, 16-0331-00, [3/7/88R] (T.65, R.2): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(122) North Lake, Little, 16-0329-00, (T.65, R.2): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(123) Norway Lake, 38-0688-00, (T.61, R.10W, S.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(124) *Ogishkemuncie Lake, 38-0180-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(125) *Ojibway Lake (upper Twin), 38-0640-00, [3/7/88R] (T.63, R.9, 10): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(126) *Owl Lake, 16-0726-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(127) *Oyster Lake, 69-0330-00, [11/5/84P] (T.66, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(128) *Paulson Lake, 16-0626-00, [11/5/84P] (T.65, R.4W, S.19; T.65, R.5W, S.24): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(129) Peanut Lake, 38-0662-00, (T.60, R.10W, S.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(130) Pelican Lake, 69-0841-00, (T.64, 65, R.19, 20, 21): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(131) *Pellet Lake, 16-0592-00, [11/5/84P] (T.65, R.4, S.19, 20): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(132) *Peter Lake, 16-0757-00, [11/5/84P] (T.64, 65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(133) Pickerel Lake, 69-0934-00, (T.60, R.21W, S.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(134) Portage Lake, 16-0327-00, (T.64, R. 2W, S.3, 4, 5; T.65, R.2W, S.33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(135) *Portage Lake, 38-0524-00, [11/5/84P] (T.65, R.8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(136) Portage Lake, Little, 16-0297-00, (T.64, R.2W, S.3): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(137) *Powell Lake, 16-0756-00, [11/5/84P] (T.64, 65, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(138) *Rabbit Lake, 38-0214-00, [11/5/84P] (T.66, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(139) *Rainy Lake, 69-0694-00, [11/5/84P] (T.70, 71, R.18, 19, 20, 21, 22, 23): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(140) *Raven Lake (Lynx Lake), 38-0113-00, [11/5/84P] (T.64, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(141) *Red Rock Lake, 16-0793-00, [11/5/84P] (T.65, 66, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(142) Regenbogan Lake, 69-0081-00, (T.64, R.12W, S.18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(143) *Rog Lake, 16-0765-00, [11/5/84P] (T.65, R.5W, S.16, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(144) *Ruby Lake, Big, 16-0333-00, [11/5/84P] (T.66, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(145) *Saganaga Lake, 16-0633-00, [11/5/84P] (T.66, 67, R.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(146) *Saganaga Lake, Little, 16-0890-00, [11/5/84P] (T.64, R.5, 6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(147) *Sand Point Lake, 69-0617-00, [11/5/84P] (T.67, 68, 69, R.16, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(148) Scarp (Cliff) Lake, 38-0058-00, (T.60, R.6W, S.31, 32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(149) *Sea Gull Lake, 16-0629-00, [11/5/84P] (T.65, 66, R.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(150) *Sema Lake (Coon Lake), 38-0386-00, [11/5/84P] (T.65, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(151) Shoo-fly Lake, 38-0422-00, (T.59, R.8W, S.1; T.60, R.8W, S.36): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(152) *Skull Lake, 38-0624-00, [11/5/84P] (T.64, R.9W, S.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(153) *Snowbank Lake, 38-0529-00, [11/5/84P] (T.63, 64, R.8, 9): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(154) *Spoon Lake (Fames Lake), 38-0388-00, [11/5/84P] (T.65, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(155) *Spring Lake, 69-0761-00, [3/7/88R] (T.68, R.18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(156) Steamhaul Lake, 38-0570-00, (T.60, R.9W, S.23): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(157) *Strup Lake, 38-0360-00, [11/5/84P] (T.64, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(158) *Sumpet Lake, 38-0283-00, [11/5/84P] (T.61, R.7): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(159) Surber Lake, 16-0343-00, (T.65, R.2W, S.34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(160) *Takuemich Lake, 69-0369-00, [11/5/84P] (T.67, 68, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(161) *Tarry Lake, 16-0731-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(162) *Thomas Lake, 38-0351-00, [11/5/84P] (T.63, 64, R.7): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(163) *Thumb Lake, 69-0352-00, [11/5/84P] (T.67, R.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(164) Tofte Lake, 38-0724-00, (T.63, R.10W, S.2, 3, 10, 11; T.64, R.10W, S.35): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(165) *Topaz Lake (Star Lake), 38-0172-00, [11/5/84P] (T.65, R.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(166) *Town Lake, 16-0458-00, [11/5/84P] (T.63, 64, R.3, 4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(167) Trappers Lake, 38-0431-00, (T.60, R.8W, S.27, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(168) Trip Lake, 16-0451-00, (T.65, R.3W, S.32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(169) *Trout Lake, Big, 69-0498-00, [11/5/84P] (T.63, 64, R.15, 16): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(170) *Trout Lake, Little (Pocket Lake), 69-0682-00, [11/5/84P] (T.68, R.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(171) *Trygg (Twigg) Lake, 69-0389-00, [11/5/84P] (T.68, R.14W, S.31; T.68, R.15W, S.36): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(172) *Tucker Lake (Trucker Lake), 16-0417-00, [11/5/84P] (T.64, R.3): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(173) *Tuscarora Lake, 16-0623-00, [11/5/84P] (T.64, R.4, 5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(174) unnamed (Pear) lake, 38-0769-00, (T.60, R.11W, S.4): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(175) *unnamed lake, 16-0598-00, [11/5/84P] (T.65, R.4, S.29, 30): 1B, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(176) unnamed swamp, Winton, (T.63, R.11, S.19; T.63, R.12, S.24): 3, 4A, 4B, 5, 6, 7;~~

~~(177) *Vera Lake, 38-0491-00, [11/5/84P] (T.64, R.8): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(178) Vermilion, Lake, 69-0378-00, (see Lake Vermilion);~~

~~(179) *Virgin Lake, 16-0719-00, [11/5/84P] (T.64, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(180) West Crab Lake, 69-0220-00, (see Crab Lake);~~

~~(181) White Iron Lake, 69-0004-00, (T.62, 63, R.11, 12): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(182) *Wine Lake, 16-0686-00, [11/5/84P] (T.63, R.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(183) *Wisini Lake, 38-0361-00, [11/5/84P] (T.64, R.7): 1B, 2A, 3, 4A, 4B, 5, 6; and~~

~~(184) Woods, Lake of the, 39-0002-00, (see Lake of the Woods).~~

[For text of items C and D, see Minnesota Rules]

Subp. 3. **Red River of the North basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Red River of the North basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Red River of the North basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 09020101 Bois de Sioux River (November 2025);

(2) 09020102 Mustinka River (November 2025);

(3) 09020103 Otter Tail River (November 2025);

(4) 09020104 Upper Red River of the North (November 2025);

(5) 09020106 Buffalo River (November 2025);

(6) 09020107 Red River of the North - Marsh River (November 2025);

(7) 09020108 Wild Rice River (November 2025);

(8) 09020301 Red River of the North - Sandhill River (November 2025);

(9) 09020302 Upper/Lower Red Lake (November 2025);

(10) 09020303 Red Lake River (November 2025);

(11) 09020304 Thief River (November 2025);

(12) 09020305 Clearwater River (November 2025);

(13) 09020306 Red River of the North - Grand Marais Creek (November 2025);

(14) 09020309 Snake River (November 2025);

(15) 09020311 Red River of the North - Tamarac River (November 2025);

(16) 09020312 Two Rivers (November 2025); and

(17) 09020314 Roseau River (November 2025).

~~(1) Bass Lake, 56-0722-00, (T.135, R.42W, S.10, 11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(2) Hanson Lake, 03-0177-00, (T.139, R.39W, S.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(3) Hoot Lake, 56-0782-00, (T.133, R.42, 43): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(4) Lake Bronson, 35-0003-00, (T.160, 161, R.46): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(5) Twin Lake, East, 03-0362-00, (T.138, R.41): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(6) unnamed slough, Vergas, (T.137, R.40, S.18; T.137, R.41, S.13, 24): 3, 4A, 4B, 5, 6, 7;~~

~~(7) Wapatus (Island) Lake, 15-0127-00, (T.144, R.38W, S.21, 28): 1B, 2A, 3, 4A, 4B, 5, 6; and~~

~~(8) Wright Lake, 56-0783-00, (T.133, R.42, 43): 1C, 2Bd, 3, 4A, 4B, 5, 6.~~

[For text of items C and D, see Minnesota Rules]

Subp. 4. **Upper Mississippi River basin (headwaters to the confluence with the St. Croix River).** The water-use classifications for the stream reaches within each of the major watersheds in the upper Mississippi River basin from the headwaters to the confluence with the St. Croix River listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the upper Mississippi River basin from the headwaters to the confluence with the St. Croix River are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 07010101 Mississippi River - Headwaters (November 2025);

(2) 07010102 Leech Lake River (November 2025);

(3) 07010103 Mississippi River - Grand Rapids (November 2025);

(4) 07010104 Mississippi River - Brainerd (November 2025);

(5) 07010105 Pine River (November 2025);

(6) 07010106 Crow Wing River (November 2025);

(7) 07010107 Redeye River (November 2025);

(8) 07010108 Long Prairie River (November 2025);

(9) 07010201 Mississippi River - Sartell (November 2025);

(10) 07010202 Sauk River (November 2025);

(11) 07010203 Mississippi River - St. Cloud (November 2025);

(12) 07010204 North Fork Crow River (November 2025);

(13) 07010205 South Fork Crow River (November 2025);

(14) 07010206 Mississippi River - Twin Cities (November 2025); and

(15) 07010207 Rum River (November 2025).

~~(1) Allen Lake, 18-0208-00, (T.138, R.26W, S.5): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(2) Bald Eagle Lake, 62-0002-00, (T.30, 31, R.21, 22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(3) Bee Cee Lake, 31-0443-00, (T.58, R.25W, S.28, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(4) Benedict Lake, 29-0048-00, (T.142, R.32): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(5) Benjamin Lake, 04-0033-00, (T.148, R.30W, S.7, 18; T.148, R.31W, S.13): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(6) Blacksmith Lake, 29-0275-00, (T.142, R.35W, S.13): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(7) *Blue Lake, 01-0181-00, [3/7/88R] (T.46, 47, R.27): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(8) *Blue Lake, 29-0184-00, [3/7/88R] (T.141, R.34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(9) *Bluewater Lake, 31-0395-00, [3/7/88R] (T.57, R.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(10) Cenaiko Lake (unnamed), 02-0654-00, (T.31, R.24W, S.26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(11) Centerville Lake, 02-0006-00, (T.31, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(12) Charley Lake, 62-0062-00, (T.30, R.23): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(13) Crappie Lake, 29-0127-00, (T.143, R.33W, S.31):1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(14) Deep Lake, 62-0018-00, (T.30, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(15) Diamond Lake, 11-0396-00, (T.141, R.30W, S.26, 27, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(16) Hazel Lake, 11-0295-00, (T.141, R.29W, S.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(17) Hay Lake, lower, 18-0378-00, (T.137, R.28, 29): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(18) *Kabekona Lake, 29-0075-00, [3/7/88R] (T.142, 143, R.32, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(19) Kennedy Lake, 31-0137-00, (T.58, R.23): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(20) Kremer Lake, 31-0645-00, (T.58, R.26W, S.33, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(21) LaSalle Lake, lower, 29-0309-00, (T.145, R.35): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(22) Loon (Townline) Lake, 01-0024-00, (T.50, R.22W, S.7; T.50, R.23W, S.12, 13): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(23) Lucky Lake, 31-0603-00, (T.57, R.26W, S.14): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(24) Mallen Mine Pit, 18-0740-00, (T.46, R.29W, S.17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(25) Manuel (South Yawkey) Mine Pit, 18-0435-00, (T.46, R.29W, S.1): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(26) Margaret Lake, 11-0045-00, (T.139, R.26W, S.16): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(27) Marion Lake, 11-0046-00, (T.139, R.26W, S.16, 17): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(28) Martin (Huntington, Feigh) Mine Pit, 18-0441-00, (T.46, R.29W, S.9, 10, 16): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(29) Moonshine Lake, Little (Moonshine), 31-0444-00, (T.58, R.25W, S.28, 33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(30) Newman (Putnam) Lake, 29-0237-00, (T.145, R.34W, S.10, 11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(31) Otter Lake, 02-0003-00, (T.30, 31, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(32) Pennington (Mahnomen, Alstead, Arco) Mine Pit, 18-0439-00, (T.46, R.29W, S.3, 9, 10, 11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(33) Perch Lake, 11-0826-00, (T.139, R.31W, S.33): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(34) Pleasant Lake, 62-0046-00, (T.30, R.22, 23): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(35) Pleasant Lake, 18-0278-00, (T.137, R.27W, S.19): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(36) *Pokegama Lake, 31-0532-01 and 31-0532-02, [3/7/88R] (T.54, 55, R.25, 26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(37) Portsmouth Mine Pit, 18-0437-00, (T.46, R.29W, S.1, 2, 11): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(38) *Roosevelt Lake, 11-0043-00, [3/7/88R] (T.138, 139, R.26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(39) Sagamore Mine Pit, 18-0523-00, (T.46, R.29W, S.19; T.46, R.30W, S.24): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(40) Section 6 Mine Pit, 18-0667-00, (T.46, R.29W, S.6): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(41) Snoshoe Mine Pit, 18-0524-00, (T.46, R.29W, S.17, 18): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(42) Snowshoe (Little Andrus) Lake, 11-0054-00, (T.139, R.26W, S.29, 30): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(43) Strawberry Lake, 18-0363-00, (T.137, R.28W, S.27, 34): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(44) Sucker Lake, 62-0028-00, (T.30, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(45) Taylor Lake, 01-0109-00, (T.52, R.25W, S.16): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(46) Teepee Lake, 11-0312-00, (T.141, R.29W, S.30; T.141, R.30W, S.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(47) Tioga Mine Pit, 31-0946-00, (T.55, R.26W, S.26): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(48) Trout Lake, 31-0216-00, (T.55, 56, R.24): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(49) *Trout Lake, Big, 31-0410-00, [3/7/88R] (T.57, 58, R.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(50) *Trout Lake, Big, 18-0315-00, [3/7/88R] (T.137, 138, R.27, 28): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(51) *Trout Lake, Little, 31-0394-00, [3/7/88R] (T.57, R.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(52) unnamed swamp, Flensburg, (T.129, R.31, S.25): 3, 4A, 4B, 5, 6, 7;~~

~~(53) unnamed slough, Miltona, (T.130, R.37, S.26, 35, 36): 3, 4A, 4B, 5, 6, 7;~~

~~(54) unnamed swamp, Staples, (T.133, R.33, S.1): 3, 4A, 4B, 5, 6, 7;~~

~~(55) unnamed swamp, Taconite, (T.56, R.24, S.22): 3, 4A, 4B, 5, 6, 7;~~

~~(56) Vadnais Lake, 62-0038-00, (T.30, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(57) Wabana Lake, 31-0392-00, (T.57, R.25): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(58) Watab Lake, Big, 73-0102-00, (T.124, R.30): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(59) Wilkinson Lake, 62-0043-00, (T.30, R.22): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(60) Willard Lake, 11-0564-00, (T.139, R.30W, S.15): 1B, 2A, 3, 4A, 4B, 5, 6; and~~

~~(61) Yawkey (North Yawkey) Mine Pit, 18-0434-00, (T.46, R.29W, S.1): 1B, 2A, 3, 4A, 4B, 5, 6.~~

[For text of items C and D, see Minnesota Rules]

Subp. 5. **Minnesota River basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Minnesota River basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Minnesota River basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 07020001 Minnesota River - Headwaters (November 2025);

(2) 07020002 Pomme de Terre River (November 2025);

(3) 07020003 Lac qui Parle River (November 2025);

(4) 07020004 Minnesota River - Yellow Medicine River (November 2025);

(5) 07020005 Chippewa River (November 2025);

(6) 07020006 Redwood River (November 2025);

(7) 07020007 Minnesota River - Mankato (November 2025);

(8) 07020008 Cottonwood River (November 2025);

(9) 07020009 Blue Earth River (November 2025);

(10) 07020010 Watonwan River (November 2025);

(11) 07020011 Le Sueur River (November 2025); and

(12) 07020012 Lower Minnesota River (November 2025).

~~(1) Amber Lake, 46-0034-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(2) Bardwell Lake, 46-0023-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(3) Budd Lake, 46-0030-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(4) Courthouse Lake, 10-0005-00, (T.115, R.23W, S.9): 1B, 2A, 3, 4A, 4B, 5, 6;~~

~~(5) George Lake, 46-0024-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(6) Hall Lake, 46-0031-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(7) Mud Lake, 46-0035-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(8) One Hundred Acre Slough, Saint James, (T.106, R.31, S.7): 3, 4A, 4B, 5, 6, 7;~~

~~(9) Silver Lake, North, 46-0016-00, (T.101, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(10) Sisseton Lake, 46-0025-00, (T.102, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6;~~

~~(11) unnamed marsh, Barry, (T.124, R.47, S.8): 3, 4A, 4B, 5, 6, 7;~~

~~(12) unnamed slough, Kensington, (T.127, R.40, S.34): 3, 4A, 4B, 5, 6, 7;~~

~~(13) unnamed slough, Brandon, (T.129, R.39, S.21, 22): 3, 4A, 4B, 5, 6, 7;~~

~~(14) unnamed swamp, Minnesota Lake, (T.104, R.25, S.3, 4): 3, 4A, 4B, 5, 6, 7;~~

~~(15) unnamed swamp (Skauby Lake), 17-0035-00, Storden, (T.107, R.37, S.30): 3, 4A, 4B, 5, 6, 7;~~

~~(16) unnamed swamp, Sunburg, Sunburg Coop Cry., (T.122, R.36, S.30): 3, 4A, 4B, 5, 6, 7;~~

~~(17) unnamed swamp, Lowry, (T.126, R.39, S.35, 36): 3, 4A, 4B, 5, 6, 7; and~~

~~(18) Wilmert Lake, 46-0014-00, (T.101, R.30): 1C, 2Bd, 3, 4A, 4B, 5, 6.~~

[For text of items C and D, see Minnesota Rules]

Subp. 6. **Saint Croix River basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Saint Croix River basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Saint Croix River basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 07030001 Upper St. Croix River (November 2025);

(2) 07030003 Kettle River (November 2025);

(3) 07030004 Snake River (November 2025); and

(4) 07030005 Lower St. Croix River (November 2025).

~~(1) *Grindstone Lake, 58-0123-00, [3/7/88R] (T.42, R.21): 1B, 2A, 3, 4A, 4B, 5, 6; and~~

~~(2) unnamed swamp, Shafer, (T.34, R.19, S.31, 32): 3, 4A, 4B, 5, 6, 7.~~

[For text of items C and D, see Minnesota Rules]

Subp. 7. **Lower Mississippi River basin (from the confluence with the St. Croix River to the Iowa border).** The water-use classifications for the stream reaches within each of the major watersheds in the lower Mississippi River basin from the confluence with the Saint Croix River to the Iowa border listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the lower Mississippi River basin from the confluence with the St. Croix River to the Iowa border are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes (by eight-digit hydrologic unit code):

(1) 07040001 Mississippi River - Lake Pepin (November 2025);

(2) 07040002 Cannon River (November 2025);

(3) 07040003 Mississippi River - Winona (November 2025);

(4) 07040004 Zumbro River (November 2025);

(5) 07040006 Mississippi River - La Crescent (November 2025);

(6) 07040008 Root River (November 2025);

(7) 07060001 Mississippi River - Reno (November 2025); and

(8) 07060002 Upper Iowa River (November 2025).

~~(1) unnamed marsh, Kilkenny, (T.110, R.23, S.22, 23): 3, 4A, 4B, 5, 6, 7; and~~

~~(2) unnamed swamp, Hampton, (T.113, R.18, S.8): 3, 4A, 4B, 5, 6, 7.~~

[For text of items C and D, see Minnesota Rules]

Subp. 8. **Cedar-Des Moines Rivers basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Cedar-Des Moines Rivers basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the

Cedar-Des Moines Rivers basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes: ~~none currently listed.~~ (by eight-digit hydrologic unit code):

(1) 07080102 Upper Wapsipinicon River (November 2025);

(2) 07080201 Cedar River (November 2025);

(3) 07080202 Shell Rock River (November 2025);

(4) 07080203 Winnebago River (November 2025);

(5) 07100001 Des Moines River - Headwaters (November 2025);

(6) 07100002 Lower Des Moines River (November 2025); and

(7) 07100003 East Fork Des Moines River (November 2025).

[For text of items C and D, see Minnesota Rules]

Subp. 9. **Missouri River basin.** The water-use classifications for the stream reaches within each of the major watersheds in the Missouri River basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the website of the Minnesota Pollution Control Agency at ~~www.pca.state.mn.us/regulations/incorporations-reference~~ https://www.pca.state.mn.us/get-engaged/incorporations-by-reference. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water-use classifications for the other listed waters in the Missouri River basin are as identified in items B to D. See part 7050.0415 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

[For text of item A, see Minnesota Rules]

B. Lakes~~: none currently listed.~~ (by eight-digit hydrologic unit code):

(1) 10170202 Upper Big Sioux River (November 2025);

(2) 10170203 Lower Big Sioux River (November 2025);

(3) 10170204 Rock River (November 2025); and

(4) 10230003 Little Sioux River (November 2025).

[For text of items C and D, see Minnesota Rules]

Executive Orders

The governor has the authority to issue written statements or orders, called Executive Orders, as well as Emergency Executive Orders. The governor's authority is specified in the Constitution of the State of Minnesota, Article V, and in *Minnesota Statutes* § 4.035. Emergency Executive Orders, for protection from an imminent threat to health and safety, become effective immediately, are filed with the secretary of state, and published in the *State Register* as soon as possible after they are issued. Other Executive Orders become effective 15 days after publication in the *State Register* and filing with the secretary of state. Unless otherwise specified, an executive order expires 90 days after the date the governor who issued the order vacates office.

Office of the Governor

Executive Order 26-10: Enhancing Protection of the Boundary Waters Canoe Area Wilderness

I, Tim Walz, Governor of the State of Minnesota, by the authority vested in me by the Constitution and applicable statutes, issue the following Executive Order.

The Boundary Waters Canoe Area Wilderness ("BWCAW") is an extraordinary natural treasure for the State of Minnesota and the nation. Minnesotans and visitors from around the world come to the BWCAW's pristine waters and vast wilderness to canoe, camp, experience nature up close, and create lasting memories. The BWCAW is the most visited wilderness area in the United States and supports a robust local culture and economy of outfitters, youth camps, resorts, guides, and other small businesses.

The long-term health of the lakes and rivers in the Rainy River Headwaters Watershed ("RRHW") that flow into the BWCAW is critical to the viability of the BWCAW itself and the resources and lifeways integral to the Tribal Nations and Ojibwe communities who share geography with Minnesota. The RRHW is teeming with biodiversity, boasting some of the lowest levels of pollutants and highest quality fisheries in the state. Its unique biological, chemical, and physical features are worthy of additional protection. The RRHW is home to nonferrous mineral deposits owned by a mix of private entities, the State, and the federal government. Corporations continue to pursue the mining and development of these minerals, including a proposal by Twin Metals in December 2019. If one or more proposals within the RRHW proceeds to development and operation, the long-term health of the BWCAW could be threatened.

In 2023, the U.S. Department of the Interior withdrew 225,504 acres of Superior National Forest land from disposition under United States mineral and geothermal leasing laws for 20 years, limiting any development of nonferrous minerals on federal land for that period. However, the U.S. Congress recently approved cancellation of this 20-year federal protection, putting the RRHW and BWCAW at risk.

On April 10, 2026, after an administrative process which included expert testimony, a hearing, and a recommendation from an Administrative Law Judge, the Minnesota Department of Natural Resources ("DNR") issued a final order that found "Minnesota Rule 6132.2000 is inadequate to protect the BWCAW from pollution, impairment, or destruction associated with noise and light impacts arising from nonferrous metallic mineral mining in the RRH [Rainy River Headwaters] watershed." To address that concern, the DNR concluded it would initiate a rulemaking proceeding to amend its rule or promulgate a new rule "to sufficiently protect the BWCAW from noise and light pollution."

Today, with renewed threats to Minnesota's cherished BWCAW, I will implement additional measures within my executive authority to help protect it for generations to come.

For these reasons, I order as follows:

1. The DNR will:

    a. Not undertake any environmental review or permitting work associated with proposals for nonferrous mineral mining in the RRHW until full and final resolution of the *Northeastern Minnesotans for Wilderness v. DNR* litigation challenging Minnesota Rule 6132.2000 under the Minnesota

Environmental Rights Act and any subsequent rulemaking associated with that litigation.

b. Not participate as a cooperating agency in any federal environmental review of any proposed nonferrous mining project in the RRHW.

c. Not offer any new state nonferrous mineral leases in the RRHW.

d. Not offer new state surface leases for nonferrous mining operations, including but not limited to disposal or storage of tailings or other waste materials, in the RRHW.

e. Review existing state nonferrous mineral leases located within the RRHW and strictly enforce compliance with the terms of those leases to the fullest extent of the law.

f. Draft legislative language prohibiting nonferrous mining in the RRHW for consideration as part of the agency's budget and policy development process.

2. The Minnesota Pollution Control Agency will:

a. Not undertake any environmental review or permitting work associated with proposals for nonferrous minerals mining in the RRHW until full and final resolution of the *Northeastern Minnesotans for Wilderness v. DNR* litigation, challenging Minnesota Rule 6132.2000 under the Minnesota Environmental Rights Act and any subsequent rulemaking that the DNR will complete associated with that litigation.

This Executive Order is effective fifteen days after publication in the State Register and filing with the Secretary of State. It will remain in effect until rescinded by proper authority or until it expires in accordance with Minnesota Statutes 2025, section 4.035, subd. 3.

A determination that any provision of this Executive Order is invalid will not affect the enforceability of any other provision of this Executive Order. Rather, the invalid provision will be modified to the extent necessary so that it is enforceable.

Signed on August 18, 2026

Tim Walz, GOVERNOR

Filed According to Law:

Steve Simon, SECRETARY OF STATE

Official Notices

Pursuant to *Minnesota Statutes* §§ 14.101, an agency must first solicit comments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

The *State Register* also publishes other official notices of state agencies and non-state agencies, including notices of meetings and matters of public interest.

Minnesota Department of Labor and Industry

Workers' Compensation Division

Notice of Annual Adjustment to Workers' Compensation Vocational Rehabilitation Hourly Rates

1. The commissioner may adjust the maximum hourly rates for rehabilitation services annually on October 1st, but any increase is limited by the annual adjustment for injured employees' weekly benefits under Minnesota Statutes, section 176.645, which is currently three percent a year. Minn. R. 5220.1900, subp. 1b. Effective October 1, 2026, the annual adjustment for injured employees according to the formula in section 176.645 is 3.0 percent.

2. **Notice is hereby given** that, for services provided on or after October 1, 2026, the maximum hourly rates for workers' compensation vocational rehabilitation services shall be adjusted as follows:

    1. The maximum hourly rate for qualified rehabilitation consultant (QRC) services, will increase by 3.0 percent to $133.88; and

    2. The maximum hourly rate for job development and placement services will increase by 3.0 percent to $107.21.

Dated: 8/12/2026

Jessica Stimac, Assistant Commissioner
Department of Labor and Industry

Minnesota Department of Transportation (MnDOT)

Office of Freight and Commercial Vehicle Operations

Request for Comments for Possible Amendment to Rules Relating to Motor Carriers and Transportation of Elderly, Disabled, Minnesota Rules, Chapters 7800, 8840, 8850, and 8855; Revisor's ID Number R-05005

Subject of Rules. The Minnesota Department of Transportation requests comments on its possible rule amendments rules that make housekeeping revisions to Chapters 7800, 8840, 8850, and 8855, and increase the insurance liability requirements to match federal levels.

Persons Affected. The amendments to the rules that are not considered housekeeping would likely affect intrastate motor carriers in Minnesota who do not currently meet the insurance liability requirements in federal rules.

Statutory Authority. *Minnesota Statutes*, section 174.30, subdivision 2, requires the commissioner to adopt by rule standards for the operation of vehicles used to provide special transportation services:

> (a) The commissioner of transportation shall adopt by rule standards for the operation of vehicles used to provide special transportation service which are reasonably necessary to protect the health and safety of

individuals using that service. The commissioner, as far as practicable, consistent with the purpose of the standards, shall avoid adoption of standards that unduly restrict any public or private entity or person from providing special transportation service because of the administrative or other cost of compliance.

(b) Standards adopted under this section must include but are not limited to:

(1) qualifications of drivers and attendants, including driver training requirements that must be met before a driver provides special transportation;

(2) safety of vehicles and necessary safety equipment;

(3) general requirements concerning inspection and maintenance of vehicles, replacement vehicles, standard vehicle equipment, and specialized equipment necessary to ensure vehicle usability and safety for disabled persons; and

(4) minimum insurance requirements.

Minnesota Statutes, section 221.031, subdivision 1, requires the commissioner to prescribe rules for the operation of motor carriers:

(a) This subdivision applies to motor carriers engaged in intrastate commerce.

(b) The commissioner shall prescribe rules for the operation of motor carriers, including their facilities; accounts; leasing of vehicles and drivers; service; safe operation of vehicles; equipment, parts, and accessories; hours of service of drivers; driver qualifications; accident reporting; identification of vehicles; installation of safety devices; inspection, repair, and maintenance; and proper automatic speed regulators if, in the opinion of the commissioner, there is a need for the rules.

(c) The commissioner shall (1) require holders of household goods mover permits to file schedules of rates and charges, (2) regulate motor carriers in matters affecting the relationship between them and the traveling and shipping public, and (3) prescribe other rules as may be necessary to carry out the provisions of this chapter.

(d) The commissioner shall enforce sections ***169.781*** to ***169.783***.

Minnesota Statutes, section 221.141, subdivision 1, requires insurance:

(a) No motor carrier and no interstate carrier shall operate a vehicle until it has obtained and has in effect the minimum amount of financial responsibility required by this section. Policies of insurance, surety bonds, other types of security, and endorsements must be continuously in effect and must remain in effect until canceled. Before providing transportation, the motor carrier or interstate carrier shall secure and cause to be filed with the commissioner and maintain in full effect, a certificate of insurance in a form required by the commissioner, evidencing public liability insurance in the amount prescribed. The insurance must cover injuries and damage to persons or property resulting from the operation or use of motor vehicles, regardless of whether each vehicle is specifically described in the policy. This insurance does not apply to injuries or death to the employees of the motor carrier or to property being transported by the carrier.

(b) Notwithstanding any other provision of this chapter, the insurance required of a motor carrier of passengers must be at least that amount required of interstate carriers under Code of Federal Regulations, title 49, section 387.33, as amended.

Minnesota Statutes, section 221.141, subdivision 1b authorizes the commissioner to prescribe the amount of insurance, bond, or other security, and subdivisions 1c and 1d prescribe amounts for interstate carriers and hazardous materials carriers:

Subd. 1b. **Amount.** Except as provided in subdivision 1d, the amount of insurance, bond, or other security required for motor carriers is the amount prescribed by order of the commissioner. The amount prescribed may from time to time be reduced or increased by order of the commissioner. The commissioner may, if desired by the petitioner, prescribe in lieu of the bond or insurance some other form of security as may be satisfactory. Each policy of insurance, surety bond, or other evidence of financial responsibility issued to a motor carrier or to an interstate carrier must be amended by attachment to the policy of Form MCS-90 prescribed in Code of Federal Regulations, title 49, section ***387.15***, or must by its terms provide coverage that conforms to the terms and conditions of that endorsement.

Subd. 1c. **Interstate carrier.** An interstate carrier must obtain insurance or bond in the minimum amounts prescribed in Code of Federal Regulations, title 49, section ***387.303***, paragraphs (a) and (b).

Subd. 1d. **Motor carrier of hazardous cargo.** A motor carrier that transports property described under (2) and (3) of the schedule of limits in Code of Federal Regulations, title 49, section 387.9, must obtain insurance or bond in the amounts prescribed in those regulations.

Minnesota Statutes, section 221.141, subdivision 7, authorizes the commissioner to permit electronic filing of evidence of financial responsibility required in this section or rules adopted under this section.

Agency Contact Person. Written comments, questions, requests to receive a draft of the rules when it has been prepared, and requests for more information on these possible rules should be directed to Andrea Barker at Minnesota Department of Transportation, 395 John Ireland Blvd., Mail Stop 130, St. Paul, MN 55155 or andrea.barker@state.mn.us.

Public Comment. Interested persons or groups may submit comments or information on these possible rules in writing until further notice is published in the *State Register* that the department intends to adopt or withdraw the rules.

The department is particularly interested in whether the cost of complying with the rule in the first year after the rule takes effect will exceed $25,000 for (1) any one business that has less than 50 full-time employees; or (2) any one statutory or home rule charter city that has less than ten full-time employees. Specifically, the impact that a requirement to meet the federal liability insurance minimums will have on intrastate property carriers. Passenger carriers, hazardous materials carriers, and interstate carriers are already subject to the federal minimums.

The department will not publish a notice of intent to adopt the rules until more than 60 days have elapsed from the date of this request for comments.

The department does not plan to appoint an advisory committee to comment on the possible rules.

This public comment opportunity is associated with the development of possible rules. Comments received in response to this notice will not be included in the formal rulemaking record submitted to the Administrative Law Judge when a proceeding to adopt rules is started. The department is required to submit to the judge only those written comments received in response to the rules after they are proposed. If you submit comments during the development of the rules and you want to ensure that the Administrative Law Judge reviews the comments, you must resubmit the comments after the rules are formally proposed.

Rules Drafts. The department does not anticipate that a draft of the rule amendments will be available before the publication of the proposed rules.

Alternative Format. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Signed: August 13, 2026

Nancy Daubenberger
Commissioner, Minnesota Department of Transportation

State Grants & Loans

In addition to requests by state agencies for technical/professional services (published in the State Contracts Section), the *State Register* also publishes notices about grants and loans available through any agency or branch of state government. Although some grant and loan programs specifically require printing in a statewide publication such as the State Register, there is no requirement for publication in the *State Register* itself. Agencies are encouraged to publish grant and loan notices, and to provide financial estimates as well as sufficient time for interested parties to respond.

SEE ALSO: Office of Grants Management (OGM) at: *https://mn.gov/admin/citizen/grants/*

Department of Employment and Economic Development (DEED)

Notice of Grant Opportunity

NOTICE IS HEREBY GIVEN that the Minnesota Department of Employment and Economic Development (DEED) places notice of any available grant opportunities online at ***https://mn.gov/deed/about/contracts/open-rfp.jsp***

Minnesota Department of Human Services

Notice of Grant Opportunities

NOTICE IS HEREBY GIVEN that the Minnesota Department of Human Services (DHS) places notice of any available grant opportunities on the DHS Grant Requests for Proposals website: ***Open grants, RFPs and RFIs***.

Minnesota Department of Transportation (MnDOT)

Office of Civil Rights

Request for Proposal: Minnesota Workforce 2027 Training Program

MnDOT requests responses from workforce centers, community-based organizations, training institutions, colleges, and trade associations to develop and administer a program in highway construction career development and training.

The program to be developed and delivered is:

- Up to two adult highway construction trade training programs in Minnesota for up to 20 participants per program.

Responses must be received via email with a time stamp of no later than 2:00 P.M. Central Standard Time on Aug. 18, 2026. Late responses will not be considered.

To view the RFP go to: ***http://www.dot.state.mn.us/civilrights/requests-for-proposals.html***.

Full eligibility requirements are detailed in the RFP.

For more information, visit: ***https://www.dot.state.mn.us/civilrights/workforce-training-programs.html***.

State Contracts

Informal Solicitations: Informal solicitations for professional/technical (consultant) contracts valued at over $5,000 through $50,000, may either be published in the *State Register* or posted on the Department of Administration, Office of State Procurement (OSP) Website. Interested vendors are encouraged to monitor the P/T Contract Section of the OSP Website at *https://mn.gov/admin/osp* for informal solicitation announcements.

Formal Solicitations: Department of Administration procedures require that formal solicitations (announcements for contracts with an estimated value over $50,000) for professional/technical contracts must be published in the *State Register*. Certain quasi-state agency and Minnesota State College and University institutions are exempt from these requirements.

Requirements: There are no statutes or rules requiring contracts to be advertised for any specific length of time, but the Office of State Procurement strongly recommends meeting the following requirements: $0 - $5000 does not need to be advertised; $5,000 - $25,000 should be advertised in the *State Register* for a period of at least seven calendar days; $25,000 - $50,000 should be advertised in the *State Register* for a period of at least 14 calendar days; and anything above $50,000 should be advertised in the *State Register* for a minimum of at least 21 calendar days.

Contact the Office of State Procurement at: (651) 296-2600

Minnesota State Colleges and Universities (Minnesota State)

Notice of Bid and Contracting Opportunities

Minnesota State advertises contract opportunities for goods and services on its Vendor and Supplier Opportunities website (***https://www.minnstate.edu/vendors/index.html***). New notices may be added daily and will remain posted for the duration specified in each individual notice. For questions or to report any issues viewing the information on the website, please email Minnesota State at ***Sourcing@MinnState.edu***.

Minnesota State Lottery

Request for Proposal for Leadership Consulting Services

PROJECT NAME: Request for Proposal for Leadership Consulting Services for the Minnesota State Lottery

DETAILS: The Minnesota State Lottery is requesting proposals for the purpose of a contractor to deliver leadership consulting services on an as-needed, hourly basis to the Minnesota Lottery executive director and senior team. The Contractor will provide consulting services in a timely manner with delivery dates agreed on by the State and the Consultant as each request for consulting services is made by the State.

Work is anticipated to start after Thursday, 10/29/26.

COPY REQUEST: To receive a copy of the Request for Proposal, please send a written request by email to:

Sarah Pound
Purchasing/Retailer Contracts Manager
purchasing@mnlottery.com.

The RFP is also publicly available at ***https://www.mnlottery.com/vendor-opportunities***.

PROPOSAL DEADLINE: Proposals in response to the Request for Proposals in this advertisement must be received by email or mail not later than 2:00 p.m. Central Time, Wednesday 9/9/26. **Late proposals will not be considered.** Faxed proposals **will not** be considered.

This request does not obligate the State of Minnesota to award a contract or complete the proposed program, and the State reserves the right to cancel this solicitation if it is considered in its best interest. All costs incurred in responding to this solicitation will be borne by the responder.

State Contracts

Minnesota Department of Transportation (MnDOT)

Engineering Services Division

Notices Regarding Professional/Technical (P/T) Contracting

P/T Contracting Opportunities: MnDOT is now placing additional public notices for P/T contract opportunities on the MnDOT's Consultant Services website. New public notices may be added to the website on a daily basis and be available for the time period as indicated within the public notice.

Taxpayers' Transportation Accountability Act (TTAA) Notices: MnDOT is posting notices as required by the TTAA on the MnDOT Consultant Services website.

MnDOT's Prequalification Program: MnDOT maintains a Pre-Qualification Program in order to streamline the process of contracting for highway related P/T services. Program information, application requirements, application forms and contact information can be found on MnDOT's Consultant Services website. Applications may be submitted at any time for this Program.

MnDOT Consultant Services website: ***www.dot.state.mn.us/consult***

If you have any questions regarding this notice, or are having problems viewing the information on the Consultant Services website, please email the Consultant Services Helpline at ***ptconsultantserviceshelpline.dot@state.mn.us***.

Non-State Public Bids, Contracts & Grants

The State Register also serves as a central marketplace for contracts let out on bid by the public sector. The *State Register* meets state and federal guidelines for statewide circulation of public notices. Any tax-supported institution or government jurisdiction may advertise contracts and requests for proposals from the private sector. It is recommended that contracts and RFPs include the following: 1) name of contact person; 2) institution name, address, and telephone number; 3) brief description of commodity, project or tasks; 4) cost estimate; and 5) final submission date of completed contract proposal. Allow at least three weeks from publication date (four weeks from the date article is submitted for publication). Surveys show that subscribers are interested in hearing about contracts for estimates as low as $1,000. Contact editor for further details.

Besides the following listing, readers are advised to check: *https://mn.gov/admin/osp* as well as the Office of Grants Management (OGM) at: *https://mn.gov/admin/citizen/grants/*.

Carnelian Marine St. Croix Watershed District (CMSCWD)

Request for Accounting, Payroll, Bookkeeping and Audit Services

The Carnelian Marine St. Croix Watershed District (CMSCWD) hereby requests letters of interest from firms desiring to accounting, payroll, bookkeeping and audit services to the CMSCWD for 2027 and 2028. The CMSCWD Board of Managers intends to select primary service providers for the above-named disciplines.

Firms interested in serving the CMSCWD for accounting, payroll, bookkeeping and/or audit services are encouraged to contact the CMSCWD Administrator at ***mike.isensee@cmscwd.org*** for a request for proposals. Electronic letters must be received to the CMSCWD Administrator at ***mike.isensee@cmscwd.org*** by 4:00 PM on Tuesday, September 1, 2026.

Carnelian Marine St. Croix Watershed District (CMSCWD)

Request for Letters of Interest for Engineering and Legal Services

The Carnelian Marine St. Croix Watershed District (CMSCWD) hereby requests Letters of Interest from firms desiring to provide engineering and legal services to the CMSCWD for 2027 and 2028. The CMSCWD Board of Managers intends to select primary service providers for the above-named disciplines.

Firms interested in serving the CMSCWD for engineering and legal are encouraged to submit an electronic Letter of Interest to the District Administrator. Letters should be no more than 6 pages (including attachments) and should briefly describe the firm's experience, identify and describe the qualifications of the Project Manager and include the 2027 and 2028 billing rates for participating staff as well as any related time and mileage charges for attending meetings or other similar functions on behalf of the District. Firms interested in providing engineering or legal services should emphasize experience with watershed districts organized under Minnesota Statues, Chapter 103D.

Electronic letters must be received to the CMSCWD Administrator at ***mike.isensee@cmscwd.org*** by 4:00 PM on Tuesday, September 1, 2026.

Inquiries may be directed to Mike Isensee at the email above or 651-839-6492.

JE Dunn Construction

Request For Qualifications: Minnesota State Patrol Headquarters Bid Package 2 - Revision

DUE DATE AND TIME: August 28th, 2026, at 3:00 P.M. CENTRAL TIME, USA

Responses to this Request for Qualifications (RFQ) must be returned to JE Dunn Construction at the following location, or by email. Paper (hard copy) or e-mailed electronic copies will be accepted.

JE Dunn Construction
Attn: Steven Dueck
800 Washington Ave N, Suite 600
Minneapolis, MN 55401
Steven.dueck@jedunn.com

Project Description

JE Dunn Construction has been selected as the Construction Manager for New Minnesota St. Patrol Headquarters, located in Roseville, MN.

Work will consist of demolishing the approximately 200,000 SF existing building and constructing a new 110,000 SF St. Patrol Headquarters building. The new building will include approximately 65,000 SF for office and training space and 45,000 SF for an enclosed garage for vehicles and equipment storage.

The intent of this RFQ process is to select subcontractors for the opportunity to be a bidding subcontractor. **A revision for this RFQ has been issued.** The scope of this RFQ includes:

Project Construction Budget

1. Approximate construction budget: $84,000,000

Schedule

1. Projected Construction Schedule:

a. Abatement and Existing Building Demolition: June 2026 to Fall 2026.

b. New Construction: Fall 2026 to March 2028.

The full **revised** RFQ can be accessed and downloaded here: ***State Patrol Headquarters - BP2 RFQ***

City of Mankato

Mankato Transit System

Notice of Request for Proposals (RFP) for Transit Development Plan

Mankato Transit System is soliciting from qualified firms for a 5-year Transit Development Plan. The Transit Development Plan will serve as a both a strategic vision and implementation road map to better serve our community. The consultant shall assess current transit services, engage with the public and stakeholders, identify transportation needs, set goals and priorities, recommend service improvements, plan for capital investments, estimate costs and funding sources and consider where transit resources should be devoted over the next five-year planning period.

Interested firms can obtain a copy of the RFP by downloading a copy from the City's website (***https://www.mankatomn.gov/about-mankato/business/bids-and-request-for-proposals***).

Submit questions related to specific project requirements by 4:00 PM on September 10, 2026 via email to Dani Theis (***danitheis@mankatomn.gov***). The deadline for submitting the RFP package is 5:15 pm September 11, 2026.

Metropolitan Airports Commission (MAC)

Notice of Call for Bids for 2026 Card Access Modifications

Airport Location:	**Minneapolis-St. Paul International Airport**
Project Name:	**2026 Card Access Modifications**
MAC Contract No.:	**106-2-1142**
Bids Close At:	**2:00 PM on September 15, 2026**
Bid Opening Conference Call:	**3:00 PM on September 15, 2026**
Teleconference Dial In #:	**1-612-405-6798**
Conference ID #:	**897 927 742#**

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via ***QuestCDN's website*** until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our portal (***https://metroairports.bonfirehub.com***) to receive email notifications of new business opportunities.

Small Businesses (SB): The goal of the MAC for the utilization of Small Businesses on this project is *12%*.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability of Construction Documents: Plans and specifications are available at QuestCDN Online indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the ***QuestCDN website***. Bidders may download the complete set of digital documents for $22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #10266278 in the "Search Projects" page. Contact Quest Construction Data

Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will **ONLY** be received electronically. Contractors submitting an electronic bid will be charged an additional $42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on August 24, 2026, at MAC's web address of ***https://metroairports.bonfirehub.com***.

Metropolitan Airports Commission (MAC)

Notice of Call for Bids for 2026 Electrical and Ground Power Substation Replacement

Airport Location: **Minneapolis-St. Paul International Airport**
Project Name: **2026 Electrical and Ground Power Substation Replacement**
MAC Contract No.: **106-2-1119**
Bids Close At: **2:00 PM on September 15, 2026**
Bid Opening Conference Call: 3:00 PM on September 15, 2026
Teleconference Dial In #: **1-612-405-6798**
Conference ID #: **897 927 742#**

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via ***QuestCDN's website*** until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our portal (***https://metroairports.bonfirehub.com***) to receive email notifications of new business opportunities.

Small Businesses (SB): The goal of the MAC for the utilization of Small Businesses on this project is *11*%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Project Labor Agreement: This project is subject to the MAC's Project Labor Agreement requirements. A copy of the Project Labor Agreement and Contract Riders are included in the Appendix D.

Availability of Construction Documents: Plans and specifications are available at QuestCDN Online indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the ***QuestCDN website***. Bidders may download the complete set of digital documents for $22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #10323194 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will **ONLY** be received electronically. Contractors submitting an electronic bid will be charged an additional $42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on August 24, 2026, at MAC's web address of ***https://metroairports.bonfirehub.com***.

Non-State Public Bids, Contracts & Grants

Metropolitan Airports Commission (MAC)

Notice of Call for Bids for 2026 FIS Facility Upgrades

Airport Location: **Minneapolis-St. Paul International Airport**
Project Name: **2026 FIS Facility Upgrades**
MAC Contract No.: **106-2-1126**
Bids Close At: **2:00 PM on September 16, 2026**
Bid Opening Conference Call: 3:00 PM on September 16, 2026
Teleconference Dial In #: **1-612-405-6798**
Conference ID #: **897 927 742#**

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via ***QuestCDN's website*** until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our portal (***https://metroairports.bonfirehub.com***) to receive email notifications of new business opportunities.

Small Businesses (SB): The goal of the MAC for the utilization of Small Businesses on this project is *12%*.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability of Construction Documents: Plans and specifications are available at QuestCDN Online indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the ***QuestCDN website***. Bidders may download the complete set of digital documents for $22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #10317857 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will **ONLY** be received electronically. Contractors submitting an electronic bid will be charged an additional $42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on August 24, 2026, at MAC's web address of ***https://metroairports.bonfirehub.com***.

Metropolitan Airports Commission (MAC)

Notice of Call for Bids for 2026 Terminal Building Remediation and Miscellaneous Modifications

Airport Location: **Minneapolis-St. Paul International Airport**
Project Name: **2026 Terminal Building Remediation and Miscellaneous Modifications**
MAC Contract No.: **106-2-1123**
Bids Close At: **2:00 PM on September 16, 2026**
Bid Opening Conference Call: 3:00 PM on September 16, 2026
Teleconference Dial In #: **1-612-405-6798**
Conference ID #: **897 927 742#**

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via ***QuestCDN's website*** until the official time and date as displayed in QuestCDN Online.

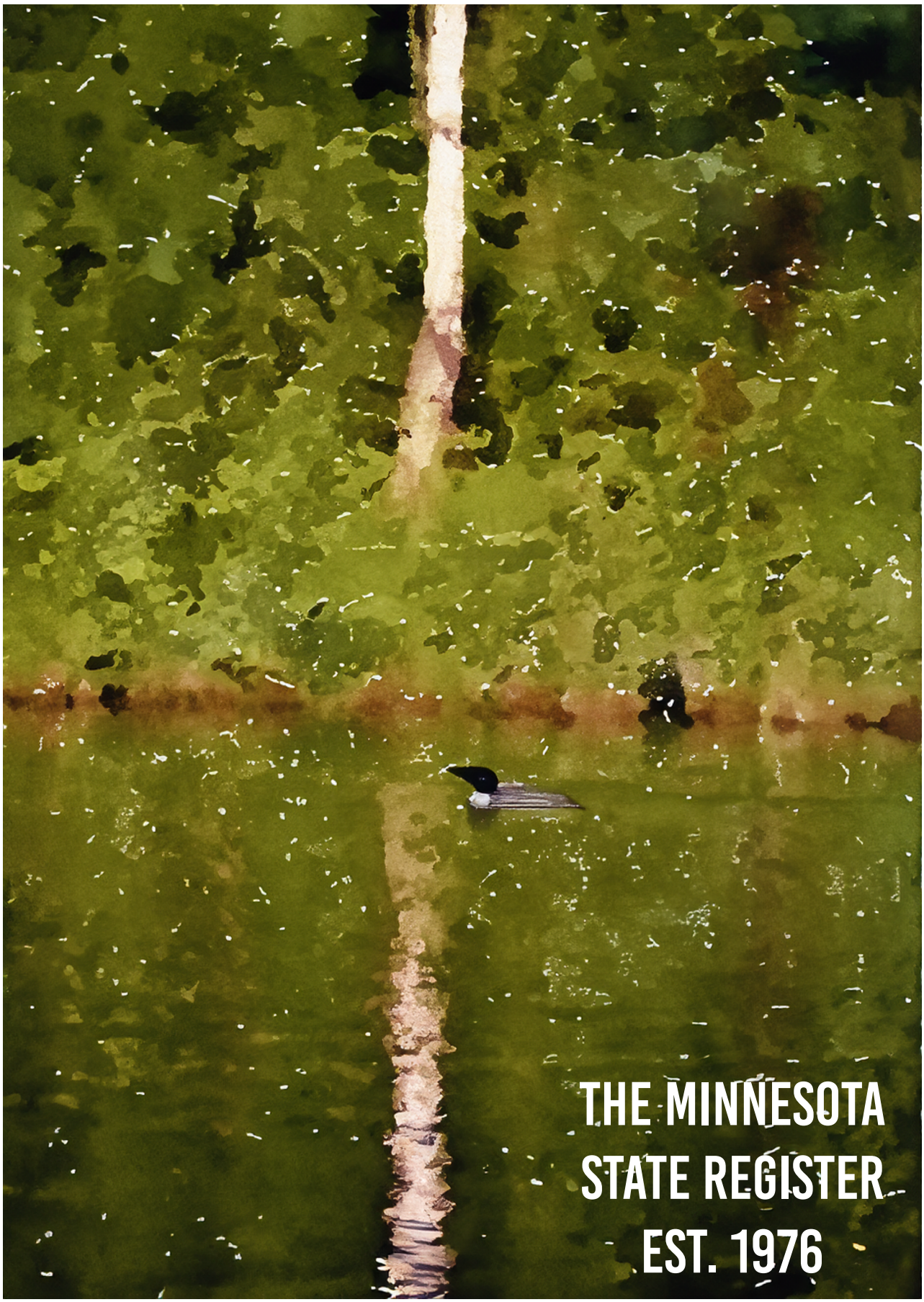
Note: You can sign up on our portal (***https://metroairports.bonfirehub.com***) to receive email notifications of new business opportunities.

Small Businesses (SB): The goal of the MAC for the utilization of Small Businesses on this project is *14%*.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability Of Construction Documents: Plans and specifications are available at QuestCDN Online indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the ***QuestCDN website***. Bidders may download the complete set of digital documents for $22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #10325298 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will **ONLY** be received electronically. Contractors submitting an electronic bid will be charged an additional $42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on August 24, 2026, at MAC's web address of ***https://metroairports.bonfirehub.com***.


THE MINNESOTA
STATE REGISTER
EST. 1976