# Appendix 9: Minnesota Water Quality Standards

## Minnesota Water Quality Standards - Lakes

The aquatic life and recreation standards for lakes are given in [**Minn. R. § 7050.0222**](https://www.revisor.mn.gov/rules/?id=7050.0222) and given in the table below. *Additional narrative lake nutrient standards are contained in Minn. Rules 7050. 0222, Subp. 2a, 3a, 4a. Site specific lake nutrient standards are contained in Minn. Rules 7050.0221, Subp. 7d.*

**Lake aquatic recreation eutrophication standards**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ecoregion** | **Resource** | **Total Phosphorus, μg/L** | **Chlorophyll a, μg/L** | **Secchi Depth, meters** |
| **Northern Lakes and Forests** | Lake Trout Lakes, Class 2A | ≤12 | ≤3 | ≤4.8 |
|  | Trout Lakes (non–Lake Trout) Class 2A | ≤20 | ≤6 | ≤2.5 |
|  | Aquatic Life and Recreation, Class 2B | <30 | <9 | >2.0 |
| **North Central Hardwood Forests** | Trout Lakes (non–Lake Trout) Class 2A | ≤20 | ≤6 | ≤2.5 |
|  | Aquatic Life and Recreation, Class 2B | ≤40 | ≤14 | ≤1.4 |
|  | Aquatic Life and Recreation, Shallow Lakes, Class 2B | ≤60 | ≤20 | ≤1.0 |
| **Western Corn Belt Plains & Northern Glaciated Plains** | Aquatic Life and Recreation, Class 2B | ≤65 | ≤22 | ≤0.9 |
|  | Aquatic Life and Recreation, Shallow Lakes, Class 2B | ≤90 | ≤30 | ≤0.7 |

## Minnesota Water Quality Standards - Streams and Rivers

The eutrophication standards for streams and rivers are contained in [**Minn. R. §§ 7050.0222 subp. 2, 3, and 4**](https://www.revisor.mn.gov/rules/?id=7050.0222), and are presented in the table below. *Additional narrative eutrophication standards for rivers and streams are contained in Minn. Rules 7050.0222 Subp. 2b, 3b, and 4b.*

**River and stream aquatic recreation nutrient standards**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Nutrient Region** | **Use Classification** | **Total Phosphorus, μg/L** | **Chlorophyll a, seston, μg/L** | **Diel Dissolved Oxygen Flux, mg/L** | **Biochemical Oxygen Demand, 5-day, mg/L** |
| **North River** | 2A, 2Bd, 2B | ≤50 | ≤7.0 | ≤3.0 | ≤1.5 |
| **Central River** | 2A, 2Bd, 2B | ≤100 | ≤18 | ≤3.5 | ≤2.0 |
| **South River (2A & 2Bd Class)** | 2A, 2Bd | ≤150 | ≤35 | ≤4.5 | ≤3.0 |
| **South River (2B Class)** | 2B | ≤150 | ≤40 | ≤5 | ≤3.5 |
| **Mississippi River Navigational Pools 1, 3, 5 to 8.** | 2B | ≤100 | ≤35 |  |  |
| **Mississippi River Navigational Pool 2 (Ford Dam to Hastings Dam)** | 2B | ≤125 | ≤35 |  |  |
| **Lake Pepin, Mississippi River Navigational Pool 4** | 2B | ≤100 | ≤28 |  |  |
| **Crow Wing River, confluence of Long Prairie River to Mississippi River** | 2B | ≤75 | ≤13 | ≤3.5 | ≤1.7 |
| **Crow River, confluence of North Fork & South Fork of Crow River to Mississippi River** | 2B | ≤125 | ≤27 | ≤4.0 | ≤2.5 |

## Minnesota Water Quality Standards - Total Suspended Solids

[**Minn. R. §§ 7050.0222, Subp. 2, 3, and 4**](https://www.revisor.mn.gov/rules/?id=7050.0222) present the total suspended solids standards for receiving water quality.

**Aquatic recreation total suspended solids standards.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Use Classification** | **Area, Resource, or Nutrient Region** | **Total Suspended Solids, mg/L** | **Exceedance Frequency, %** | **Applicable Time Period** |
| 2A | Statewide | ≤10 | ≤10 | April 1 – September 30 |
|  | North River | ≤15 | ≤10 | April 1 – September 30 |
|  | Central River | ≤30 | ≤10 | April 1 – September 30 |
|  | South River | ≤65 | ≤10 | April 1 – September 30 |
|  | Red River | ≤100 | ≤10 | April 1 – September 30 |
| 2Bd, 2B | Pools 2 to 4, Lower Mississippi River | ≤32 | ≤50 | June 1 – September 30 |
|  | Lower Mississippi River below Lake Pepin | ≤30 | ≤50 | June 1 – September 30 |

## Minnesota Water Quality Standards - Dissolved Oxygen

Applicable standards for dissolved oxygen in rivers and streams are contained in [**Minn. R. §§ 7050.0222, Subp. 2, 3, and 4**](https://www.revisor.mn.gov/rules/?id=7050.0222).