

Appendix 2

*Resource Management Information
Provided by DNR*

Appendix 6 - Watershed Tables for the Lower Chippewa River Basin & Upper Chippewa River Basin

Understanding the Watershed Tables

The tables in Appendix 6 contain a wealth of information about the surface water resources in the Lower Chippewa River Basin. They include current and potential water quality conditions; the extent of assessment work that has been conducted; water quality trends; sources of pollution that are impacting the water body; the types of impacts of those pollutant sources; and recommendations for monitoring and management.

The tables are organized by the Lower Chippewa Basin's 24 watersheds (Map 1). Within each watershed, the stream tables appear first, followed by the lake tables.

Stream Table Codes

This section describes the information contained in each column of the stream table, and defines the abbreviations used in each column. *A blank space anywhere in the table means that data is unassessed or unavailable.*

Stream Name

All named streams and some unnamed streams are listed. Stream names are those found on U.S. Geological Survey (USGS) quadrangle maps unless the Wisconsin Geographic Names Council has established a different name. Unnamed streams are identified by location of the stream mouth as indicated by township, range, section and quarter-quarter section.

Waterbody ID Code (WB ID Code)

All waterbodies require a unique waterbody identification code in order to link them to other databases.

Town Range Section

This column identifies the Township, Range, and Section where the mouth of the stream is located.

County

This column indicates the county or counties in which the stream is located.

Codified Use

The codified use of a waterbody is a classification that is formally and legally recognized by NR102 and NR104, Wis. Adm. Code, and is used to determine water quality criteria and effluent limits. The codified use classification for a stream is determined by applying formal stream classification procedures, which are undergoing revision. This column includes the codified use and the approximate length in miles of the stream portion meeting this classification, for example: Cold II/8.0.

Codified use categories, known as "Fish and Other Aquatic Life Uses" (NR102.04 (3)) are:

COLD (Cold Water Community): This codified use category includes surface waters that are capable of supporting a community cold water fish and other aquatic life or serving as a spawning area for cold water fish species. A COLD water community may be further classified based on trout populations, as identified in *Wisconsin Trout Streams* (DNR Publ. 6-3600[80]).

Class I: High-quality stream where populations are sustained by natural reproduction.

Class II: Stream has some natural reproduction but may need stocking to maintain a desirable fishery.

Class III: Stream has no natural reproduction and requires annual stocking of legal-size fish to provide sport fishing.

Note 1: The Bureau of Fisheries Management has classified some streams as trout streams under NR1.02 (7) after the publication of *Wisconsin Trout Streams* (1980). These streams are not formally classified as COLD trout waters until code revisions of NR102 and NR104 are completed and approved. Currently, the "default" code (WWSF-Warm Water Sport Fish) is used for these streams and stream segments.

WWSF (Warm Water Sport Fish Communities): This category includes waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish. WWSF is the default Codified Use classification for streams that do not otherwise have an identified Codified Use.

WWFF (Warm Water Forage Fish Communities): This category includes surface waters capable of supporting an abundant, diverse community of forage fish and other aquatic life.

LFF (Limited Forage Fishery): This category includes surface waters of limited aquatic life use capacity due to low flow, naturally poor water quality or poor habitat. These surface waters are capable of supporting only a limited community of tolerant forage fish and aquatic life.

LAL (Limited Aquatic Life): This category includes surface waters that are severely limited for aquatic life use because of low flow and naturally poor water quality or poor habitat. These surface waters are capable of supporting only a limited community of aquatic life.

In addition, the codified use column identifies ORW (Outstanding Resource Waters) and ERW (Exceptional Resource Waters) streams listed in NR102.10 and NR102.11. Technically, ORW/ERW waterbodies are not "Fish and Aquatic Life Use" designations. The ORW/ERW designation was developed for the WDNR antidegradation program. These waterbodies also receive a "Fish and Aquatic Life Use" designation, as listed above, for the purpose of determining water quality criteria.

ORW (Outstanding Resource Waters): These waters have excellent water quality and high-quality fisheries. They do not receive wastewater discharges. No point source discharges will be allowed in the future, unless the quality of such discharges meets or exceeds the quality of the receiving water. This classification includes national and state Wild and Scenic Rivers and the highest quality Class I trout streams, as listed in NR102.10.

ERW (Exceptional Resource Waters): These waters have excellent water quality and valued fisheries but may already receive wastewater discharges or may receive future discharges necessary to correct environmental or public health problems. This classification includes all Class I trout streams identified in *Wisconsin Trout Streams* (1980) that are not listed as ORW, as well as additional cold and warm water streams listed in NR102.11.

Existing Biological Use

This column indicates the *biological* use that the stream or stream segment currently supports. The Existing Biological Use categories are defined in NR102 (04)(3) under "Fish and Aquatic Life Uses", and are the same categories used for the Codified Use column, as described above. The Existing Biological Use designation is based on the current condition of the surface water and the associated biological community. Information in this column is not used for regulatory purposes.

Additional biological use categories identified in this column include:

303(d): These streams have been identified as a 303(d) listed impaired water. The 303(d) list identifies waters that are not currently meeting water quality criteria for specific substances or designated uses. See Chapter 3 for a discussion of Impaired Waters.

INT (Intermittent): These streams are identified as *intermittent* (not continuously flowing).

A stream may not have the same Codified and Existing Biological uses. For example, a stream may have biological conditions of a COLD trout stream. However, if the stream is not identified as COLD in *Wisconsin Trout Streams* (1980) or NR102 or NR104, it will receive the "default" Codified use of WWSF until code revisions change its Codified use.

Attainable Biological Use (Attainable or Potential Biological Use)

This column indicates the biological use that the investigator believes the stream or stream segment could achieve through proper management of "controllable" pollution sources. Beaver dams, hydroelectric dams, low gradient streams, and low flows that are naturally occurring are generally not considered to be "controllable" problems. The Attainable Biological (or potential) use may be the same as the Existing Biological Use or it may be higher. Abbreviations for "Attainable Biological Use" are the same as those used in the "Existing Biological Use" column.

Supporting Use Level (the extent to which a stream supports its Attainable Biological Use)

This column indicates the extent to which a stream meets, or is threatened in meeting, its Attainable Biological Use. This column shows the relationship between the stream's Existing and Attainable Biological Use. Chemical, physical (habitat, morphology, etc.) and biological information or direct observation and professional judgment are used to make this determination. Biological data is considered to be the most important information in determining the Supporting Use designation. Supporting Use categories are:

FULLY (Fully Supporting): The Existing Use is the same as the Attainable Use. The stream or stream segment is *not affected* by "controllable" pollution sources. Stream segments that are impacted by *culturally irreversible* pollution sources are also designated as FULLY Supporting. For example a river system with an "optimally operating" dam (minimal to no effect on the fish and aquatic life community assemblage, productivity, and diversity) is considered FULLY Supporting. On the other hand, poorly operating dams are *not* considered "culturally irreversible" and their effect on biological resources is factored into the Supporting Use designation (see PART - Partially Supporting, below).

FULLY-THR (Fully Supporting, but Threatened): The Existing Use is the same as the Attainable Use, but there is a *clear and imminent* "threat" to the existing level of biological productivity and ecological health. Examples of threats include rapid commercial, residential, and/or industrial development in the watershed, the advent of large-scale industrial operations in the watershed, or channel modifications that have been, or will be permitted, or cannot be regulated under existing state or federal rules (i.e., drainage districts).

PART (Partially Supporting): The Existing Use is classified as the same as the Attainable Use, except that improved management practices could enhance the overall ecological health of the biological community. For example, dam operations could be modified to reduce the impact of hydrologic regimes on the biological community.

NOT (Not Supporting): The Existing Use is one or more Codified Use classifications below the Attainable Use. These Codified Use categories include COLD (I, II and III), WWSF, WWFF, LFF and LAL. For example a stream is considered NOT supporting if its Existing Use is WWFF while its Attainable Use is WWSF. The Existing Use impairment is considered reversible by improving management practices.

Assessment Level (Level of assessment the stream has received)

This column describes the quality of resource information that is available on a waterbody. These categories have been agreed upon for information included in Wisconsin's Water Quality Assessment Report to Congress (305[b]).

Mon (Monitored): A stream or stream segment is classified as "monitored" if *site-specific* data has been collected in the past five years, and is adequate to assess the quality or integrity of a resource. The WDNR or others can collect the data. The data must be adequate to develop a best professional judgment determination of the Existing and Attainable uses, and to determine the extent to which a stream supports its Attainable Use.

Eval (Evaluated): A stream is classified as "evaluated" if information *other than* site-specific data is adequate to determine the Existing and Attainable uses, and to determine the extent to which a stream supports its Attainable Use. Data sources that are adequate to "evaluate" a stream include site-specific data that is more than five years old, information on file provided by the public or others, and best professional judgment of a WDNR biologist or a WDNR fish manager.

Un (Unassessed): The available data on a stream is inadequate to consider the stream to be either Monitored or Evaluated

Resource Trend

This column indicates resource changes over time, and can be based upon best professional judgment alone or in combination with resource data trends. The trend category should indicate an actual change in waterbody condition, and not be an artifact of increased data collection. Trend categories include:

Imp - Improving

Stab - Stable

Dec - Declining

Unk (or blank) - Unknown

Sources and Impacts

These two columns indicate probable **sources** of impact to the stream and the **impacts**, or water quality problems that are present in the stream. Sources and impacts are identified using the best professional judgment of field staff. The following table explains the source and impact codes used in these columns. There is almost always a complex relationship between pollutant sources and resource impacts.

SOURCE
BY - Barnyard or exercise lot runoff LF - Landfill
CE - Construction site erosion MS - Mine wastes and/or roaster piles
CL - Cropland erosion NMM - Non-metallic mining
CM - Cranberry marsh NPS - Unspecified nonpoint sources of pollution
DEV - Intense development pressure OBS-M - Manmade obstructions to flow such as culverts bridges fences & stream crossings (excluding dams)
EX - Exotic species OBS-N - Natural obstructions to flow, including thick streambank brush, debris, dams and reed canary grass
EX-PL - Exotics - purple loosestrife PSB - Pastured streambank
EX-RC - Exotics - reed canary grass PSI - Point source industrial discharge
F - Forestry activities PSM - Point source municipal treatment plant discharge
FL - Flooding PWL - Pastured woodlot
FS- BrN - A natural barrier to fish and aquatic organisms. Examples: Waterfalls and Rapids RS - Roadside erosion
HM-DM - Hydrological modification caused by dam SB - Streambank erosion
HM-DR - Hydrological modification caused by ditching or dredging URB - Urban storm water runoff

IMPACT
CL - Chloride toxicity NH3 - Ammonia toxicity
COM - Competition or encroachment by introduced species NUT - Excessive nutrient enrichment
DO - Low dissolved oxygen concentration ORG - Organic chemical toxicity or bioaccumulation
FAD - Fish advisory pH - Extreme high or low pH or fluctuations
FLOW - Stream flow fluctuations caused by unnatural conditions PCB - Bioaccumulation of PCBs
HAB - Habitat degradation (scouring etc.) PST - Pesticide/herbicide toxicity
HG - Mercury advisory SC - Sediment contamination
HM - Heavy metal toxicity SED - In-stream sedimentation
MAC - Undesirable rooted aquatic plant (macrophyte) or algal growth TEMP - Extreme high or low temperature or fluctuations
MIG - Fish migration interference TOX - General toxicity problems
TURB - Turbidity problems

Monitoring Activity/Status/Date/Rank

The monitoring activity column includes a list of monitoring activities that have taken place on the waterbody in the past 5 years *or* are recommended for the future. These activities are described in the list below. Monitoring activities that do not include a status, rank or dates are simply suggestions for future monitoring. Examples include:

- ATOX/R/H (Aquatic Toxicity testing is Recommended, and is a High priority)
- BASE/C/1999 (Baseline monitoring was Completed in 1999).

Status: This indicates the status identified for each monitoring activity.
R=Recommended, **P**=Planned, **O**=Ongoing, **C**=Complete

Date: If the monitoring activity is planned or has already been completed, the planned or completion date is included.

Rank: Each of the listed monitoring activities are also assigned a priority rank, based on the best professional judgment of field staff.
L=Low, **M**=Medium, **H**=High

Monitoring Activity Codes

ATOX (Aquatic Toxicity Monitoring) - The collection of information on the concentrations of priority toxic pollutants in sediments and fish in Wisconsin's surface waters by collecting and analyzing samples from a subset of the baseline sites to obtain a broad scale coverage of the condition of surface waters.

BASE (Baseline-Wadeable & Non-Wadeable Stream Monitoring) - The collection of a suite of physical and biological parameters that identify the status or baseline condition of a stream. Those parameters include stream flow, physical habitat measurements, catch per unit effort for all species of fish and selective invertebrate sampling. Indices are calculated for fish habitat (HAB), fish community health (IBI), fish abundance (CPE) and organic pollution (HBI).

BUG - The collection of aquatic macroinvertebrates to characterize the overall biological health of a stream.

AMB (Ambient Stream Monitoring) - The collection of ambient stream water chemistry samples to provide an index of water quality conditions.

CT - Continuous temperature monitoring with the installation of data recorders at monitoring sites.

DO - Continuous dissolved oxygen monitoring with the installation of data recorders at monitoring sites.

FL - Stream flow monitoring.

FS-Comp (Comprehensive) - The collection of a suite of fisheries information on streams specifically aimed at identifying the abundance of fish populations. This includes catch per unit effort and/or population estimates. Data is often quantified as number per mile or pounds per acre.

FS-Hab - The collection of physical data used to evaluate the condition of fish habitat before and after implementation of an in-stream habitat management action. There are standardized Habitat Rating Systems used for streams greater than 10 meters and for streams less than 10 meters in width.

FS-Other – The collection of all other fisheries data that is not specifically taken to document the baseline (BASE) or comprehensive (FS-Comp) condition of fisheries resources. These monitoring activities tend to be stand-alone sampling techniques such as fish abundance (CPE), or fish community health (IBI).

FS-Regs Eval – The collection of fisheries information used to assess the net impact of a new regulation such as size and bag limit changes, seasons, quotas, refuges, bait and gear restrictions, etc.

FS-Stk Eval (Stocking) – The collection of fisheries data used to determine the success or failure of stocking various strains, sizes and densities of fish.

FS-MaxMin – The collection of water temperature range data using maximum/minimum thermometers.

FS-Tis - The collection of fish tissue for fish toxicity evaluations. Examples include mercury and PCBs.

STOX (Sediment Toxicity Testing) - The collection of sediment samples for toxicity testing. Examples include toxic metals and organic compounds.

WC - Water chemistry sampling includes a collection of samples for dissolved oxygen, temperature, pH, phosphorus or other parameters.

Management Activity/Status/Date/Rank

The management activity column includes a list of management activities that have taken place on the waterbody in the past 5 years *or* are recommended for the future. These activities are described in the list below. Management activities that do not include a status, rank or dates are simply suggestions for future management. Examples include:

- AB/O/H (Agriculture Best management practices are Ongoing, and are a High priority)
- BS/C/98 (Bank Stabilization was Completed in 1998)

Status: This indicates the status identified for each management activity.
R=Recommended, **P**=Planned, **O**=Ongoing, **C**=Complete

Date: If the management activity is planned or has already been completed, the planned or completion date is included.

Rank: Each of the listed management activities are also assigned a priority rank, based on the best professional judgment of field staff.
L=Low, **M**=Medium, **H**=High

Management Activity Codes

AB (Agricultural Best Management Practices) - Practices designed to reduce pollutant loads carried to surface waters and groundwater from agricultural land uses. Examples include grassed waterways, nutrient and pest management, barnyard controls, cropland practices to reduce erosion.

BC (Beaver Control) – Practices that reduce the thermal or physical impacts of overabundant beaver populations and their dams on cold water resources. This may include activities such as trapping, dam removal, and vegetative management.

BFR (Base Flow Regulation) - Activities that promote maintenance of stream base flow. Examples include regulating flow regimes of dams, and restoration of wetlands.

BS (Bank Stabilization) – A practice used to reduce bank erosion and sediment deposition in waterways. Examples include planting riparian buffer strips, rip rapping, sloping, grading and seeding or bioengineering techniques.

DR (Dam Removal and Restoration) - Removal of a dam and associated activities to restore a natural and/or functional river or stream ecosystem.

EXC (Exotic Species Control) - Control or removal of exotic and nuisance species by chemical, biological or physical means.

ES (Endangered Species) - Management actions to protect identified endangered or threatened aquatic or terrestrial species and associated habitats.

FC (Flood Control) – Upland management actions to reduce the impacts of downstream flooding on stream banks and fish habitat. Examples include dry dams, grass waterways, gully stabilization, and improved infiltration through establishment of vegetative cover.

FE (Fencing) –Upland management actions to limit or prevent livestock from damaging stream banks, fish habitat and stream corridors. Techniques may include rotational grazing, livestock watering areas or devices and fencing.

FS-Br (Fish Barrier) - In-stream management actions used to prevent or exclude upstream or downstream movement of detrimental species of fish. Examples include low head dams, electric weirs, gates or screens.

FS-PS (Fish Passage) - Modifications to manmade or natural fish barriers to allow fish passage, providing systemic benefits to the aquatic community.

FS-Ctrl (Rough Fish Control) –Instream management actions to reduce or control over abundant or nuisance fish populations. Examples include rough fish removal by commercial fishing, netting, seining, shocking or chemical treatment of waterways.

FS-Regs (Fish Regulations) - Management actions that restricts the harvest or harvest method of sport fisheries. Examples include regulation of size and bag limits, season length, refuges, and gear and bait restrictions.

FS-ST (Stocking and Transfer) –The stocking of fish raised in hatcheries or the transfer of fish from other waterways to supplement natural reproduction of native species or to create a fishery for a new species.

IHI (Instream Habitat Improvement) – Instream management actions to improve habitat and sport fish populations. Examples include the installation of artificial banks (boom covers), large woody debris, rip rap, boulder retards and other similar devices.

LA (Land Acquisition and Streambank Protection) - Acquisition of protective easements or fee title lands to protect or enhance important or critical habitat, and to provide recreational access.

NPS (Nonpoint Source) - Control of nonpoint sources of pollution, through selection of a stream or lake watershed for Priority Watershed Program funding.

PDR (Point Discharge Regulation) - Control of pollution from point source discharges through regulatory programs.

PLAN (Planning Grant) - Support of management planning through state-funded planning grants.

PROT (Protection Grant) - Support of resource protection activities through state-funded protection grants.

TMDL (Total Maximum Daily Load) - Establishment of a total maximum daily load for pollutant sources that are impairing the water body.

UB (Urban or Industrial Best Management Practices) - Management practices that reduce pollutant loads carried to surface waters and groundwater from non-agricultural land uses. Examples include stormwater infiltration, stormwater detention, construction site erosion control, and other pollutant reduction practices.

WR (Wetland Restoration) - Management actions to restore or enhance wetland habitat. Examples include breaking of drain tile and ditch plugs.

Refs (References)

Information included in the stream tables is derived from the knowledge of agency staff and from various studies conducted by the DNR and other agencies. The information is now housed in DNR files. For more in-depth information contact the Eau Claire DNR Service Center.

CHIP CO-1996 - Chippewa County Land Conservation Department Study 1996

LCRSNA - Lower Chippewa River State Natural Area 2000 Study

FH-1961 - 2001 - Studies completed by the DNR Fisheries & Habitat Bureau

Schreiber-1995 - Study completed by Ken Schreiber - Eau Claire Service Center 1995

UWEC-1999 - University of Wisconsin-Eau Claire 1999 Study

UWSP-1993 - University of Steven's Point 1993 Study

WR-1991 - DNR Water Resources Bureau 1991 Study

WRM-1992 - DNR Water Resources Management Bureau 1992 Study

Lake Table Codes

This section describes the information contained in each column of the lake table, and defines the abbreviations used in each column. *A blank space anywhere in the table means that data is unassessed or unavailable.*

Lake Name

All named lakes and some unnamed lakes larger than 10 acres in size are listed. Cold water spring or trout ponds that are smaller than 10 acres in size may also be listed. Lake names are those found on U.S. Geological Survey (USGS) quadrangle maps unless the Wisconsin Geographic Names Council has established a different name. Some lakes are known locally by other names; where available, local names have been listed with the official name. Township, range, section and quarter-quarter section identify unnamed lakes.

Waterbody ID Code (WB ID Code)

All waterbodies require a unique waterbody identification code in order to link them to other databases.

Town Range Section

This column identifies the Township, Range, and Section where the lake is located.

County

This column indicates the county or counties in which the lake is located.

Surface Area

This column indicates the surface area, in acres, as listed on the WDNR Master Waterbody File, *Wisconsin Lakes* (WDNR PUBL-FM-800-95REV) and the *Lower Chippewa River Water Quality Management Plan (1996)*.

Max Depth and Mean Depth

These two columns indicate the maximum depth and mean depth as listed in *Wisconsin Lakes* (WDNR PUBL-FM-800-95REV) and the *Lower Chippewa River Water Quality Management Plan (1996)*

Access

This column categorizes the type of public access available on the lake. If there is more than one access on a lake, only the most highly developed type of public access is listed in this column.

- BR** = Boat Ramp
- BF** = Barrier-free boat ramp (boating dock and/or wheelchair access)
- P** = Barrier-free pier (wheelchair access)
- T** = Walk-in trail
- R** = Roadside access
- W** = Wilderness access
- BW** = Barrier-free wilderness access (wheelchair access)
- NW** = Navigable water access to lake
- X** = Some type of access available, but not specified

Lake Type

This column categorizes the limnological characteristics of the lake based on physical and chemical properties. Each lake type category generally supports characteristic aquatic plant and animal communities. Lake type classifications and qualifying criteria are:

- DG** (Drainage lake) - Impoundments and natural lakes which have both a surface water (stream) inlet and outlet. The main water source to these lakes comes from stream drainage.
- DR** (Drained lake) - Natural lakes with the main water source dependent on the groundwater table and seepage from adjoining wetlands. These lakes seldom have an inlet but will have an outlet of very little flow. They are similar to the seepage lakes (below) except that they have an outlet.
- SE** (Seepage lake) - Landlocked lakes which have no surface water (stream) inlet or outlet. The groundwater table, and sediments that seal the bottom of the lake maintain water level. On some lakes, an intermittent outlet may be present.
- SP** (Spring lake) - Spring lakes seldom have an inlet, but always have an outlet of substantial flow. The main water source to these lakes comes from groundwater (springs).
- IMP** (Impoundment) - This code following the lake type code (above) indicates that an impounding structure (dam) located on a stream created that lake.
- NLD** (Dammed Natural Lake) - This code following the lake type code (above) indicates that dam is present on a natural lake.

Winterkill

Winterkill (winter oxygen depletion) is a common problem in many shallow Wisconsin lakes. A kill can occur when at least four inches of snow cover the lake, which prevents sunlight from reaching the water. All photosynthesis stops and plants begin to die and decompose. The extent of oxygen loss depends on the total amount of plant, algae and animal matter that decays. Drought increases the chance of winterkill by reducing the volume of water in the lake.

- YES** - Indicates the lake has experienced winterkill at least once.
- NO (or blank)** - Indicates winterkill is not known to have occurred.
- NO-A** - No winterkill has taken place since aeration units were installed in the lake.

Map

YES - An official lake map is available for the lake.

NO (or blank) - An official lake map is not available for the lake.

Phosphorus Sensitivity

This column indicates a lake's classification, based on an analysis of the lake's relative sensitivity to phosphorus loading and existing trophic (water quality) conditions. These phosphorus sensitivity classifications are used to prioritize lakes for nutrient control management. Lakes in each general classification are subdivided into management groups based on data needs or existing water quality conditions, and to establish appropriate management recommendations and priorities.

CLASS 1	CLASS 2
GROUP A	Existing water quality fair to excellent
	Potentially most sensitive to increased phosphorus loading. May not be as sensitive to phosphorus loading as Class 1 lakes
	High priority for protection management. Medium to high priority for protection or use impairment management
	Recommend impact assessment monitoring if water quality is less than achievable
GROUP B	Existing water quality poor to very poor
	Less sensitive to increased phosphorus loading. Low sensitivity to increased phosphorus loading
	Use impairment management recommended where appropriate. Low priority for protection management
	Medium priority for protection management
GROUP C	Data inadequate to assess trophic condition
	Classification monitoring recommended. Classification monitoring recommended
GROUP D	Water quality cannot be adequately assessed with trophic status index
CLASS 1	CLASS 2
	Physical and/or biological attributes make lake potentially less sensitive to increased phosphorus loading. Physical and/or biological attributes make lake potentially less sensitive to increased phosphorus loading
	Should be evaluated for re-classification if conditions change. Should be evaluated for re-classification if conditions change

Trophic Class and TSI (Trophic Status Index)

These two columns indicate a lake's classification based on water quality factors including concentrations of dissolved oxygen, phosphorus and chlorophyll in water samples. Trophic State Index (TSI) values are calculated for a lake based on a series of water quality sample data. These categories are general indicators of lake productivity.

Olig (Oligotrophic) - TSI values of 39 or less: These lakes are generally clear, cold and free of many rooted aquatic plants or large blooms of algae. Because they are low in nutrients, oligotrophic lakes generally do not support large fish populations. However, they often have an efficient food chain with a very desirable fishery of large predator fish.

Meso (Mesotrophic) - TSI values of 40 - 49: These lakes are intermediate between oligotrophic and eutrophic. The bottoms of these lakes are often devoid of oxygen in late summer months, limiting available habitat for cold water fish and resulting in release of phosphorus from lake sediments into the water column.

Eutr (Eutrophic) - TSI values of 50 or greater: These lakes are high in nutrients. They are likely to have excessive aquatic vegetation and/or experience frequent or severe algae blooms. They often support large fish populations, but are also susceptible to oxygen depletion. Small, shallow lakes are especially vulnerable to winterkill (see above), which can reduce the fishery diversity and quality.

Biological Use

This column indicates the *biological* use that the lake currently supports. The Biological Use designation is based on the current condition of the surface water and the associated biological community. Information in this column is not used for regulatory purposes.

CWSF (Cold Water Sport Fish Communities): This category includes lakes capable of supporting a community of cold water sport fish or serving as a spawning area for cold water sport fish.

TSSF (Two-Story Sport Fishery): This biological use category includes lakes that are capable of supporting a community cold water fish and also a community of warm water sport fish.

WWSF (Warm Water Sport Fish Communities): This category includes lakes capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

WWFF (Warm Water Forage Fish Communities): This category includes lakes capable of supporting an abundant, diverse community of forage fish and other aquatic life.

LFF (Limited Forage Fishery): This category includes lakes of limited aquatic life use capacity due to low flow, naturally poor water quality or poor habitat. These lakes are capable of supporting only a limited community of tolerant forage fish and aquatic life.

LAL (Limited Aquatic Life): This category includes lakes that are severely limited for aquatic life use because of low flow and naturally poor water quality or poor habitat. These surface waters are capable of supporting only a limited community of aquatic life.

Additional biological use categories identified in this column include:

303(d): These lakes have been identified as 303(d) listed impaired lakes. The 303(d) list identifies waters that are not currently meeting water quality criteria for specific substances or designated uses. See Chapter 3 for a discussion of Impaired Waters.

ORW (Outstanding Resource Waters): These waters have excellent water quality and high-quality fisheries. They do not receive wastewater discharges. No point source discharges will be allowed in the future, unless the quality of such discharges meets or exceeds the quality of the receiving water.

ERW (Exceptional Resource Waters): These waters have excellent water quality and valued fisheries but may already receive wastewater discharges or may receive future discharges necessary to correct environmental or public health problems.

Rec Use (Recreational Use)

This category indicates the type of recreational activities known to be taking place on the lake, and the intensity of use.

BT - Boating,

FS - Fishing,

SW - Swimming,

WS - Water Sports

Use Intensity: L=Low, M=Medium, H=High, U (or blank)=Unknown.

LMO (Lake Management Organization)

This column indicates whether or not a lake management organization (LMO) exists for the lake. A LMO can range from a small, loosely organized group of lake property owners, to an association or to a district, complete with by-laws and taxing authority.

Y - Indicates that a LMO does exist

ASSC (Lake Association) - Criteria for Lake Association status are spelled out in Section 144.253(1), Wisconsin Statutes. Generally, an Association must be at least 25 members in size, allow membership to anyone living within one mile of the lake for at least one month per year, and have lake protection and improvement as its primary purpose.

DIST (Lake District) - Criteria for Lake District status can be found in Chapter 33, Wisconsin Statutes. A Lake District is a special purpose unit of government, which is formed through local government approval processes. It has specified boundaries, and its main purpose is to improve or protect a lake and its watershed.

Rec (LMO Recommended) - It is recommended that a LMO be developed.

If blank - no lake management association exists.

Sources and Impacts

These two columns indicate probable **sources** of impact to the lake and the **impacts**, or water quality problems that are present in the lake. Sources and impacts are identified using the best professional judgment of field staff. The following tables explain the source and impact codes used in these columns. There is almost always a complex relationship between pollutant sources and resource impacts, and the table below is not intended to show a relationship between specific sources and impacts.

SOURCE
AGSPR - Agricultural land spreading site. NPS - Unspecified nonpoint sources of pollution
BY - Barnyard or exercise lot runoff (animal operations) PS - Point sources of pollutants
CE - Construction site erosion. PSB - Streambank pasturing
CL - Cropland erosion. PWL - Woodlot pasturing
DEV - Intense development pressure. RS - Roadside construction erosion
EX-CP - Exotics – curly leaf pondweed. SB - Streambank erosion
EX-EWM - Exotics -eurasion milfoil. SEP - Septic systems are or may be causing water quality problems
EX-PL - Exotics - purple loosestrife. URB - Urban storm water runoff
HM - Hydrological modification caused by damming, ditching, or wetland drainage. WLF - Water level fluctuations
INT - Internal loading

IMPACT
ACC - Access problems. The general public is unable to access a navigable waterbody, which is considered a water of the state. NUT - Excessive nutrient enrichment
ALG - Undesirable algae growth. SED - Excessive Sedimentation
BAC - Bacteria monitoring. TOX - General toxicity problems
DO - Low dissolved oxygen concentration TURB - Turbidity problems
HAB - Aquatic or terrestrial habitat degradation. WKILL - Winterkill that occurs as a result of human activity
HG – Mercury advisory
MAC - Undesirable macrophyte plant growth

Monitoring Activity/Status/Date/Rank

The monitoring activity column includes a list of monitoring activities that have taken place on the lake in the past 5 years *or* are recommended for the future. These activities are described in the list below.

Monitoring activities that do not include a status, rank or dates are simply suggestions for future monitoring. Examples include:

- FS-Comp/R/M (Comprehensive Fish Survey is Recommended, and is a Medium priority)
- StkEval/C/98 (Fish stocking evaluation was Completed in 1998).

Status: This indicates the status identified for each monitoring activity.

R=Recommended, **P**=Planned, **O**=Ongoing, **C**=Complete

Date: If the monitoring activity is planned or has already been completed, the planned or completion date is included.

Rank: Each of the listed monitoring activities are also assigned a priority rank, based on the best professional judgment of field staff.

L=Low, **M**=Medium, **H**=High

Monitoring Activity Codes

AMB (Ambient Lake Monitoring) - The collection of ambient lake water chemistry samples to provide an index of water quality conditions.

BASE-T (Baseline Trend Monitoring) - The collection of a suite of physical and biological parameters that provide an assessment of trends in lake quality between lakes and over time. On a set number of lakes, water chemistry data are collected every other year and data on habitat and the fish community are collected every five years. Parameters include the levels of a variety of chemical components, physical habitat measurements, and the catch-per-unit-effort for all fish species collected.

BASE-S (Baseline Status Monitoring) - The collection of a suite of physical, chemical and biological parameters that supplements more intensive data gathered from lakes included in the trends monitoring program. This data also establishes a baseline of information or status of a number of other lakes in the basin. The types of sampling are similar to the trends monitoring program, however water chemistry data are collected every five years.

CLA - chlorophyll a sampling

DF - Diagnostic or feasibility study, to determine watershed and lake management needs to protect or improve water quality.

DOT - The collection of a dissolved oxygen and water temperature profile, generally at regular depth intervals at the deepest spot of the lake.

FS-Comp (Comprehensive) - The collection of a suite of fisheries information on lakes specifically aimed at identifying the abundance of fish populations. This includes catch per unit effort and/or population estimates. Data is often quantified as number per acre.

FS-Hab - The characterization of habitat available to fish and other aquatic life in a lake. Habitat is identified in terms of both quantity and quality to determine needs for protection and/or enhancement of the current condition.

FS-K (Fish Kill) - An assessment of the extent and duration of fish kills, most often caused by low oxygen conditions, to identify further management needs including fish stocking.

FS-Other – The collection of all other fisheries data that is not specifically taken to document the baseline (BASE) or comprehensive (FS-Comp) condition of fisheries resources. These monitoring activities tend to be stand-alone sampling techniques such as fish abundance (CPE), fish community health (IBI), or fish habitat condition (HAB).

FS-Regs Eval – The collection of fisheries information used to assess the net impact of a new regulation such as size and bag limit changes, seasons, quotas, refuges, bait and gear restrictions, etc.

FS-Stk Eval (Stocking) – The collection of fisheries data used to determine the success or failure of stocking various strains, sizes and densities of fish.

FS-Tis - The collection of fish tissue for fish toxicity evaluations. Examples: mercury and PCBs.

FS-YOY (Young Of Year Fish) - Monitoring conducted to assess the level of natural reproduction of a specific year class of fish (usually sportfish species such as walleye or musky).

LTT (Long Term Trend Monitoring) - This is an intensive monitoring program which involves collecting data on water quality and other biological and physical conditions, five times per year for a period of 10 years, from 1986 - 1996.

MOD - Modeling of lake and watershed conditions to assist in development of management plans.

SED (Sediment) - The collection of sediment samples for chemistry testing. Samples are analyzed for bulk chemistry, metals and organic compounds.

SH-C (Self-Help Program - Chemistry) - Collection of water chemistry data by Lake Self-Help Program Volunteer Monitors. Data collected includes water clarity, chlorophyll concentration, phosphorus concentration and temperature profiles.

SH-E (Extended Self Help Program - Chemistry and DO) - Collection of water chemistry and dissolved oxygen data by Lake Self-Help Program Volunteer Monitors.

SH-P (Self-Help Program - Plants) - Collection of aquatic plant data by Lake Self-Help Program Volunteer Monitors

SH-S (Self-Help Program - Secchi) - Collection of water clarity (Secchi depth) data by Lake Self-Help Program Volunteer Monitors.

VEG (Vegetation Surveys) - Collection of data about the aquatic plant community by WDNR staff. Information collected includes species presence, frequency, density and maximum rooting depth along specified transects.

WC - Water chemistry sampling includes a collection of samples for dissolved oxygen, temperature, pH, phosphorus or other parameters.

Management Activity/Status/Date/Rank

The management activity column includes a list of management activities that have taken place on the lake in the past 5 years *or* are recommended for the future. These activities are described in the list below. Management activities that do not include a status, rank or dates are simply suggestions for future management. Examples include:

- SR/R/H (Shoreline habitat restoration is Recommended, and is a High priority)
- AER/O/H (Aeration is Ongoing, and is a High priority)

Status: This indicates the status identified for each management activity.

R=Recommended, **P**=Planned, **O**=Ongoing, **C**=Complete

Date: If the management activity is planned or has already been completed, the planned or completion date is included.

Rank: Each of the listed management activities is also assigned a priority rank, based on the best professional judgment of field staff.

L=Low, **M**=Medium, **H**=High

Management Activity Codes

AER - Installation of an aeration system to prevent winterkill conditions.

APMP - Development of an aquatic plant management plan.

APM-C (Aquatic Plant Management-Chemistry) - Control nuisance aquatic plants through chemical applications.

APM-M (Aquatic Plant Management-Mechanical) - Control nuisance aquatic plants by mechanical means, such as harvesting.

BS (Bank Stabilization) – A practice used to reduce bank erosion and sedimentation to waterways. Examples include planting riparian buffer strips, rip rapping, sloping, grading and seeding or bioengineering techniques.

CHP (Critical Habitat Protection) - Management activities which protect the current state of habitat critical to the survival of fish and other aquatic life, especially endangered, threatened, and rare species. Activities may include land acquisition, no-wake zones, and more restrictive criteria applied to aquatic plant management and water regulation activities.

CR (Chemical Rehabilitation) - Chemical treatments used to rehabilitate a lake ecosystem. Examples include removal of carp through chemical treatment.

D-SC (Dredging/Sediment Control) - Dredging or removal of lake sediments to improve lake water quality or habitat conditions.

ES (Endangered Species) - Management actions to protect identified endangered or threatened aquatic or terrestrial species and associated habitats.

EXC (Exotic Species Control) - Control or removal of exotic and nuisance species by chemical, biological or physical means.

FS-Br (Fish Barrier) - In-lake management actions used to prevent movement of detrimental species of fish. Examples include low head dams, electric weirs, gates or screens.

FS-Ctrl (Rough Fish Control) – Management actions to reduce or control over abundant or nuisance fish populations. Examples include rough fish removal by commercial fishing, netting, seining, shocking or chemical treatment of waterways.

FS-Regs (Fish Regulations) - Management actions that restricts the harvest or harvest method of sport fisheries. Examples include regulation of size and bag limits, season length, refuges, and gear and bait restrictions.

FS-ST (Stocking and Transfer) – Lake management actions to restore or enhance sport and nongame species. Examples include stocking fish raised in a hatchery or field transfer of wild stocks.

IHI (In-lake Habitat Improvement) - In-lake management actions to improve habitat for fish populations. Examples include the installation of log fish cribs, large woody debris, riprap, spawning reefs, half-logs and other similar devises.

INT-M (Internal Loading Management) - Management activities intended to reduce internal phosphorous loading such as alum treatment or summer aeration.

LA (Land Acquisition and Habitat Protection) - Acquisition of protective easements or fee title lands to protect or enhance important or critical habitat, and to buffer upland uses.

LMP (Lake Management Plan) - Development of a comprehensive lake management plan.

MAP - Development of a hydrographic (contour) map of the lakebed.

NPS (Non-Point Source) - Control of non-point sources of pollution, through selection of a stream or lake watershed for Priority Watershed Program funding.

PLAN (Planning Grant) - Support of management planning through state-funded planning grants.

PROT (Protection Grant) - Support of resource protection activities through state-funded protection grants.

SR (Shoreline Habitat Restoration) - Protection or restoration of shoreland vegetative habitat to promote native species diversity.

SZ (Shoreland Zoning) - Implementation and enforcement of shoreland zoning regulations.

TMDL (Total Maximum Daily Load) - Establishment of a total maximum daily load for pollutant sources that are impairing the water body.

WLM (Water Level Management) - A practice or strategy for managing water levels and water level fluctuations to enhance recreation, wildlife, habitat and property protection.

WR (Wetland Restoration) - Management actions to restore or enhance wetland habitat. Examples include breaking of drain tile and ditch plugs.

Refs (References)

Information included in the stream tables is derived from the knowledge of agency staff and from various studies conducted by the DNR and other agencies. The information is now housed in DNR files. For more in-depth information contact the Eau Claire DNR Service Center.

FH-96 - 99 - Studies completed by the DNR Fisheries & Habitat Bureau

PRATT 1994-2000 - Studies completed by Frank Pratt - DNR Northern Region

Pine Creek and Red Cedar River Watershed - LC07

Lake Name	WS ID Code	Town Range Section	County	Surface Area	Max Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensibility	Trophic Class	TSI	Biological Use/Status	Rec Use	LMO	Source	Impact	Monitoring Activity/Status/Date/Rank	Management Activity/Status/Date/Rank	Refs
Dallas Flowage	2088000	32 12W 14 NW SE	Barron	27	9		BR	DG-IMP	NO		2B	Euir	58	CWSF	BT-L FS L SW-L WS-L		CL,PSB	HAB		FS-ST/OIL	
Mirror Lake	2082600	29 11W 16 NE NW	Dunn	10	13	4	T	DG	NO	X	2C										

LC013

ID Code	Lake Name	Watershed Code	WB ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Minor Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Use/Status	Lake Use	LMO	Source	Impact	Monitoring Recs./Status/Dat	Management Recs./Status/Dat
2121000LC13	Eik Creek Lake	LC13	2121000	27 11W 13 SE SE	Dunn	54	17	6	BR	DG, "IMP"	NO	YES	2B	E		WWSF	BT-L, FS-L, SW-L	DIST	BY, CL, SB	TURB, SED	VEG/R, BASE-SIR, Q2/M, SH-CIR, WCR/M, SED/R	
2125400LC13	Hailmoon Lake	LC13	2125400	27 10W 24 SE SE	Emm Chaire	132	9	6	BRP	SE, "NLD"	NO, YES	X	2A	E	83-70	WWSF	BT, FS-H, SW, WS	DIST	URB, EX-CP	MAC, ALG, TURB, DO, NUT	VEG/C95, DF/99, FS-COMP/C00, BASE/S/P01/H	AP/M/O, NPS, PLAN/00, PROT, AER/O/H, FS-ST/O/M
1871400LC13	Old Eik Lake	LC13	1871400	27 11W 16 NW NW	Dunn	200	6			SE	YES	NO	2C	E	51-83		wildlife?		PSB, BY, SB, CL, AGSPR	ALG, TURB, ACC	W/C/C01, VEG/R/H	MAP/M, NPS, PROT, PLAN, SZ/H
1881800LC13	Sneen Lake	LC13	1881800	26 11W 03 NE NW	Dunn	14	4			SE	YES		2C								WCR/M, VEG/R/M	MAP/L, SZ/H, PROT, PLAN

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By Wisconsin DNR

LC15

ID Code	Lake Name	Watershed Code	NWI ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Used Status	Lake Use	LMO	Source	Impact	Monitoring Recd./Status/Dat of Bank	Management Recd./Status/Dat of Bank
2133600LC15	Corn Fork Flowage	LC15	2133600	26 05W 29 SE SW	Eau Claire	75	20	8	BR (should be BRP)	DG-IMP	NO	X	2B	E	50-66	WWSF	BT-H, BT-L FS-H, FS-L SW-H, SW-M WS-L		BY, CL, PSB	NUT, BAC, ALG	VEG/C97, SH- E/O, DFS/C97, B ASESIP/02/H	NPS/RH/PLAN/ R/H, PROTR/RH
2133200LC15	Eau Claire Lake	LC15	2133200	26 06W 05 SW SW	Eau Claire	860 (lake map indicates 1,116)	25		BR (should be BRP)	DG-IMP	NO	X	2B	E	62-65	WWSF	BT-H FS-H SW-H WS-H	ASSC	CL, BY, IL, NP S, DEV	DEV (should be under source), NUT, SB, ALG, SED, HAB	DFS/C98, SH- ERRH, BASESIP 02/H, FS- COMPR/07/H, FS-YOY/RH	SR, CHP, NPS/R/ H, INT- M/RM/PLAN/R/ H, PROTR/RH/DIS C/RH, CHP/RH, D/SC/RM, FS- STO/H, IHIRH
2136200LC15	Fairchild Pond	LC15	2136200	25 05W 35 NW NE	Eau Claire	18	9	3	BR	DG-IMP	NO	X	2C	E	51-59	WWSF	BT-L FS-H, FS-L SW-L WS-L		BY, CL, NPS	SED, ALG, HAB, MAC, NUT	SH- S/O, VEG/C95 B ASESIP/RM	NPS/RH/PLAN/ RH, PROTR/RH, S R, D/SC/RH
2133700LC15	Unnamed Pond T27h Row S2.2	LC15	2133700	27 06W 02 SW NE	Eau Claire	30	7			these are man-made gravel pits	NO		2C									

Last Updated on 12/06/2000

Wisconsin DNR

LC17

ID Code	Lake Name	Watershed Code	WS ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Use/Status	Lake Use	LMO	Source	Impact	Monitoring Rec./Status/Date/Rank	Management Rec./Status/Date/Rank	Refs
2147200LC17	Chapman Lake	LC17	2147200	Z9 05W 26 SE SE	Chippewa	34	9		BR	DG-IMP	YES (none since dredging)		2C			WWSF	BT-M SW-M FS		DEV/NPS	MAC ALG. SED. NUT	SH-SC87-SH-E/F/VEGR/BASES/RM	SR MAP/RAL	
2148400LC17	Unnamed Lake T30N R3W S20-2	LC17	2148400	30 03W 20 SW NE	Taylor	23	6				YES												

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By Wisconsin DNR

LC18

ID Code	Lake Name	Watershed Code	WBI ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Use/Status	Lake Use	LMO	Source	Impact	Monitoring Recs./Status/Date/Ref Rank	Management Recs./Status/Date/Ref Rank	Refs
2152600LC18	Chippewa Falls Flowage	LC18	2152600	28 08W 05 SE SE	Chippewa	282	29	11	R (should be BRP)	DC-IMP	NO	X	2B	E	58-59	WWSF	BT-M FS- H FS-L		EX-PLURB, HM, WLF	HAB, HG	BASES/P02/H FS-COMP/R/H	FS-REGS/RM	FS-REGS/RM
2152700LC18	Como Lake	LC18	2152700	30 08W 08 NW NE	Chippewa	98	6		BRP	DC-IMP	NO	X	2B	E	50-90	WWSF	FS-M, SW- L		DEV/URB, CL, B, Y	MAC, ALG, NUT, SED, D, HAB	SH- SIO, WCR/L, FS- COMP/COO, BASES/R04/H	APMMR, SR, DISCR/LCH, PIR/H, DISCR/H, SR/H, NFSR/H, FS-	
2149500LC18	Dells Pond	LC18	2149500	27 09W 18 NE NE	Eau Claire	739	30	9	BR (should be BF)	DC-IMP	NO	X	2B	E	58-66	WWSF	BT-H FS- H, FS-L SW-H, SW-L WS- H		WLF EX- CP, URB, HM, NFS	HAB, ALG, TU, RE, NUT, SED, HG	FS-COMP/C97	BGRM, FS- CHFR/H, FS- STOH, WLMR/H, FS- REGS/RM	
2151000LC18	Glen Loch Flowage	LC18	2151000	29 08W 31 NE NW	Chippewa	39	17		T (should be BR)	DC-IMP	NO		2B	E	50-90	WWSF	FS-L		NPS, DEV, URB, SB, CL	MAC, ALG, TURB, SED	SH- SIC92, WCR/L, B ASE/SRM	APMMR, BSR/H	
2150200LC18	Halls Lake	LC18	2150200	28 09W 27 NE NE	Chippewa	79	13	6	R (should be BF)	SE DG- IMP	NO	X	2A	E	45-62	TSSF	BT-H, BT- L FS-H	ASSC	EX- CP, URB, DEV, AS, ED	MAC, ALG, NUT, SED	SH- SIO, WCR/L, VEG /R/L, FS- COMP/P01/H, BASET/P01/H, DOT/R01/H	APMOR, NFS/R, AERR/H, FS- ST/O, SR/R/H, DISCR/M	
2151500LC18	Tilden Mill Pond	LC18	2151500	29 09W 24 NE NW	Chippewa	61	11	3	R (should be BR)	DC-IMP	NO	X	2B	E	45-90	WWSF	FS-L		NPS, DEV, CL, SB, FSB	MAC, ALG, SED, HAB, NUT	SH- SIC92, WCR/L, B ASE/SRM, school	APMMR, BSR/H, DISCR/H	

Last Updated on 12/06/2000
By Wisconsin DNR

LC19

ID Code	Lake Name	Watershed Code	WB ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Use/Status	Lake Use	LMO	Source	Impact	Monitoring Rec./Status/Date/Rank	Management Rec./Status/Date/Rank	Refs
2155800LC19	Cadott Flowage	LC19	2155800	29 06W 31 SE NE	Chippewa	20	10		T	DG-MP	NO		2C			WWSF	FSL SW-L		CLBY,PSB, HM, SB	BAC, NUT, SED	NOTE TO JOE ABOUT DAM		
2157000LC19	Otter Lake	LC19	2157000	30 05W 11 SW SE	Chippewa	651	43	11	BR BF	SE-NLD	YES	X	1B	E	53-65	WWSF	BT-H, BT-L FS-H SW-H, SW-L WS-H	DISTR or ASSCR	EX- CF,DEV,NFS	HAB, NUT, DO	SH-CIC'92, VEGC'96,BASE/ R/WCR, FS-COMP/R-08/H, BASE/SR-03/H	AGRO/H,SZ/R,C HPR/H, FS-STO/H,LA/RAM	
2157800LC19	Pike Lake	LC19	2157800	30 05W 14 SE NW	Chippewa	192	37	12	BR	SE	NO	X	1A	E	43-55	WWSF	BT-H FS-H SW	DISTR or ASSCR	DEV,NFS,RY, PSB	HAB, NUT, ACC	VEGC'96,BASE/ R/WCR, FS-COMP/R-08/H, BASE/SR-03/H	NPS/R, SZ/R, CHP/R, LA-ACC	

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By Wisconsin DNR

LC21

ID Code	Lake Name	Watershed Code	WB ID Code	Town Range Section	County	Surface Area	Maximum Depth	Mean Depth	Access	Lake Type	Winter Kill	Map	Phosphorus Sensitivity	Trophic Class	TSI	Biological Use/Status	Lake Use	LMO	Source	Impact	Mentioning Recr./Status/Dat e/Rank	Management Recr./Status/Dat e/Rank	Refs
1832700LC21	Basin Lake T32N R5W S15	LC21	1832700	32 08W 15 NE NW	Chippewa	39	23			SE		X	1C			WWSF				ACC			
1834400LC21	Beaver Lake T31N R08W S16	LC21	1834400	31 08W 15 NE SW	Chippewa	15	15		R, NW	SE	NO YES	X	1C			WWSF	FS			DO			
2170300LC21	Big Buck Lake	LC21	2170300	31 08W 15 NW SE	Chippewa	17	45		R	SE	NO	X	1C	E	50-58	WWSF	BT-L, SW-L FS		RS,NPS	NUT, ACC	SH-S0,WCRIL	SZ/RL	
2178400LC21	Bob Lake	LC21	2178400	31 08W 23 NE NE	Chippewa	97	66	27	BR	DG	NO	X	1A	E	40-58	WWSF	FS		DEV	HAB	WCRIL,VEGRIL, BASESIP-03H, FS-COMPR/H	SZ/RL	
1836600LC21	Boon Lake	LC21	1836600	30 08W 10 NE SE	Chippewa	27	14		R	SE	YES	X	1C			WWSF	FS			DO, ACC	SH-S0, DOTIR/H	AER/RI, LA-ACC/RIH	
1838200LC21	Burnt Wagon Lake	LC21	1838200	31 08W 10 NW SE	Chippewa	15	12		W	SE	YES	X	1C			WWSF				DO			
1841200LC21	Clear Lake T31N R08W S23	LC21	1841200	31 08W 23 NW SE	Chippewa	19	11			SE	NO YES	X	2C			WWSF	FS			DO			
2181400LC21	Cornell Flowage	LC21	2181400	31 08W 16 SW SE	Chippewa	836	54		BRP	DG,IMP	NO	X	2B		55-58	WWSF	FS-M, SW-L, WS-L, BT-L		EXPL, NFS, HM, WLF	NUT, HAB, HG	FS-COMPR-08H, FS-REG EVAL/RI, FS-YOY/RI	EXCR/RI, FS-REGS/RI, FS-ST/OH, MAP/RI, MARI/RI	
2171000LC21	Cornell Lake	LC21	2171000	31 08W 24 SE SE	Chippewa	184	39	16	BR	SE	NO	X	1C	E	47-59	WWSF	FS		ILL DEV, SEP	HAB, NUT	SH-S0, VEGC36, BASE/ R or WCR, FS-COMPR-08H, BASESIP-03H, FS-ST/RIH	CHP/RI, FS-ST/RI	
1845300LC21	Deer Island Lake	LC21	1845300	32 08W 35 SE SW	Chippewa	5	9			SE	YES	NO	1C			WWSF	FS			DO			
1846600LC21	Eagle Lake	LC21	1846600	31 08W 15 NE NW	Chippewa	15	15		W	SE	NO	X	1C			WWSF	FS						
2183100LC21	Ellis Flowage	LC21	2183100	32 04W 03 SE NW	Taylor	15	5			SE	YES		2C										
1847600LC21	Evans Lake	LC21	1847600	31 08W 15 SW NW	Chippewa	12	8			SE	YES	X	1C			WWSF							
2175700LC21	Finley Lake	LC21	2175700	30 08W 01 SE SE	Chippewa	56	27		NW	DG	NO	X	1C	E	51-71	WWSF	FS		PML,NPS,S Y,INT	TURB, NUT, ACC	VEGC36,WCR/ SR, NPSR, INT-MR, LA-ACC		
2176200LC21	Firth Lake	LC21	2176200	31 07W 02 NW SW	Chippewa	51	18		W	SE	NO YES	X	1C			WWSF				DO	DOT/RI		
1849200LC21	Fishpole Lake	LC21	1849200	31 08W 03 NE SE	Chippewa	20	12		W	SE	NO YES	X	1C			WWSF				DO			
2183600LC21	Flowage #3 - Precision	LC21	2183600	32 04W 26 SW NW	Taylor	14	4			SE	YES		2C										
2178900LC21	Hay Meadow Flowage No. 1	LC21	2178900	31 08W 14 SW NE	Chippewa	24	40		BR	DG, 'NLD'	YES		1C			WWSF	FS						
2180100LC21	Hay Meadow Flowage No. 2	LC21	2180100	31 08W 11 SE SW SE	Chippewa	40	9		BR	DG, 'IMP'	YES		2C			WWSF							
2180700LC21	Hay Meadow Flowage No. 3	LC21	2180700	31 08W 11 NE SE	Chippewa	19	4		T	DG, 'IMP'	YES		2C			WWSF				DO			
2180900LC21	Hay Meadow Flowage No. 4	LC21	2180900	31 08W 11 SW NE	Chippewa	24	22		T	SE, 'IMP'	YES		1C			WWSF				DO			
1854400LC21	Hemlock Lake	LC21	1854400	31 08W 16 NW SE	Chippewa	28	17		T BR	SE	YES	X	1C			WWSF	FS			DO, HG	WCR, VEGR, DOT/RI		
2173900LC21	Highland Lake	LC21	2173900	32 08W 34 SW SW	Chippewa	10	16		W	SE	YES	X	1C			WWSF	FS			DO			
1854200LC21	Horseshoe Lake T31N R08W S10	LC21	1854200	31 08W 10 SW SE	Chippewa	17	16		W	SE	NO	X	1C			WWSF							
1854400LC21	Horseshoe Lake T32N R9W S25	LC21	1854400	32 9W 25	Chippewa	14.6	15		W	SE	YES	X	2B	E	57-59	WWSF				DO			
1855100LC21	Hawe Lake	LC21	1855100	30 08W 14 NW NE	Chippewa	68	39	18	BR	SE	NO	X	1C	M	44-54	WWSF	FS		DEV	HG	WCR, VEGR, BASESIP-03H	SZR, LA-ACC/RI	
1856300LC21	Jeanston Lake	LC21	1856300	32 9W 36 NW NE	Chippewa	8.6	30		T, W	SE	NO	X	1B	E	50-59	WWSF							

J#	LC21	2168800	30 08W 22 SE NW	Chippewa	58	20		SE	YES	X	IC	FS	WWSF	DO, ACC	LA-ACC
2168800LC21	LC21	2168800	30 08W 22 SE NW	Chippewa	12	7		SE	YES	X			WWSF		
186500LC21	LC21	1865000	32 09W 10 SW SW	Chippewa	22	11	W no access	SE	YES	X	2C		WWSF	DO	
1862800LC21	LC21	1862800	31 07W 06 SW SW	Chippewa	11	24		SE	YES	X	1C		WWSF	DO	
2173400LC21	LC21	2173400	32 08W 33 SE SE	Chippewa	438	14	7	BR	NO	X	2B	RECC	WWSF	TURB, MAC, ALG, NUT, DO	VEGCS/4, WCR, WRR, FS, COM/IR-04H, BASES/P-04H, DOT/IRH
217200LC21	LC21	2172000	31 08W 29 NW SW	Chippewa	11	20		SE	NO	X	1C		WWSF		
217500LC21	LC21	2175000	31 08W 16 SE SE	Chippewa	25	15		SE	NO	YES	1C		WWSF	DO	
217400LC21	LC21	2174000	31 08W 21 NE SE	Chippewa	15	11		SE	YES	X	1C		WWSF	DO	
1867500LC21	LC21	1867500	31 08W 15 NW SW	Chippewa	18	14		SE	YES	X	1C		WWSF	DO	
217400LC21	LC21	2174000	30 08W 24 SW SE	Chippewa	23	4		SE	YES	X	2C		WWSF	DO	
217800LC21	LC21	2178000	31 08W 08 SE NE	Chippewa	1072	35		SE	NO	YES	2B	FS-L, BT-L, WS-L	WWSF	EX-CP, HM, WLF	FS-COMP/C-09, FS-REG, EVAL/IR, FS-VAL/IR, WRR
2174700LC21	LC21	2174700	30 07W 20 SW SW	Chippewa	14	32		BRP	NO	X	2B		WWSF		
2178100LC21	LC21	2178100	31 08W 24 NW SE	Chippewa	4	62		T	NO	YES	1B		WWSF	NUT, DO	WRR
2178200LC21	LC21	2178200	31 08W 24 SW SW	Chippewa	6	48		SE	NO	X			WWSF		
2178300LC21	LC21	2178300	31 08W 23 SE SE	Chippewa	15	4		SE	NO	X	2C		WWSF	DO	
1874200LC21	LC21	1874200	30 07W 28 SW SE	Chippewa	15	46		SE	NO	X	1C		WWSF		
2180500LC21	LC21	2180500	31 08W 01 SW SE	Chippewa	16	8		SE	YES	X	2C		WWSF	DO	
1874800LC21	LC21	1874800	31 07W 08 SW NW	Chippewa	90	25	13	SE	NO	YES	1B		WWSF		
2179800LC21	LC21	2179800	30 08W 25 SE NW	Chippewa	94	35		BR	NO	X	1C		WWSF		
217600LC21	LC21	2176000	31 08W 09 SW NW	Chippewa	12	8		NW BR	NO	X	2C		WWSF	DO	
1880000LC21	LC21	1880000	31 08W 15 NE NW	Chippewa	39	52		W	NO	YES	1A		WWSF	TURB, DO, HG, NUT	MODIR
1869300LC21	LC21	1869300	32 09W 25 SE	Chippewa	59	25		BR	NO	YES	1A		WWSF	TURB, DO, NUT	AER/IRH, CH/IR, NPS/IR, MODIR
1879300LC21	LC21	1879300	32 08W 31 SE	Chippewa	5	41		BR	NO	YES	1A		WWSF		
2177600LC21	LC21	2177600	32 07W 28 SE SE	Chippewa	75	5		BR	NO	X	1A		WWSF		
2183500LC21	LC21	2183500	32 04W 28 SW SW	Taylor	16	7		DG	YES		1C		WWSF		
2176500LC21	LC21	2176500	32 07W 35 SW NE SW	Chippewa	19	4		DG	YES		2C		WWSF		
2177300LC21	LC21	2177300	32 07W 35 NW NE SW	Chippewa	12	12		BR T	NO	X	1C		WWSF		
1883300LC21	LC21	1883300	31 08W 15 NE SE	Chippewa	48	26		BR	NO	YES	1A		WWSF	TURB, DO, NUT	VEGCS/6, DOT/IRH, BASES/P-04H
2172600LC21	LC21	2172600	32 08W 33 NE SW	Chippewa				BR	NO	YES	1A		WWSF		

1865300LC21	Tram Lake	LC21	1865300	31 08W 02 SW SE	Chippewa	20	34		W	SE	NO YES	1C	M	44-53	WWSF	FS-L, ET-L, SW-L, VS-H		DO	BASE/RM/L, VEG/RM/L	NPS/R, CHP/R
1913400LC21	Unnamed Lake T32N R9W S33 NWSW	LC21	1913400	32 08W 33 SW NW SW	Chippewa	4	27					1C								
2184400LC21	Unnamed T31N R07W S 3-3 (local name Parich Lake)	LC21	2184400	31 07W 13 NW NE	Chippewa	14	7		R	SE	NO	2C			WWSF	FS	HM	WLF		WLM/RH
1898500LC21	Unnamed T31N R08W S2-3	LC21	1898500	31 08W 22 SW NE	Chippewa	11	10				YES	1C								
2177400LC21	Unnamed T32N R07W S28-9	LC21	2177400	32 07W 28 NE SW	Chippewa	11	23				NO	1C								
2043700LC21	Upper Twin Lake	LC21	2043700	30 08W 11 NE SE	Chippewa	36	25			SE	NO	1C			WWSF	FS		ACC	LA-ACGR/RM	
1846500LC21	Weeks Lake, East	LC21	1846500	32 08W 25 SE SE	Chippewa	4	7		W	SE	YES	1C			WWFF			DO		
2044900LC21	Weeks Lake, West	LC21	2044900	32 09W 25 SW SE	Chippewa	5	11		W	SE	YES	1B			WWSF			DO		
2152800LC21	Wiscola Lake	LC21	2152800	28 08W 03 SE NW	Chippewa	6300	72		BR BF, P	DG-IMP	NO	1B			WWSF	FS-H, BT-H, SW-H, WS-H	ASSC	HM, CL, SB, PSB, SEP, DEV, WLF	SHE/O, VEG/CO, FS-COMPR-02/H, BASE/SF-02/H, FS-REG EV/AL/RH, FS-YOY/RH	WLM, CHP, BSRH, CHP/RH, FS-REGS/RH, FS-STO/H, I/H/RH, LAR/RM, NPS/RH, SR/RM, WLM/RH
2184100LC21	Will Flowage	LC21	2184100	32 04W 24 NW SE	Taylor	72	5			SE	YES	2C								

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LC07

ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Codified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator Result	Data Level	Source	Impact	Monitoring Rec./Status/Date/Action	Management Rec./Status/Date/Action	Reis
2084700LC07	Beaver Creek	LC07	2084700	31 11W 26 SE SW	Chippewa, Dunn	DEF	Cold I/a 4.0	Cold I/a 4.0	PART/4	E	U		B2 H P/C T	BDAM, PSB, OBS-N	MIG, HAB	BASE/R	BC, FE, I/H	FH-1994
2083300LC07	Bronken Creek	LC07	2083300	30 11W 33 NE SW	Dunn	Cold III/4.5	Cold III/4.5	UNK/4.5	UNK/4.5	U	U		B H P/C T			BASE/R		
2088600LC07	Cutshank Creek	LC07	2088600	32 11W 27 NW SE	Barren	DEF	WWFF/2	WWFF/2	UNK/2	E	D		B1 H1 P/C T	PSE, CL	HAB		AB/R/L	
2088100LC07	East Branch Upper Pine Creek	LC07	2088100	32 12W 14 NW NE	Barren	Cold II	Cold III/2.5	Cold III/2.5	PART/3.5	E	S		B1 H1 P/C T	BDAM, PSB, CL	HAB	FS-Other/R/M	AB/R/M	
2083900LC07	Eddies Creek	LC07	2083900	30 11W 16 NE SW	Dunn	DEF	UNK/2	UNK/2	UNK/2	U	U		B H P/C T	BDAM	HAB			
2082400LC07	Eighteen Mile Creek	LC07	2082400	29 11W 16 NE NW	Chippewa, Dunn	ERW Cold III/2.5 Cold III/2.0	Cold I/a 1.9 Cold I/b 5.0	Cold I/a 1.9 Cold I/b 5.0	PART/6.9	M	I	IBI-C/G HAB/G	B4 H4 P/C T	HM-DM/BEAVER/SS, FL, I/RB	HAB, TEMP, SED	BASE/R	AB, BC, BS, FL, I/J, FS, ST/VEAL, I/H, LA, FE	FH-1997
2084900LC07	Hay Creek	LC07	2084900	31 11W 27 NE SE	Dunn	Cold III/6.4	Cold I/b 6.4	Cold I/b 6.4	PART/8.4	E	I		B H P/C T	PSB	HAB, SED, TEMP	BASE/R	FS-ST/VEAL	FH-1981
2085300LC07	Lower Pine Creek	LC07	2085300	31 11W 23 NW NE	Barren, Dunn	Cold III	Cold III/3.6 WWFF/8	Cold III/3.6 WWFF/8	PART/11.6	M	U.S		B1 H1 P/C T	BDAM, PSB, I/V, NPS	BAC, HAB, TEMP, SED	BASE/R	FS-ST/VEAL, AB/R/M	FH-1971
2088200LC07	North Branch Upper Pine Creek	LC07	2088200	32 12W 11 SW NE	Barren	Cold II	Cold II/2.5	Cold II/2.5	PART/2.5	E	S		B1 H1 P/C T	BDAM, PSB, CL	HAB	FS-Other/R/M	AB/R/M	
2084500LC07	Popple Creek	LC07	2084500	30 11W 04 SE SW	Dunn	Cold III/4.5	Cold I/b 4.5	Cold I/b 4.5	PART/4.5	E	U		B2 H P/C T	SED	TEMP, SED, HAB	BASE/R	FS-ST/VEAL	FH-1972
2083500LC07	Red Cedar River	LC07	2083500	29 12W 30 SE NW	Sawyer, Barren, Dunn, Washburn,		WWSF/40	WWSF/40	FULLY/40	M		IBI/W/E HAB/G	B4 H4 P/C T	FL, SB, NPS, CL	NUT, DO, HAB	FS-COMP, IBI, HAB, F I/1992	AB, BS, FE, NPS, PLAN, PROT	FH-1992
2082700LC07	Running Valley Creek	LC07	2082700	29 11W 11 SE SE	Dunn, Chippewa	Cold III/4.0	Cold I/b 4	Cold I/b 4	PART/4	M	U	IBI-C/P HAB/G	B4 H4 P/C T	HM-DR, PSB, HM-DM/BEAVER/	TEMP, SED, HAB	FS-COMP, IBI, HAB, F U/1997	AB, BC, FE	FH-1997
2086100LC07	Sand Creek	LC07	2086100	31 11W 14 SE SE	Dunn, Chippewa	ERW Cold III/5.5 ERW Cold I/b 5.0	Cold I/b 5.5 Cold I/b 5.0	Cold I/7.5	PART/7.5 FULLY/6 FULLY/7.5	E, M	D		B4 H P/C T	PSB, CE, BY, BDA M (do not see CE as a source) CL, EX-PL, EX-RC, OBS-N, OBS-M	SED, HAB, MAC, MIG, COM	FS-COMP/IC-96, BASER	AG/R/M, BC/R/H, EXC/R/H, FER/H, FS-REGS, EVAL/R/M, I/H/R/M, LA/R/H	FH-1996
2086700LC07	Sioux Creek	LC07	2086700	32 11W 22 NE NW	Barren	DEF	WWFF/4	WWFF/4	PART/4	E	S		B1 H1 P/C T	PSB	HAB, SED	AB/R/M	AB/R/M	FH-1971
2085600LC07	South Fork Lower Pine Creek	LC07	2085600	32 12W 28 SE SW	Barren, Dunn	Cold III/2.2 Cold III	Cold I/b 5.2 Cold III/2.1	Cold III/2.2 Cold III/2.1	PART/5.3	M	U.S		B H P/C T	FSM, NPS, PSB, Y	DO, BAC, HAB	BASE/R	AB/R/M	
2084300LC07	South Fork Trout Creek	LC07	2084300	30 10W 08 SW SW	Chippewa		UNK/4	UNK/4	UNK/4	U	U		B H P/C T			BASE/R		
2085300LC07	Spring Brook	LC07	2085300	31 10W 16 NE NE	Chippewa	ERW Cold I/2.3	Cold I/2.3	Cold I/2.3	FULLY-THR/2.3	E, M	S		B4 H P/C T	BDAM, BY, BDA EX-RC, OBS-N, OBS-N	HAB, SED, MAC, MIG, COM	FS-COMP/IC-96, BASER	BC/R/H, EXC/R/H, FER/H, FS-REGS, EVAL/R/M, I/H/R/M, LA/R/H, AB/R/M	FH-1996
2085900LC07	Spring Creek	LC07	2085900	32 12W 29 SE NW	Barren	Cold II	Cold III/0.5 WWFF/2.5 WWFF/4	Cold III/0.5 WWFF/2.5 WWFF/4	PART/4	E	S		B1 H1 P/C T	FL, PSB	HAB, SED, TURB		AB/R/M	
2088900LC07	Tiller Creek	LC07	2088900	32 11W 15 SE SW	Barren	DEF	WWFF/4	WWFF/4	FULLY/4	E	S		B1 H1 P/C T	PSB		AB/R/M		
2084000LC07	Trout Creek	LC07	2084000	30 11W 09 SW NE	Dunn, Chippewa	Cold III/2.3	Cold III/2.3	Cold III/2.3	PART/2.3	E	U		B H P/C T	PSB	HAB	BASE/R	AB/R/M	FH-1971
2087300LC07	Upper Pine Creek	LC07	2087300	31 11W 03 NE SW	Barren, Dunn	ORW WWSF	Cold I/2.5 Cold I/1 WWSF/16.5	Cold I/2.5 Cold I/1 WWSF/16.5	THR/2.5 FULLY/16.5	E	U.S		B1 H1 P/C T	BY, FL, SB, PSB, H M-DM	HAB, SED, TEMP	BASE/R, FS-Other/R/H	AB/R/H, DR/R/H, FER/H	

LC13

ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Codified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator /Result	Data Level	Source	Impact	Monitoring Recd./Status/Dat	Management Recd./Status/Dat	Reis	
2121900LC13	Big Elk Creek	LC13	2121800	28 10W 08 NE SW	Chippewa, Dunn	ERW Cold I/4.9	Cold I/4.9	Cold I/4.9	FULLY-THR/4.9	E M	S		B4 H P/C T	BDAM, PSB, BY, CL, OBS-N, OBS-M	SED, HAB, MIG	BASER/ FS-COMP/C-97, FS-REGS EVAL/R PLAN, PROT, BS	AB, BC, NPS, IHI, LA, FE, FS-REGS EVAL, PLAN, PROT, BS	FH-1996	
2050000LC13	Chippewa River	LC13	2050000	22 14W 04 SW SE	Rusk, Dunn, Sawyer, Pepin, Buffalo, Eau Claire, Chippewa	DEF	WWSF/32	WWSF/52	PART/62	E M	S	IBI-W/E	B H P/C T	SB, UR, HM, DM, NPS, DEV, NMM	BAC, HAB, NUT, FLOW, HAB, MIG, SED, HG	BASER/00, FL/R, FS-OTHER	AB, BFR, BS, FS, PS, FS-Regs Eval, IHI, LA, NPS, PROT, ES	FH-2000, LORSNA	
2121700LC13	Creek 17-11 (Trib to Elk Creek)	LC13	2121700	28 10W 17 NW SW	Chippewa	ERW Cold I/3.0	Cold I/3.0	Cold I/3.0	FULLY-THR/3.0	M	U		B4 H P/C T	OBS-M, OBS-N, BDAM, HM, DR, NPS, SB	HAB, SED, MAC, MIG	FS-COMP/C-97, BASER	AB, BC, FS-PS, IHI, LA, NPS	FH-1996	
2122200LC13	Creek 2-8 (Trib to Big Elk Creek)	LC13		28 11W 02 SE NW	Dunn	ERW Cold I/1.9	Cold I/1.9	Cold I/1.9	FULLY-THR/1.9	M	U		B4 H P/C T	DEV, OBS-N, CL	HAB, SED	FS-COMP/C-97, BASER	AB, BC, IHI, LA	FH-1997	
2122200LC13	Creek 04-01 (Trib to Elk Creek)	LC13	2122200	28 10W 04 NE	Chippewa	ERW Cold I/1.7	Cold I/2.1	Cold I/2.1	FULL/2.1	M	U		B4 H P/C T	BDAM, HM, DR, NPS, SB, OBS-N, OBS-M	HAB, SED, MIG	FS-COMP/C-97, BASER	AB, BC, BS, FS-PS, IHI, LA, NPS	FH-1997	
2122300LC13	Creek 35-12 (Trib to Elk Creek)	LC13	2122300	29 10W 35 SE SW	Chippewa	ERW Cold I/2.5	Cold I/5.3	Cold I/5.3	FULLY-THR/5.3	M	D		B4 H P/C T	BY, FL, HM, DR, PSB, SB, BDAM, OBS-M, OBS-N, CL	HAB, MAC, MIG, SED, TEMP, TURB	FS-COMP/C-97, BASER/ FS-REGS EVAL	AB, BC, BS, FC, FE, FS-PS, FS-REGS EVAL, IHI, LA, NPS, WR	FH-1997	
2122100LC13	Creek 5-16 (Trib to Elk Creek)	LC13	2122100	28 10W 05 SE SE	Chippewa	ERW Cold I/1.8	Cold I/2.8	Cold I/2.8	FULL/2.8	M	U		B4 H P/C T	NPS, BDAM, OBS-N, OBS-M	HAB, SED, MIG	FS-COMP/C-97, BASER	AB, BC, FS-PS, IHI, LA, NPS	FH-1997	
2120800LC13	Elk Creek	LC13	2120800	27 11W 36 SE NW	Eau Claire, Chippewa, Dunn	ORW Cold I/10.8, ERW Cold I/3.0	Cold I/13.8 Cold I/3.9	Cold I/13.8 Cold I/3.9	FULLY-THR/17.7	E M	I		B4 H P/C T	CE, BDAM, SB, BY, CL, FL, PSB, OBS-M, OBS-N, HM, DM	HAB, SED, MAC, MIG, TURB	BASER/ FS-COMP/C-97, FS-REGS EVAL/R	AG, BC, IHI, LA, FE, BS, DR, FC, NPS, FS-REGS EVAL, PLAN, PROT	FH-1997	
2118400LC13	Iron Creek	LC13	2118400	27 11W 07 SW SE	Dunn	DEF	WWFF/5	WWFF/5	PART/5	E			B H P/C T		HAB, SED, TEMP	BASER/	AB		
2118300LC13	Muddy Creek	LC13	2118300	26 11W 06 NW NW	Dunn	Cold I/2.5 Cold I/3.5	Cold I/2.5 Cold I/3.5 WWFF/20	Cold I/2.5 Cold I/3.5 WWFF/20	PART/26	E			B H P/C T	FK	HAB, SED, TEMP	BASER/	AB	FH-1971	
2125100LC13	Sherman Creek	LC13	2125100	27 10W 25 NE NE	Eau Claire	DEF	WWFF/14	UNK/14	UNK/14	E U	U		B H P/C T	URB, HM, BDAM, SB	HAB, SED	BASER/	UB		
	14 Unnamed Streams						WWFF/59 WWSF/32 Cold I/13.5 Cold I/16.4 Cold I/18.7 UNK/14	WWFF/25 WWSF/32 Cold I/13.5 Cold I/16.4 Cold I/18.7 UNK/14	FULLY/63 PART/7 NOT/ THR/22.6 UNK/14										

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LC15

ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Certified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator /Result	Data Level	Source	Impact	Mentioning Recr./Status/Date/Rank	Management Recr./Status/Date/Rank	Refs
2135700LC15	Black Creek	LC15	2135700	26 05W 32 SW NE	Eau Claire, Clark	Cold III/0.0	Cold III/0	UNK/0	UNK/0	E U	U	HBIG	B2 H/P/C/T	HM,DM, BDAM	TEMP	BUGC/1995, AMBC/1995, BASER, CTR		
2133400LC15	Cold Creek	LC15	2133400	27 06W 27 SE NW	Eau Claire	Cold III/0.0	Cold III/0.0	UNK/0.0	UNK/0.0	U	U		B H/P/C/T			BASER		
2135100LC15	Coon Fork Creek	LC15	2135100	26 05W 17 SW SW	Eau Claire		UNK/7	UNK/7	UNK/7	U	U		B H/P/C/T			BASER		
2135000LC15	Coon Gul Creek	LC15	2135000	26 06W 13 NE SE	Eau Claire	Cold III/1.2	Cold III/1.2	UNK/1.2	UNK/1.2	U	U		B H/P/C/T			BASER		
2135500LC15	Creek 10-6 (Schoolhouse Cr. Tributary)	LC15	2135500	24 05W 10 NW NW	Jackson	Cold III/0.6	WWFF1.5	WWFF1.5	FULLY1.5	E S	S					BASER		FH-1994
2133500LC15	Darrow Creek	LC15	2133500	27 06W 22 NE SW	Eau Claire	ERW Cold III/1.4	Cold I/1.4	UNK/1.4	UNK/1.4	U	U		B H/P/C/T			BASER		
2125600LC15	Eau Claire River	LC15	2125600	27 09W 20 NE NW	Eau Claire	WWSF	WWSF12	WWSF12	FULLY12	U	U	U	B H/P/C/T	DEV, HM, DM, SB	MIG, SED	Comp/R/2001/H, BASER	FS-PS, PLAN, PROT, BS	
2134800LC15	Halfway Creek	LC15	2134800	26 06W 12 NE SW	Eau Claire	Cold III/3.0	Cold I/0	UNK/0	UNK/0	U	U		B H/P/C/T			BASER		
2133300LC15	Hay Creek	LC15	2133300	26 05W 03 NE NW	Eau Claire, Chippewa	DEF	WWFF11	WWFF12	WWFF13	E U	U	HBIG	B2 H/P/C/T			BUGC/1995, BASER		FH-1975
2136000LC15	McGaver Creek	LC15	2136000	25 05W 26 NW NW	Eau Claire	Cold III/1.8	Cold III/1.8	UNK/1.8	UNK/1.8	U	U		B H/P/C/T			BASER		
2134200LC15	Muskat Creek	LC15	2134200	26 06W 03 NW NE	Eau Claire, Chippewa	Cold III/3.0	Cold I/0	UNK/0	UNK/0	E U	U	HBIG	B2 H/P/C/T			BUGC/1995, BASER		
2135200LC15	Pea Creek	LC15	2135200	26 05W 20 NE SW	Eau Claire		UNK/4	UNK/4	UNK/4	U	U		B H/P/C/T			BASER		
2135600LC15	Schoolhouse Creek	LC15	2135600	25 05W 15 NE SE	Jackson, Eau Claire	Cold III/6.8	Cold III/3	Cold III/3	FULLY 7.6	E S	S	HBIG	B2 B4 H/P/C/T	HM,DM, BDAM, FSS	SED, TEMP, HMB, MIG	BUGC/1995, BASER	AB, BC, DR, FE, FS-PS	FH-1994
2134600LC15	Whippoorwill Creek 11 Unnamed Streams	LC15	2134600	26 05W 18 SW NW	Eau Claire	Cold III/2.2	Cold III/2.2	UNK/2.2	UNK/2.2	U	U		B H/P/C/T			BASER		

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LC17

ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Qualified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Impairment Indicator / Result	Data Level	Source	Impact	Monitoring Recv./Status/Dat of Data	Management Recv./Status/Dat of Data	Refs	
2145500LC17	Beaman Creek	LC17	2145500	26 05W 10 NE NE	Eau Claire	Cold II/2.2	Cold II/2.2	UNK/2.2	UNK/2.2	U	U		BHP/CT			BASER, CTIR			
2148800LC17	Goggin-Eye Creek	LC17	2148800	29 04W 22 SE SE	Clark		WWFF7	WWFF7 UNK/7	FULLY/7 UNK/7	E U	U		BHP/CT			BASER			
2147300LC17	Little Otter Creek	LC17	2147300	29 05W 23 SE SE	Clark, Chippewa		WWFF6	WWFF6 UNK/6	FULLY/6 UNK/6	E U	U		BHP/CT	PSB, SB	HAB	BASER			
2145900LC17	Loner Creek	LC17	2145900	27 05W 14 SE SE	Eau Claire	Cold III/1.8	Cold III/1.8	UNK/1.8	UNK/1.8	U	U		BHP/CT			BASER, CTIR			
2148700LC17	McGrogan Creek	LC17	2148700	28 04W 03 NE SW	Clark		WWFF8	WWFF8	FULLY/8	E U	U		BHP/CT	PSI	PDR	BASER			
2145400LC17	North Fork Eau Claire River	LC17	2145400	26 05W 15 SE NE SW	Clark, Eau Claire, Taylor		WWSF56	WWSF56	FULLY/56	M U	U		B2-H1-P1-CT	FLOW, DO, SED, PSM, NPS	FLOW, DO, SED, PDR	BASER	AB		
2148300LC17	Robinson Creek	LC17	2148300	27 04W 16 NW SW	Clark		UNK/2	UNK/2	UNK/2	U	U		BHP/CT			BASER			
2146500LC17	Roger Creek	LC17	2146500	28 05W 01 SE SE	Clark, Chippewa		UNK/7	UNK/7	UNK/7	U	U		BHP/CT			BASER			
2145600LC17	Shambaugh Creek	LC17	2145600	27 05W 34 NE SE	Eau Claire	Cold III/1.8	Cold III/1.8	UNK/1.8	UNK/1.8	U	U		BHP/CT			BASER, CTIR			
2147800LC17	Simes Creek	LC17	2147800	27 05W 13 SW NE	Clark, Eau Claire		WWFF9	WWFF9 UNK/9	WWFF9 UNK/9	E U	U		BHP/CT			BASER			
2148500LC17	Stirling Creek	LC17	2148500	28 04W 27 NE SE	Clark	Cold III/3.5	Cold III/3.5	Cold III/3.5 UNK/3.5	FULLY/3.5 UNK/3.5	E U	U		BHP/CT			BASER, CTIR		HH-19/5	
2146100LC17	Swan Creek (Swim Creek)	LC17	2146100	27 05W 02 SE SE	Chippewa, Eau Claire	ERW Cold II/2.5, Cold III/1.0	Cold II/2.5 Cold III/1	Cold II/2.5 Cold III/1	FULLY/2.5 UNK/3.6	E U	U		BHP/CT	SDAM, PSB, SB		BASER, CTIR	FE, BC, LA		
2146500LC17	Wolf River	LC17	2146500	27 05W 14 SW NE	Taylor, Clark, Eau Claire, Chippewa		WWFF2.5 UNK/30.5	WWFF2.5 UNK/30.5	FULLY/2.5 UNK/30.5	M U	U		BHP/CT	PSB, SDAM, HML-DM, PSI	DO, SED, HAB, MIG	BASER	AB		
	10 Unnamed Streams						WWFF21.5 WWSF56 Cold III/3.5 Cold III/6.8 Cold II/2.6 UNK/39.5	WWFF21.5 WWSF56 Cold III/3.5 Cold III/1 UNK/45.3	FULLY/21.5 PART NOT THR UNK/45.3										

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ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Coolified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator /Result	Data Level	Source	Impact	Monitoring Recd./Status/Date/Back	Management Recd./Status/Date/Back	Reqs	
2150300LC18	Beaver Creek	LC18	2150300	28 09W 10 SW SE	Chippewa		Cold I/3	Cold I/3	UNK/3	E	U	HB/E	B2 H PIC T	SE,CE,FL	SED,HAB	DO/C/1991, BUG/C/1990, FS-COMP/C/1991, BASER, CTR	BS, FL, AB	WRM 1992, WR-1991	
2050000LC18	Chippewa River	LC18	2050000	22 14W 04 SW SE	Rusk, Dunn, Sawyer, Pepin, Buffalo, Eau Claire, Chippewa		WWSF/11.5	WWSF/11.5	FULLY/11.5 PART/11.5	M	S		B4 H3 PIC3 T	URB,BS,HW,DM,DEV,NPS,PSI,PSM,FL	SED, MIG, FLOW, HAB, HG	AMBO/2000, Comp/C/2000, BASEC/00, FS-OTHER, FS-REGS EVAL, FUR	FS-PS, PROT, BFR, FS-PS, FS-REGS, IHI, PDR, UB	FH-2001, FH2000	
2152300LC18	Como Creek	LC18	2152300	30 09W 06 NW SE	Chippewa	ERW Cold I/2.8	Cold I/2.8	Cold I/2.8	UNK/2.8	E U	U	HB/IF	B2 H PIC2 T	BDAM, BY, PSB, CL, OBS-N	HAB, PSB, CL, OBS-N, TEMP, SED, DO	BUG/C/1990, DO/C/1991, CT/C/1991, FS-COMP/C/1991, BASER, CTR	LA, FE, BS, AB, BC, IHI	WRM 1992	
2156000LC18	Duncan Creek	LC18	2156000	28 09W 06 SE SE	Chippewa	ORW Cold I/6.5, DEF/18.7	Cold I/6.5, WWSF/19.7	Cold I/6.5, WWSF/19.7	FULLY-THR/15.7 NOT/12.5	E M (partial)	S	HB/IG	B2 B3 H PIC T	URB,BS,HW,CE,RC,CL,PSB, OBS-N, BDAM	SED, HAB, COM, MIG, FN, TEMP	BUG/C/1990, DO/C/1991, CT/C/1991, BASER, CTR, FS-REGS EVAL, FS-COMP, FS-HAB	PLAN, PROT, BS, LA, IHI, FE, AB, BC, EXC, FS-REGS, IHI, LA	WRM 1992, FH-1995	
2151500LC18	Hay Creek	LC18	2151500	30 09W 33 SW SE	Chippewa	Cold I/6.0	Cold I/6	Cold I/6	PART/6	E M	I	HB/IG	B2 B4 H PIC2 T	BDAM, BY, CE, PSB, CUL, CL, OBS-M, FL	SED, HAB, TEMP, MIG	BUG/C/1990, DO/C/1991, CT/C/1991, BASER, CTR, FS-STK, EVALU-C, FS-COMP/R, FS-REGS EVAL	PLAN, PROT, IHI, AB, BC, FC, FE, FS-REGS, IHI, LA	WRM 1992, FH-1995	
2151400LC18	Little Hay Creek	LC18	2151400	28 09W 04 NW NE	Chippewa		WWFF/1.8	Cold I/1.8	NOT/1.8	E	U	HB/IG	B2 H PIC T	BS,CE,PSB, Y, BDAM, OBS-N, CL	HAB, DO, TEMP, TURB	BUG/C/1990, DO/C/1991, CT/C/1991, FS-COMP/C/1991, BASER, CTR	IHI, LA, FS-ST, AB, FE	WRM 1992, WR-1991	
2152400LC18	North Fork Como Creek 1-16 (Trib to Como Creek)	LC18	2152400	30 10W 01 SE SE	Chippewa	ERW Cold I/1.0	Cold I/3	Cold I/3	UNK/3	U	U		B H PIC T	PSB, BDAM, BY, CL	SED, HAB, TEMP, MIG	BASER, CTR	AB, BC, FE, IHI, LA		
2151800LC18	Tilden Creek	LC18	2151800	28 09W 13 SW NW	Chippewa		WWFF/5	WWFF/5 Cold I/5	FULLY/5 NOT/5	E	U	HB/IG	B2 H PIC T	BY, PSB, CE, CL	OC, HAB, SED, NH3	BUG/C/1990, DO/C/1991, FS-COMP/C/1991, BASER, CTR	AB, FE, LA, IHI, FS-ST	WRM 1992, WR-1991	
2150400LC18	Trout Creek	LC18	2150400	28 09W 10 SW NE	Chippewa	ERW Cold I/2.8	Cold I/2.8	Cold I/2.8	FULLY-THR/2.8	E	U	HB/IG	B2 H PIC T	FL, BS, CE, PSB, BY	SED, HAB, TEMP, TURB	BUG/C/1990, DO/C/1991, CT/C/1991, FS-COMP/C/1991, BASER, CTR	AB, BS, FL, FE, IHI	WRM 1992, WR-1991	
2151600LC18	Creek 32-3 (Trib to Hay Creek)	LC18	2151600	30 09W 32 SW NE	Chippewa	ERW Cold I/1.4	Cold I/1.4	Cold I/1.4	FULLY-THR/1.4	M	U		B3 H PIC T	PSB, CL, BDAM	HAB, SED	BASER, CTR, FS STK EVALU-C ³⁵	AB, FE, BC, LA	FH-1995	
2151600LC18	Creek 35-6 (Trib to Hay Creek)	LC18	2151600	30 10W 36 NW NW	Chippewa	ERW Cold I/1.0	Cold I/1.0	Cold I/1.0	FULLY-THR/1.0	M	U		B3 H PIC T	CL, OBS-N, BDAM	HAB, SED	BASER, CTR, FS STK EVALU-C ³⁶	AB, BC, LA	FH-1995	
	7 Unnamed Streams						WWFF/20.3, WWSF/17.7, Cold I/14.1, Cold I/14.1	WWFF/6, WWSF/17.7, Cold I/20.3, Cold I/17.1	FULLY/16.5, PART/6, NOT/14.3, THR/27.3										

LC19

ID Code	Stream Name	Waistwater Code	WB ID Code	Town Range Section	County	Qualified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator /Result	Data Level	Source	Impact	Monitoring Recv./Status/Dat	Management Recv./Status/Dat	Ref	
2154000LC19	Alder Creek	LC19	2154000	28 06W 30 SE NE	Eau Claire, Chippewa		UNK/3	UNK/3	UNK/3	U	U		BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154600LC19	Big Drywood Creek	LC19	2154600	29 07W 28 NE NE	Chippewa		UNK/16	UNK/16	UNK/16				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155600LC19	Brown Creek	LC19	2155600	28 07W 28 NE NW	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155000LC19	Chap Creek	LC19	2155000	29 06W 05 SW NE	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155700LC19	Clear Creek	LC19	2155700	28 07W 28 NE NE	Chippewa		UNK/4	UNK/4	UNK/4				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2156300LC19	Coldwater Creek	LC19	2156300	29 05W 06 NE SE	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154600LC19	Drywood Creek	LC19	2154600	29 07W 33 NE SW	Chippewa		UNK/4	UNK/4	UNK/4				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154700LC19	Dutch Creek	LC19	2154700	29 07W 28 SW SE	Chippewa		UNK/4	UNK/4	UNK/4				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2152900LC19	Fredrick Creek	LC19	2152900	28 08W 14 SE NE	Chippewa		UNK/2	UNK/2	UNK/2				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER, CTR	NPS, AB, FE, BS	CHIP. CO. - 1996	
2157700LC19	Hay Creek	LC19	2157700	30 05W 04 NW NW	Chippewa		UNK/11	UNK/11	UNK/11				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155900LC19	Hannon Creek	LC19	2155900	29 06W 32 SE NE	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155200LC19	Iron Creek	LC19	2155200	29 07W 16 SW NW	Chippewa		UNK/2	UNK/2	UNK/2				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2156100LC19	Loiz Creek	LC19	2156100	29 06W 35 SE NE	Chippewa		UNK/4	UNK/4	UNK/4				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER, CTR	NPS, AB, FE, BS	CHIP. CO. - 1996	
2155100LC19	Little Drywood creek	LC19	2155100	29 07W 28 NE NE	Chippewa		UNK/19	UNK/19	UNK/19				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2156800LC19	Oiler Creek	LC19	2156800	30 05W 04 NW SE	Chippewa, Taylor		UNK/19	UNK/19	UNK/19				BHP/CT	PSS, NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2153200LC19	Paint Creek	LC19	2153200	28 07W 07 NW SE	Chippewa		UNK/21	UNK/21	UNK/21				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER, CTR	NPS, AB, FE, BS	CHIP. CO. - 1996	
2157800LC19	Pike Creek	LC19	2157800	30 05W 05 NW NW	Chippewa		UNK/5	UNK/5	UNK/5				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2153300LC19	South Fork Paint Creek	LC19	2153300	28 07W 16 NW SW	Chippewa, Eau Claire		UNK/6	UNK/6	UNK/6				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER, CTR	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154900LC19	Seth Creek	LC19	2154900	29 07W 14 NW SE	Chippewa		UNK/7	UNK/7	UNK/7				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER, CTR	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154200LC19	Sherman Creek	LC19	2154200	28 06W 29 NW SW	Chippewa		UNK/4	UNK/4	UNK/4				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2153500LC19	Silver Creek	LC19	2153500	28 07W 15 SW SE	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2156000LC19	Slaughterhouse Creek	LC19	2156000	29 06W 33 NW NW	Chippewa		UNK/1	UNK/1	UNK/1				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2153000LC19	Sillison Creek	LC19	2153000	28 08W 13 SW NW	Chippewa		UNK/3	UNK/3	UNK/3				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2156200LC19	Turner Creek	LC19	2156200	28 06W 03 NW NE	Chippewa		UNK/2	UNK/2	UNK/2				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2153800LC19	Wilicat Creek	LC19	2153800	28 07W 24 SE SE	Eau Claire, Chippewa		UNK/2	UNK/2	UNK/2				BHP/CT	NPS	SED, TURB, NUT, HAB	BASER	NPS, AB, FE, BS	CHIP. CO. - 1996	
2154500LC19	Yellow River	LC19	2154500	29 07W 31 NE SE	Chippewa, Taylor		WWSF64	WWSF64	WWSF64				BHP/CT	SB, CE, BY, NPS, HM-DM, FL	SED, TURB, NUT, HAB, MIG	BASER, FS-COMP, ES	NPS, AB, FE, BS, PDB, DR, FS	CHIP. CO. - 1996	
	10 Unnamed Streams						WWSF64	WWSF64	WWSF64										

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LC21

ID Code	Stream Name	Watershed Code	WB ID Code	Town Range Section	County	Catified Use	Existing Use	Attainable Use	Supporting Use	Assessment	Trend	Integrity Indicator /Result	Data Level	Source	Impact	Monitoring Rec./Status/Dat	Management Rec./Status/Dat	Refs	
2182000LC21	Beaver Creek	LC21	2182000	32 05W 20 SW NW	Chippewa		UNK/3	UNK/3	UNK/3	U	U		B H P I C T			BASER			
2181600LC21	Buck Creek	LC21	2181600	31 06W 04 SE SW	Chippewa		UNK/4	UNK/4	UNK/4	U	U		B H P I C T			BASER			
2050000LC21	Chippewa River	LC21	2050000		Chippewa		WWSF727	WWSF727	FULLY/27 PART/27	M E	S		B H P I C T	HM,SB,EX-PL, HM-DM, CL, PSI, PSM	HAB, SED, MIG, COM, FLOW, HG	BASER, FL, FS, OTHER, FS REGS, EVAL, FS STK EVAL	PLAN, PROT, AB, BFR, EXC, PDR, FS-PS, FS-REGS, FS-STK	FH-1888	
2181200LC21	Clark Creek	LC21	2181200	31 06W 19 NE NE	Chippewa		UNK/3	UNK/3	UNK/3	U	U		B H P I C T			BASER			
2174800LC21	Cobban Creek	LC21	2174800	30 07W 11 NW NW	Chippewa		UNK/2	UNK/2	UNK/2	U	U		B H P I C T			BASER			
2174750LC21	Creek 17-13 (Trib to Chippewa River)	LC21	2174750	30 07W 17 NE SE	Chippewa	ERW Cold I/1.2	Cold I/1.2	Cold I/1.2	UNK/1.2	U	U					BASER, CT/IR			
2174800LC21	Cushing Creek	LC21	2174800	30 07W 16 NW NE	Chippewa		UNK/1	UNK/1	UNK/1	U	U		B H P I C T			BASER			
2175900LC21	Firth Lake Creek	LC21	2175900	31 07W 16 SE SE	Chippewa		UNK/4	UNK/4	UNK/4	U	U		B H P I C T			BASER			
2181500LC21	Fisher River	LC21	2181500	31 06W 06 NW NW	Taylor, Chippewa		WWSF53	WWSF53	UNK/33	U	U		B H P I C T	PSB, BY, CL, SB		BASER	AB, FE		
2181100LC21	French Creek	LC21	2181100	31 06W 19 SW SW	Chippewa		UNK/6	UNK/6	UNK/6	U	U		B H P I C T			BASER			
2168700LC21	Jim Creek	LC21	2168700	29 08W 16 NE NW	Chippewa		UNK/9	UNK/9	UNK/9	U	U		B H P I C T	CL	TURB, SED, HAB	BASER	AB		
2181000LC21	Lehman Creek	LC21	2181000	31 07W 25 SW NW	Chippewa		UNK/2	UNK/2	UNK/2	U	U		B H P I C T			BASER			
2168900LC21	McCann Creek	LC21	2168900	30 08W 18 NE SE	Chippewa	ORW Cold I/13.2	Cold I/13.2	Cold I/13.2	FULLY-THR/13.2	E M	D		B H P I C T	CE, BDAM, PSB, BY, CUL, CL, EX, RC, OBS-M, OBS-N, NMM	SED, HAB, TURB, TEMP, COM, FLOW, MIG, IMAC	BASER, CT, FL, FS-COMPR, FS-HAB, FS-COMPR-36	PLAN, PROT, IHI, AB, BC, EXC, RE, FS-PS, FS-REGS, LA, NPS	FH-1896	
2175000LC21	Minnie Creek	LC21	2175000	31 07W 35 SE SW	Chippewa		UNK/1	UNK/1	UNK/1	U	U		B H P I C T			BASER			
2175100LC21	No. Fk, Bob Creek	LC21	2175100	31 07W 35 NW NW	Chippewa		UNK/15	UNK/15	UNK/15	U	U		B H P I C T	NPS, PSB, CL	HAB, SED	BASER	AB, FE		
2168900LC21	O'Neill Creek	LC21	2168900	29 08W 16 SW NW	Chippewa		WWSF717	WWSF717	FULLY/17	E U	U		B H P I C T			BASER			
2175200LC21	So. Fk, Bob Creek	LC21	2175200	31 07W 35 NW NW	Chippewa		UNK/10	UNK/10	UNK/10	U	U		B H P I C T	SB, PSB, CL	HAB, SED	BASER	AB, FE		
2176300LC21	Spring Creek	LC21	2176300	31 07W 16 SW SE	Chippewa		UNK/7	UNK/7	UNK/7	E	U		B H P I C T	HM-DM	FLOW, TEMP, HAB	BASER, CT/IR, FI	DR	FH-1972	
	39 Unnamed Streams						WWSF44 Cold I/13.2, UNK/100	WWSF44 Cold I/13.2, UNK/100	FULLY/44 PART/NOT/ THR/13.2 UNK/100										

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Upper Chippewa River Basin Water Quality Management Plan (1996)

WATERSHED NARRATIVES

HOW TO USE THE WATERSHED TABLES

The following information is included in the watershed tables.

Name of Stream: All named streams and some unnamed streams are listed. Stream names are those found on U.S. Geological Survey (USGS) quadrangle maps unless the Wisconsin Geographic Names Council established a different name. Unnamed streams are identified by location of the stream mouth as indicated by township, range, section and quarter-quarter section.

Length: Stream length is either the total length of the stream, or the starting and ending mile of the portion of the stream described based on data from the Fish Distribution Study conducted by the Bureau of Research (WDNR Research Report 126, 1984). The stream mile at the stream mouth is zero ("0") and increases as one moves upstream.

Existing Use: This column indicates the existing biological use supported by the stream as defined in NR 102(04)(3) under fish and aquatic life uses. A blank space indicates the existing use is unassessed. The following abbreviations for stream uses are used in the tables:

COLD; Cold Water Communities; includes surface waters capable of supporting a community of cold water fish and other aquatic life or serving as a spawning area for cold water fish species. This use includes, but is not restricted to, surface waters identified as trout waters in the publication (6-3600[80]) *Wisconsin Trout Streams*.

WWSF; Warm Water Sport Fish Communities; includes surface waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

WWFF; Warm Water Forage Fish Communities; includes surface waters capable of supporting an abundant diverse community of forage fish and other aquatic life.

LFF; Limited Forage Fish Communities; includes surface waters of limited capacity because of low flow, naturally poor water quality or poor habitat. These surface waters are capable of supporting only a limited community of forage fish and aquatic life.

LAL; Limited Aquatic Life; includes surface waters severely limited because of very low or intermittent flow and naturally poor water quality or poor habitat. These surface waters are capable of supporting only a limited community of aquatic life.

The table also includes the "class" of trout streams based on "Wisconsin Trout Streams" [DNR Publ. 6-3600(80)] and Outstanding/Exceptional Resource Waters, Wisconsin Administrative Code NR 102.10 and NR 102.11.

Class I streams are high-quality streams where populations are sustained by natural reproduction.

Class II streams have some natural reproduction but need stocking to maintain a desirable fishery.

Class III streams sustain no natural reproduction and require annual stocking of legal-size fish for sport fishing. The approximate length or portion of stream meeting each of the use classes is indicated.

Potential Use: This column indicates the biological use, and trout stream class, a stream or stream segment could achieve if it was well managed and pollution sources were controlled. In many cases potential use is the same as the existing use classification. In other streams potential use may be higher than the existing use. Abbreviations are the same as those used in the existing use columns. The sources of information are indicated by footnotes on each table. The classification for trout streams came from "Wisconsin Trout Streams" [DNR Publ. 6-3600(80)], Wisconsin Administrative Code NR 102.10 and NR 102.11 and the professional judgments of area Fish Managers. If the potential biological use is unknown, a blank space indicates the potential biological use is unassessed.

Supporting Potential Use: This column indicates whether a stream is threatened, or is fully, partially, or not meeting its potential biological use. An entry in any of the columns indicates the relationship between actual stream use and potential use. For example, if the entire length of a stream is listed under the "Fully" column, the stream has no problems which can be controlled. When a portion or all of a stream length is listed under another heading, the stream is affected or threatened by some manageable factor and the biological use of the stream can probably be improved. **In this plan, this column is used only if there is recent information on the stream, or if a fisheries manager or aquatic biologist familiar with the stream is able to make a determination based on best professional judgment. A blank space indicates that use support is unassessed.**

Assessment Category/Monitored or Evaluated: It is important to detail what information was used to derive a potential biological use designation and the degree to which a stream meets that potential use. If the potential use decision was based upon site-specific data, then "M," for monitored, is entered. If the decision is based on information other than site-specific data (citizen complaints, best professional judgment of a biologist or fish manager) then "E," for evaluated, is entered. "Evaluated" includes decisions based on data more than five years old.

Stream Classification (water quality standard designation): This column indicates the formal stream classification of a particular stream. All state waters are classified as one of the following:

Fish and Other Aquatic Life Use Waters: All surface waters are classified into one of the following fish and other aquatic life subcategories. Only the first three are considered suitable for the protection and propagation of a balanced fish and other aquatic life community. The last two are not capable of supporting a balanced community because of naturally limited habitat or water quality. These limited forage fishery and limited aquatic life waters are listed in NR104 if they receive a permitted point source discharge.

Cold Water Communities (COLD) are capable of supporting a community of cold water fish and other aquatic life. This classification includes all the streams referenced in the Wisconsin Trout Streams publication.

Warm Water Sport Fish Communities (WWSF) are capable of supporting a community of warm water sport fish or of serving as a spawning area for warm water sport fish.

Warm Water Forage Fish Communities (WWFF) are capable of supporting an abundant diverse community of forage fish and other aquatic life.

Limited Forage Fishery (LFF) communities capable of supporting only a limited community of forage fish and aquatic life.

Limited Aquatic Life (LAL) communities capable of supporting only a limited community of aquatic life.

Great Lake Communities consist of the waters of Lakes Michigan and Superior, including Green Bay and all arms and inlets, as well as tributaries to these waters which serve as a spawning area for anadromous fish species. These waters have their own category because of their unique characteristics. Also, they will receive special protection from the impacts of toxic substances under the new antidegradation rules.

Note: Any water which is not formally classified is assumed by the Federal Clean Water Act to meet the Clean Water Act goals of supporting a balanced warm-water fish and other aquatic life community and will appear in the table as DEF.

Outstanding Resource Waters (ORW) have the highest quality water and fisheries in the state and are therefore deserving of special protection. No discharge is allowed to these waters unless the quality of the wastewater discharged is equal to or better than background conditions. These streams are listed in NR 102.

Exceptional Resource Waters (ERW) have excellent water quality and valued fisheries but already receive discharges. In some cases, new discharges to exceptional waters may be allowed to correct an environmental or public health problem. These streams are listed in NR 102.

Use Problems, Source/Impact: This column indicates the probable sources of pollution in the stream and the types of water quality problems present (impact). Some streams shown as fully meeting potential use may still show up in this column as having a use problem. When this occurs it may mean there is a problem but it cannot be managed for some reason, or there is a potential threat to the use. These situations are explained in the narrative or in the references.

Following is a key to the abbreviations in the watershed tables:

Source (cause of problem)

BDAM - Beaver dam
CM - Cranberry marsh
DRDG - Dredging
GR.Pit - Gravel Pit Washing Operation
HM - Hydrologic modification
LF - Landfill
NPS - Unspecified nonpoint sources
 BY - Barnyard or exercise lot runoff
 CL - Cropland erosion
 CON - Construction site erosion
 PSB - Streambank pasturing
 RS - Roadside erosion
 SB - Streambank erosion
 PSB - Streambank pasturing
PSM - Point source, municipal treatment plant discharge
PSI - Point source, industrial discharge
SP - Spill

Impact (effect or impact of source on a stream)

BAC - Bacteriological contamination
DO - Dissolved oxygen
FAD - Fish advisory
FLOW - Stream flow fluctuations caused by unnatural conditions
HAB - Habitat (lack of cover, sedimentation, scouring, etc.)
MIG - Fish migration interference
NUT - Nutrient enrichment
SC - Sediment contamination
SED - Sedimentation
TURB - Turbidity

Narrative/Recommendations: This column indicates if there is a narrative or if there are monitoring or management recommendations relating to the stream. The column is marked with an "N" if there is a narrative. The column is marked with an "R" if there are recommendations.

References: The reference material used to complete the table for each stream is indicated by a number. A corresponding list of references is provided at the end of each watershed write-up.

HOLCOMBE FLOWAGE WATERSHED (UC01)

The Holcombe Flowage Watershed is the southwestern-most watershed in the Upper Chippewa River Basin. Approximately 70 percent of the watershed is wooded, with the remainder open woodland and agriculture. The watershed is divided into roughly equal parts between Rusk and Chippewa Counties, and contains the Holcombe Flowage in its eastern tip. The flowage is an impoundment formed by the Northern States Power Company dam on the Chippewa River near the town of Holcombe. Holcombe Flowage supports a very good sport fishery, although a fish consumption advisory exists for walleye due to mercury. Shore vegetation consists of upland woods and wetlands with heavy development around the entire perimeter of the flowage. The flowage is fed by the Chippewa, Flambeau and Jump rivers, and Main, Deertail, Cranberry, and Birch creeks.

Stream surveys from the 1960s provide the only data for most of the streams in the watershed. We have virtually no documentation describing nonpoint source threats to water quality of streams in the Holcombe Flowage Watershed.

RECOMMENDATIONS

1. Northwest and Western District Water Resources Management (WRM) should evaluate nonpoint source water pollution impacts on all named streams in this watershed, Birch, Cranberry, Mud, Tealey, Willow, Foster, Rick, Swift, Cedar, Potato, and McDermott creeks to allow for ranking as potential priority watershed project under Wisconsin's Nonpoint Source Water Pollution Abatement Program (Type B).
2. District WRM, together with the U.S. Geological Survey should identify the sources of sediment inputs into the Chippewa River, and document the extent and rate of sedimentation (Type B and C).

Chippewa River

The Chippewa River supports an excellent warm water sports fishery that is intricately linked to the Holcombe Flowage. Besides containing fish such as walleye, muskellunge, northern pike, bass, and rough fish species, the Chippewa River provides an important lake sturgeon spawning habitat (Bur. of Fisheries Management). We have little water quality information on this segment of the Chippewa River. Long-time residents observe, however, that the character of sections of the river bottom has changed from cobble to shifting sand over the past 20 years (Pratt, 1993). Despite the serious impact sedimentation can have on the river's biological health, the severity and extent of sand deposition in the Chippewa River is unknown.

The Chippewa River segment in this watershed is very significant for endangered resources. Rare dragonflies, two listed fish species, and several other Wisconsin Special Concern Species have been found here. Many populations of rare species have been declining in the Chippewa River (Bur. of Endangered Resources). It is thus important to identify water quality or habitat threats, and reduce any degradation of water quality in the Chippewa River.

Table 6. Holcombe Flowage (UC01) Streams
 COUNTIES: Chippewa, Rusk SQUARE MILES:
 WATERSHED NUMBER: UC01

NAME OF STREAM	LENGTH (MILES)	EXISTING USE/MILES	POTENTIAL USE/MILES	FULLY-PART- NOT-(MILES)	CLASS.	USE PROBLEMS		REFERENCES
						SOURCE/ IMPACT	MILES EVALUATED/ MONITORED	
Chippewa River	19	WWSF ^c	same	X	DEF	SED	E	R/N 2,4
Birch Creek	4	WWFF	same		DEF		E	R 2
Cranberry Creek	5	WWFF	same		DEF		E	R 1
Mud Creek	13	WWFF	same		DEF		E	R 1
Tealey Creek	5	WWFF	same		DEF		E	R 1
Willow Creek	5	WWFF	same		DEF		E	R 1
Foster Creek	4	WWFF	same		DEF		E	R 1
Rice Creek	1	WWSF	same		DEF		E	R 1
Swift Creek	3	WWSF	same		DEF		E	R 2
Cedar Creek	7	WWFF	same		DEF		E	R 1
Potato Creek	8	WWSF	same		DEF		E	R 2
McDermott Creek	6							
Manitou Wetland	<1	LAL ^d	Same		LAL ^d			
Unnamed Streams	49							

^aA formal use classification (COLD, WWSF, WWFF) published by the department.

^bTrout stream identified in the "blue" Wisconsin Trout Streams book (WDNR, 1980).

^cA formal variance use classification published by the department and correctly listed in NR 104.

^dA formal variance use classification published by the department and incorrectly or not listed in NR 104.

^eRecent studies or the professional judgment of a fish manager or aquatic biologist familiar with the water indicates this is the biological use the stream is now meeting or has the potential to meet.

DEF - Waters not formally classified are assumed by default to meet the Federal Clean Water Act goals of supporting a balanced warm-water fish and other aquatic life community.

USE PROBLEMS

SED - Sedimentation

NPS - Unspecified nonpoint sources

BY - Barnyard or exercise lot runoff

Upper Chippewa River Basin Water Quality Management Plan (1996)

HOW TO USE THE LAKE TABLES

LAKE NAME: All named lakes 10 acres or larger and unnamed lakes 25 acres or larger for each watershed in the Upper Chippewa River Basin are listed on each watershed's lake table. Lake names are those found on U.S. Geological Survey (USGS) quadrangle maps unless the Wisconsin Geographic Names Council has established a different name. Some lakes are known locally by other names. Where available, those names have been listed along with the lake's official name. Lakes are identified by name unless multiple lakes with the same name occur in any county when township, range and section locators are added.

CO.: Counties are identified by number as alphabetically listed for Wisconsin's 72 counties. Counties in the Upper Chippewa River Basin are:

Ashland (02)	Bayfield (04)	Chippewa (09)	Iron (26)
Oneida (44)	Price (51)	Rusk (55)	Sawyer (58)
Taylor (61)	Vilas (64)	Washburn (66)	

RF. AREA: The surface area is the size of the lake, in acres, as listed in WDNR publication "Wisconsin Lakes".

MAX DEPTH: Maximum depths are those listed in "Wisconsin Lakes," WDNR.

LK. TYPE: Each lake type displays unique limnological characteristics based on physical and chemical properties. Production of plant and animal life generally varies with lake type. The identifying number used in the tables and the basic classifications and qualifying criteria are:

(1) Seepage lake; Landlocked. Water level maintained by groundwater

table and basin seal. Intermittent outlet may be present.

- (2) Drainage lake: Natural lakes and impoundments the main water source of which is stream drainage. Has at least one inlet and one outlet.
- (3) Drained lake: Natural lake the main water source of which is dependent on the water table and seepage from adjoining wetlands. Seldom has an inlet but will have an outlet of very little flow. Similar to the seepage lake except for the outlet.
- (4) Spring lake: Seldom has an inlet, but always has an outlet of substantial flow. Water supply dependent upon groundwater rather than surface drainage.
- (5) Impoundment: A drainage lake that has an impounding structure (dam) located on the outlet stream that contributes significant depth to the waterbody. Shallow impoundments commonly exhibit problems with sedimentation, turbidity, excess vegetation and algae, rough fish and water level fluctuations.

WBN: The unique seven digit number assigned for each lake, using the WDNR Master Waterbody File.

PUB. ACC.: The type of public access facility available as described in the WDNR "Wisconsin Lakes" publication:

BR = boat ramp T = walk-in trail R = roadside
W = wilderness NW = navigable water.

TSI: Trophic status index values were calculated for waters where sufficient water quality data was available. Wisconsin trophic state index equations were used to calculate these values (Lillie, et al. 1993).

EVAL: An X indicates lake was evaluated using TSI data more than five years old rather than being monitored recently.

LK. CLASS: The purpose of this analysis is to classify lakes according to their relative sensitivity to phosphorus loading and existing trophic condition. The screening identifies high quality lakes that should receive highest priority for nutrient control management. The analysis first separates lakes into two major categories; lakes that are sensitive to increased phosphorus loading (Class 1) and lakes less responsive to changes in phosphorus loading (Class 2). Lakes in each general classification are then subdivided into management groups based on data needs or existing water quality conditions.

Class 1:

- A = Existing water quality fair to excellent; potentially most sensitive to increased phosphorus loading
- B = Existing water quality poor to very poor; less sensitive to

- C = increased phosphorus loading than Group A
= Data inadequate or insufficient to assess trophic condition;
classification monitoring recommended
- D = Stained, dystrophic lake, or aquatic plant-dominated lakes.

- Class 2:
- A = Existing water quality fair to excellent; may not be as sensitive to phosphorus loading as Class I lakes
 - B = Existing water quality poor to very poor; low sensitivity to increased phosphorus loading
 - C = Data inadequate or insufficient to assess trophic condition
 - D = Stained, dystrophic lake, or aquatic plant-dominated lakes.

These classifications are used to establish management recommendations and priorities.

WINT. KILL: An indication of past history of winterkill based primarily on information from the Surface Water Inventory database.

FISH ADV.: Numerous lakes in Wisconsin contain fish with elevated levels of mercury. Fish consumption advisories are issued semi-annually for lakes with fish mercury levels of 0.5 ppm or greater. Generally, predator fish from soft water, poorly buffered, low pH lakes have the highest concentrations of mercury. An X in this column denotes that a fish consumption advisory exists for this lake.

The recommendations column for fish tissue mercury monitoring (Hg) denotes those waters recommended for fish sampling with a 1 through 5 priority rating dependent upon the degree of public access and the type of fishery.

ALK.: A measure of the amount of available carbonates and other materials that reflect the buffering capacity of the water.

ACID SENS: This column identifies lakes highly susceptible to acid deposition. Monitoring is recommended for lakes most susceptible and having inadequate water quality information.

- N = not sensitive.
- N = lakes with alkalinities of 3-5 mg/l as calcium carbonate (CaCO₃); moderate priority for monitoring
- Y = lakes most susceptible to acid deposition, recommend monitoring to confirm sensitivity status; high priority

RES. MGMT POTN: This column identifies lakes that have the potential to benefit from cooperative resource management efforts. Cooperative efforts may include Bureaus of Water Resources Management, Water Regulation and Zoning, Fisheries Management, Game Management, other WDNR staff, other state or federal agencies and local interest groups.

Management Groups:

- Group A - protection management recommended
- high value fishery and/or recreational use

- sensitive to phosphorus loading
- Group B
 - high potential for cooperative management efforts
 - high value fishery and/or recreational use
 - public access available
 - potential for water quality improvement
- Group C
 - current management appropriate
 - no further recommendations at this time
- Group D
 - additional fishery and/or water quality data needed to make management recommendations
 - high priority for data collection
- Group E
 - additional fishery and/or water quality data needed to make management recommendations
 - low priority for data collection
- Group F
 - lakes with limited fishery potential
 - evaluate cooperative management potential
- Group G
 - lakes with very limited or no fishery potential
 - low priority for water resources management/fisheries management efforts
 - manage for wildlife, aesthetics, etc.

ORW: In the basin, 31 lakes are classified as "Outstanding Resource Waters" as described in Administrative Code NR 102. These waters may be identified with an X. For those 15 lakes classified as "Exceptional Resource Waters" under NR 102, an "ERW" appears in this column. For more information on this classification see "How to Read the Watershed Tables" in the Surface Water Quality Report.

MONITORING: These columns identify existing or recommended monitoring:

- SH = Self-Help Lake Monitoring Volunteer
- TM = Long-Term Trend Monitoring Lake
- Hg = Fish tissue mercury monitoring
- AD = Acid deposition monitoring
- TS = Trophic status monitoring
- ILR = Lake District Feasibility Study conducted in 1970s
- IM = Inventory monitoring (update Surface Water Inventory)
- SENS = Aquatic plant "sensitive area" designation

The following letters in each column signify that monitoring is:

R = recommended X = completed C = current activity

COMMENTS: Additional information that was available for the lakes has been included in the comments column. Abbreviations were used to conserve space as follows:

LMO = Lake Management Organization exists for this lake
Mig Birds = Significant use/stop for waterfowl and migratory water birds
N = See the narrative section for this watershed/county for a more detailed description
NPS = Nonpoint source pollution impacts
Rec = High quality recreational experience for listed activities: (eg. Rec: S, F, CA)

S - Swimming **B** - Boating **C** - Canoeing
H - Hunting **W** - Waterfowling
F - Fishing **CA** - Camping

LAKES NARRATIVES BY WATERSHED

HOLCOMBE FLOWAGE WATERSHED (UC01)

The Holcombe Flowage watershed includes the Chippewa River drainage from below Soft Maple Creek down to the Holcombe Flowage dam. This area, which includes the southwestern portion of Rusk County and the northwestern corner of Chippewa County, contains an abundance of lakes, including 22 in Rusk County and 45 in Chippewa County.

Most of this watershed lies in a terminal moraine area and is characterized by irregular, hilly topography, and features numerous pothole lakes and swamps. Several lakes have physical characteristics that make them sensitive to increases in nutrient loading. These lakes generally have relatively small watersheds, are deep enough to stratify and have relatively low flushing rates. Most of the larger natural lakes have good water quality and measures should be taken to protect water quality.

Table 29 lists water quality and management conditions and recommendations, which includes five lakes that winterkill and have marginal fishery and water quality recreational values and thus should be managed primarily for wildlife and/or aesthetic values. Five lakes lack adequate public access facilities and thus should be relatively low in priority for water quality assessment monitoring and other intensive lake management activities. Monitoring for fish tissue contamination by mercury was conducted on seven lakes in this watershed and one lake is under a fish consumption advisory. Participation in the Self-Help Monitoring Program is an ongoing activity on five lakes and one of the volunteers has requested involvement at the "TSI" level of monitoring. Four lakes were designated outstanding resource waters under NR102 and should be managed with water quality protection as a high priority. Water quality in one cluster of lakes is threatened by riparian and residential development and forestry activities. These lakes require special attention and are thus recommended for a priority lakes "cluster" project.

RECOMMENDATIONS

1. Water Resources Management should consider Fireside Lake watershed, and Round, Axehandle, Bradley, Pine, and Spence lake watersheds as a high priority for selection as a lake cluster priority lakes project under the Wisconsin Nonpoint Source Water Pollution Abatement Program, the cluster would include Sand, Henneman, Long, Chain, McCann and Island lakes (Type B).
2. WRM should encourage lake communities to pursue lake management planning grants for water quality assessment studies on Axehandle, Boot, Bradley, Cadotte, Calkins, North Calkins, Dumke, Fireside Lakes, Goose, Henneman, Hodge, Holcombe Flowage, Horseshoe, Knickerbocker, Lake Four, Larrabee, Little Plummer, Logger, Long, Meadows, Picnic, Pine, Plummer, Potato, Pulaski, Riley, Roedecker, Ruby, Rusk, Salisbury, Sand, Spence, East & West Triple, Turk, Two Island, Unnamed (T32N R07W S30-1), Wesley, Willow Creek Flowage #1, and Worden lakes (Type B).

3. WRM should conduct water quality assessment monitoring including trophic status on Boot, Bradley, Cadotte, Calkins, North Calkins, Fireside Lakes, Goose, Henneman, Hodge, Horseshoe Lake (T32N R9W S25), Lake Four, Larrabee, Little Plummer, Logger, Long, Meadows, Picnic, Pine, Potato, Pulaski, Riley, Roedecker, Ruby, Rusk, Salisbury, Sand, Spence, East & West Triple, Turk, Two Island, Unnamed (T32N R07W S30-1), Wesley, Willow Creek Flowage #1, and Worden lakes, which lack up-to-date information.
4. WRM and Fisheries Management should conduct an aquatic ecosystem assessment to evaluate resource potential on Axehandle, Dumke, Horseshoe, Knickerbocker, and Plummer lakes (Type B)
5. WRM and Fisheries Management should conduct sampling for fish tissue contamination by mercury on Boot, Dumke, Pulaski, and Rusk Lakes (Type B).
6. WRM should encourage participation in the Self-Help Monitoring Program on Bear, Dark (T32N R08W S19), Dumke, Fireside Lakes, Foster, Goose, Granger, Harwood #2, Henneman, Hodge, Horseshoe (T32N R9W S25), Knickerbocker, Lake Four, Little Plummer, Meadows, Pine, Potato, Pulaski, Rusk, Sand, Spence, Star, East & West Triple, Turk, Two Island, and Unnamed (T32N R07W S30-1) lakes, with priority given to lakes that have an association and an interested and willing volunteer (Type B).
7. District WRM should conduct aquatic plant management "sensitive area" designation surveys on Boot, Chain, Clear, Fireside Lakes, Island, McCann, Potato, Pulaski and Sand lakes (Type B).
8. WRM should conduct Surface Water Inventory monitoring to update this important database on Axehandle, Bear, Boot, Bradley, Brush, Cadotte, Chain, Clear, Dark (T32N R08W S19), Dumke, Fireside, Foster, Goose, Granger, Harwood #2, Henneman, Hodge, Hogskin, Horseshoe, Hungry, Island, Jacks, Knickerbocker, Lake Four, Larrabee, Leo Joerg, Little Plummer, Logger, Marsh, McCann, Meadows, Picnic, Pine, Plummer, Potato Creek Flowage, Potato, Pulaski, Riley, Roedecker, Round, Ruby, Rusk, Salisbury, Sand, Spence, Star, Sugar, East & West Triple, Turk, Two Island, Unnamed (T32N R07W S30-1), Wesley, Whiplash, Willow Creek Flowage #1, and Worden lakes (Type B).
9. WRM should conduct monitoring to assess the impact of acid deposition on Round Lake (Type B).
10. WRM should continue to assist the Island Chain of Lakes Protection and Rehabilitation District with protection of these high quality waters.
11. District WRM and the Rusk and Chippewa County Zoning Offices should be encouraged to pursue a sanitary survey to answer the shoreline septic concerns on the Island Chain of Lakes (Types B,C).

12. WRM should encourage the development of lake management organizations on Boot and Potato lakes and Fireside Lakes (Type B).
13. WRM should assist the Potato Lake community with an application for a lake management planning grant to assess current lake water conditions and watershed status (Type B).
14. WRM should conduct water quality monitoring to verify the water quality modeling results for Bradley and Henneman lakes (Type B).
15. WDNR should use the Henneman and Bradley Lakes Watershed Study to evaluate using the Stewardship Program to purchase water quality easements and sensitive areas within watersheds of high quality, phosphorus-sensitive lakes (Type B).
16. WRM and Water Regulation and Zoning should continue to work with the Chippewa County Zoning Department to improve the implementation of shoreland zoning (Type B).
17. WRM, Fisheries Management and Northern States Power should develop and conduct an EPA Clean Lakes Phase I Diagnostic and Feasibility Study Project for the Holcombe Flowage (Type B).
18. WRM should continue to work with the Holcombe Flowage Improvement Association, Inc. to control purple loosestrife (Type B).
19. WRM and Fisheries Management should conduct additional sampling of game fish species for mercury in Holcombe Flowage to monitor trends (Type B).
20. The Bureau of Forestry and the Chippewa County Forest and Parks Department should review all timber harvest within the Horseshoe Lake and Knickerbocker Lake watersheds to insure best management practices are implemented to protect water quality (Types B and C).
21. WRM, Water Regulation and Zoning, the Long Lake Protection and Rehabilitation District, and the Chippewa County Zoning Department should develop a cooperative agreement to ensure the effective implementation of shoreland zoning on Long Lake (Types B and C).
22. The Chippewa County Zoning Department should correct all shoreland zoning violations for Long Lake identified in the Chippewa County Lakes Shoreland Zoning Study 1988 (Type C).
23. WRM should assist the Long Lake Protection and Rehabilitation District in updating the Long Lake Water Quality Management Plan (Type B).

24. WRM, Water Regulation and Zoning, and the Rusk and Chippewa County Zoning Departments should develop a cooperative agreement to insure the effective implementation of shoreland zoning on Sand Lake (Types B and C).
25. WRM, University of Wisconsin-Extension and the Wisconsin Association of Lakes should assist the residents of Sand Lake in developing an citizens lake management organization to assist in protecting Sand Lake (Type C).
26. The Round Lake management organization should consider adopting a boating use ordinance that would either limit time of use or designate the entire lake "slow-no wake" (Type C).

Boot Lake

A resident on this lake recently volunteered for the Self-Help Monitoring Program. Sparse information indicates Boot Lake has good water quality.

Fireside Lakes

Recent contacts from lake residents raises the concern for a possible decline in water quality. This 302-acre lake comprising of Mud and Rice lakes, has an intermittent connection with the Chippewa River. During high runoff the river backs up into the lakes, leading to potential nutrient loading. Fireside Lake has an excellent fishery but the potential problems from vegetation and algae growths leads to a high priority ranking for trophic assessment monitoring.

Island Chain of Lakes

This chain of lakes includes 468-acre Chain Lake, 95-acre Clear Lake, 133-acre McCann Lake and 526-acre Island Lake. The aggressive lakeshore community has a long history of lake management activities. An official lake management district was formed in 1977 and a feasibility study was completed in 1980. These lakes were found to be high quality water resources with trophic assessments in the mesotrophic range. A Lake Management Planning Grant Study in 1991 included trophic assessment monitoring and an attempt to document the persistently rumored leakage of septic tank effluent to the lakes. The study revealed the continued high quality of this chain of lakes but the bacteriological testing was inconclusive in revealing any serious septic effluent leakage.

Potato Lake

We have a lack of water quality information for this important, 534-acre lake. File information indicates that portions of the lake have abundant vegetation and algae blooms have been noted. This lake would benefit from the formation of a lake management organization and the implementation of a lake management planning grant study to assess water quality conditions.

Axehandle Lake

Current self-help monitoring data indicates that Axehandle Lake has good water quality based on secchi depth information collected during the summers of 1990 through 1992. Lake physical data and watershed size indicate this lake will be sensitive to increases or decreases in phosphorus loading from the watershed.

Bradley Lake and Henneman Lake

A eutrophication modeling assessment (Voss 1989) was conducted for these two lakes. The lakes were chosen because they were thought to have good water quality, are sensitive to increases in nutrient loading and have watersheds and riparian shorelands which have the potential to be developed. Both lakes are seepage lakes which are managed as two-story fisheries. The modeling assessment evaluated the potential water quality impacts of various residential development scenarios in the watersheds. The study concluded that if the remaining undeveloped shorelands are converted to residential development under current land use restrictions it is likely that both lakes would experience significant water quality degradation.

Currently no residential development exists on Bradley Lake but a significant portion of the shoreline is in private ownership and could be developed. Henneman Lake currently has six seasonal riparian dwellings with the remainder of the shoreline undeveloped. These lakes are representative of a large group of smaller lakes that have remained relatively undeveloped. As development pressures increase it is likely that shorelands will be developed.

Lakes similar to Bradley and Henneman Lakes should also be considered sensitive to increased nutrient loading. These lakes are characterized as smaller deep lakes with small watersheds and relatively low flushing rates. The undeveloped watersheds tend to retain nutrients and preclude their transport to the lake. The conversion of these watersheds to low density residential development will significantly increase nutrient runoff unless proper land use controls are implemented at the time of development. Research conducted in Maine (Dennis 1986) found that runoff from residential development on large wooded lots (1.1 dwellings/acre) contained 5 to 10 times as much phosphorus as runoff from adjacent undeveloped watersheds. This research was conducted in a area of Maine with soil types similar to those in northern Chippewa County.

Dumke Lake

A water quality assessment in 1988 and 1989 indicated this lake is eutrophic and experiences occasional winterkill conditions. The assessment included predicting mercury concentrations in fish tissue based on lake alkalinity and calcium concentrations. This analysis predicted that fish tissue for a 17-inch walleye would be above the .5 ug/l mercury fish tissue standard. The entire shoreline is owned by the State of Wisconsin.

Holcombe Flowage

Holcombe Flowage is a 3,890-acre impoundment on the Chippewa River in northeastern Chippewa County. The impoundment was created in 1950 when Northern States Power completed construction of a 34,000 kilowatt hydroelectric generating facility. The impoundment provides an important recreation resource of regional significance.

Water Resources Management, Fisheries Management and Northern States Power (NSP) currently have several issues and concerns associated with Holcombe Flowage. Water Resources Management and NSP conducted a water quality assessment in 1989. Water quality data for chlorophyll *a*, total phosphorus and secchi depth indicated that the portion of Holcombe Flowage influenced by the Jump River had poorer water quality than the remainder of the impoundment. The monitoring site in the Jump River portion of the impoundment was compared with 11 additional monitoring sites within all the impoundments from Holcombe Flowage downstream. The Jump River site in Holcombe Flowage ranked eleventh for chlorophyll *a* and secchi depth and twelfth for total phosphorus. An infestation of purple loosestrife is presently invading the shorelines and wetlands associated with Holcombe Flowage. Northern States Power is currently evaluating low dissolved oxygen problems in back water embayments. NSP changed its winter operating procedures in the early 1980s to facilitate surging high dissolved oxygen water into the backwater embayments weekly. The current concern is that the high dissolved oxygen water remains near the surface and does not mix throughout water column. This problem may result in severe dissolved oxygen depletion during late winter drawdown when many of the embayments are hydraulically cut off from the main basin. Several of the backwater embayments experience heavy growths of aquatic plants. The decomposition of the plants is likely contributing to the winter dissolved oxygen problems. Holcombe Flowage currently has a fish tissue consumption advisory for mercury in walleye.

Other issues of concern for Holcombe Flowage include the Federal Energy Regulatory Commission relicensing of the Holcombe dam and the discharge from the Flambeau Mining Co. Copper Mine. Northern States Power will begin the relicensing process in 1995 as the current license expires in 2000. Water Resources Management collected sediment samples in 1992 to establish background metals concentrations. These results will help assess if the Flambeau Mining Co. Copper Mine discharge has any impact on Holcombe Flowage. The environmental impact statement for the mine stated that effluent limits in the Wisconsin Pollutant Discharge Elimination System (WPDES) permit are designed to prevent the adverse accumulation of metals in aquatic organisms.

Horseshoe Lake T32N R8W S33

A water quality assessment was completed for Horseshoe Lake in 1988 and 1989. Summer trophic state index values for chlorophyll *a*, total phosphorus and secchi depth were 54, 67 and 48 respectively. These values indicate the lake has fair water quality and is eutrophic. Late winter dissolved oxygen monitoring indicated severe oxygen depletion typical of winterkill conditions. The lake also has a fish consumption advisory for mercury in walleyes larger than 15 inches. The entire shoreline of this lake is in the Chippewa County Forest.

Knickerbocker Lake

A water quality assessment conducted in 1988 and 1989 indicated the lake has poor water quality and is eutrophic. Late winter dissolved oxygen monitoring found severe oxygen depletion and near winterkill conditions. The entire shoreline of this lake is in the Chippewa County Forest.

Long Lake

Long Lake is the largest natural lake and one of the highest quality lakes in Chippewa County. Water quality is still perceived as good but water quality data collected by the department in the Long-Term Trends Monitoring Program indicates water quality is declining. Pre-1980 dissolved oxygen data indicates only 3-4 percent of the lake bottom became anoxic during the summer. Current data indicates complete anoxia in the hypolimnion by late August.

A comprehensive lake management plan was prepared for the Long Lake Protection and Rehabilitation District by Water Resources Management. This plan developed several recommendations which would protect water quality. Several of the recommendations identified effective implementation of shoreland zoning as a critical management activity to minimize increases in nutrient loading to the lake.

A 1988 shoreland zoning evaluation study conducted in Chippewa County, which included Long Lake, was conducted by the Chippewa County Zoning Department and Water Resources Management. The study evaluated if shoreland zoning requirements were being effectively implemented for lakes within the county. The study found that shoreland zoning was not being effectively implemented. The study found that for 70 percent of the activities requiring shoreland zoning permits, the riparian owners either did not obtain a permit or did not adhere to permit requirements.

It is critical that effective lake protection management activities be implemented in the Long Lake watershed. Without effective lake protection activities water quality will continue to decline in Long Lake.

Plummer Lake

A 1989 water quality assessment indicated water quality to be fair. Plummer Lake has moderate nutrient and algal levels. Late winter oxygen concentrations indicated significant depletion and the lake experiences occasional winterkills.

Sand Lake

Sand Lake is included as one of 50 lakes in the department's Long-Term Trends Monitoring Program. Extensive water quality data has been collected from Sand Lake since 1986. The Long-Term Trends Monitoring data indicates that water quality is good and the lake has a diverse high quality aquatic plant population. Physical data for Sand Lake indicate that the lake is sensitive to increases in nutrient loading. Water quality is threatened by existing and future development in the Sand Lake watershed. The lake currently experiences late summer anoxia in the hypolimnion which is indicative of increasing eutrophication.

Round Lake

Round Lake has been monitored since 1986 as one of 50 lakes in WDNR's Long-Term Trend Monitoring Program. Water quality data is collected annually and aquatic plant surveys were conducted in 1988, 1991 and 1994.

Currently the lake has good water clarity and low phosphorus levels, though seasonal monitoring reveals short periods when phosphorus levels significantly increase. For example, during the summer of 1993 the phosphorus levels increased until in August the lake experienced a blue green algal bloom.

With a maximum depth of 18 feet, this shallow lake experiences resuspension of sediments from boat traffic and wind. The Bureau of Research has conducted several studies on Round Lake sediments, finding the majority of sediment in the lake is loosely consolidated with a low specific gravity and high--more than 50 percent--organic content. This sediment resettles slowly after agitation by wind or boat traffic and can release phosphorus to the surface water.

As part of a boating-impact survey conducted on Round Lake during the summer of 1994, water samples and Secchi disk readings were taken before and after high use boating weekends. The most significant change occurred during Memorial Day weekend: total phosphorus went from 23 micrograms per liter (ug/l) on Friday to 66 ug/l on Sunday. Secchi disk depth readings decreased from 2.3 meters on Friday to 1.5 meters on Sunday.

Aquatic plant survey data also raised concerns about effects of motorcraft on Round Lake. The lake supports 37 rooted aquatic plant species including four listed as rare and of special concern by the Bureau of Endangered Resources: waterthread pondweed, Robbin's spikerush, purple bladderwort and small purple bladderwort. These four plants share a characteristic of very fine submersed stems that are particularly susceptible to being cut by propellers. A number of plants in the lake are indicators of good water quality but are sensitive to disturbance and increased turbidity.

The plant surveys also revealed a dramatic change in the Round Lake plant community from 1988 and 1991. Various-leaved water milfoil went from no presence in the 1988 survey to occurring at 48 percent of the sampling sites in 1991. This plant can be locally aggressive and spreads effectively from cuttings. The appearance and spread in Round Lake coincided with a period of heavier recreational boating use.

Increased recreational usage and boating activity are likely to occur on this lake as a result of a new full-service boat landing, completed in 1995, and a new county park with beach frontage that is currently under construction on the northern shoreline. In response to the threat increased usage may pose to the lake, the Round Lake Protection and Rehabilitation District and Town of Sampson adopted a slow, no-wake zone that parallels the 10-foot depth contour along the western and southern shorelines. This protected zone encompasses the majority of the fragile plant beds and some of the most easily resuspended sediments.

As trend monitoring continues on Round Lake, an evaluation can be made about the effectiveness of this protection. It is possible that the whole lake may eventually need to

be designated as slow, no-wake or limited to trolling motors and non-motorized watercraft.

NAMED LAKES >= 10 ACRES UPPER CHIPPEWA BASIN (Unnamed Lakes >= 25 acres)
Holcombe Flowage Watershed (UC01)

LAKE NAME (T-R-S)	CO.	AREA	SURF. DEPTH	MAX DEPTH	LK. TYPE	WBN	PUB. ACC.	TSJ	EVAL	CLASS	WINT. KILL	FISH ADV.	ALK.	SENS	POTN	ACID	MGMT	RES.	ORW	ILR	IM	SENS	COMMENTS	Monitoring	
																								5	
AXEHANDLE L.	9	84	73	2092500	Y	40	X	1A	2	2	10	N	A	C	R	R	R	R	R	R	R	R			
BEAR LAKE	55	29	12	1833800		47	X	2A	1	1	14	N	E	R	R	R	R	R	R	R	R	R			
BOOT LAKE	55	87	44	1836700	BR			1C	2	2	9	N	A	C											
BRADLEY LAKE	9	11	38	2346000	Y			1A	2	2	7	N	E	R	R	R	R	R	R	R	R	R			
BRUSH LAKE T33N R08W S30	55	17	39	1837400				1C	2	2	4	N	D	R	R	R	R	R	R	R	R	R			
CADOTTE LAKE	9	14	44	1838400				1C	2	2	8	N	D	R	R	R	R	R	R	R	R	R			
CALKINS LAKE	9	43	20	2361100				1C	2	2	5	N	D	R	R	R	R	R	R	R	R	R			
CALKINS LAKE, NORTH	9	14	17	1869000				1C	2	2	60	N	A	X	C									LMO	
CHAIN LAKE	9,55	468	74	2350500	NW	44		1A	2	2	10	N	G	C											
CHICK LAKE T32N R9W S3	9	10	8	1840600						1															
CLEAR LAKE	55	95	74	2350600	BR	42		1A	2	2	88	N	A	X	C									LMO	
DARK LAKE T32N R9W S10	9	13	62	2092700	Y		X	1A	2	2															
DARK LAKE T32N R8W S19	9	21	65	2361800	Y		X	1C	2	2	14	N	D	R	R	R	R	R	R	R	R	R			
DUMKE LAKE	9	11	16	1846100	Y	58	X	1B	1	1	12	N	D	R	R	R	R	R	R	R	R	R			
FIRESIDE LAKES (RICE & MUD)	55	302	30	2349500	BR			1C	2	2	52	N	D	R	R	R	R	R	R	R	R	R			
FOSTER LAKE	9	28	21	2346100				1C	2	2	62	N	C	R	R	R	R	R	R	R	R	R			
GOOSE LAKE	55	20	52	2353500	T			1C	2	2	43	N	D	R	R	R	R	R	R	R	R	R			
GRANGER LAKE	9	10	31	2361000			X	1C	2	2	10	N	C	R	R	R	R	R	R	R	R	R			
HARWOOD LAKE NO. 2	9	14	9	1852900			X	2C	1	1	6	N	C	R	R	R	R	R	R	R	R	R			
HENNEMAN LAKE	9	64	60	2362500	Y		X	1A	2	2	11	N	A	R	R	R	R	R	R	R	R	R			
HODGE LAKE (L.HARRIET)	9	19	28	1853700			X	1C	2	2	5	N	D	R	R	R	R	R	R	R	R	R			
HOGSKIN LAKE T33N R09W S33-13	55	16	8	1853900				2D	1	1	11	N	G	R	R	R	R	R	R	R	R	R			
HOLCOMBE FLOWAGE	9	3890	61	2184900	Y	63	X		2	2	50	N	A	C											
HORESHOE LAKE T32N R8W S33	9	24	23	1854300	Y	54	X	1A	2	2	7	N	A	R	R	R	R	R	R	R	R	R			
HUNGRY LAKE	55	20	20	1855300				1C	1	1	9	N	E	R	R	R	R	R	R	R	R	R			
ISLAND LAKE	55	526	54	2350200	BR	45		1A	2	2	65	N	A	X	C									LMO	
JACKS LAKE	9	14	58	1855700			X	1C	2	2	11	N	A	R	R	R	R	R	R	R	R	R			
KNICKERBOCKER LAKE	9	14	24	1868300	Y	62	X	1B	1	1	17	N	B	R	R	R	R	R	R	R	R	R			
LAKE FOUR	55	21	49	2356200	W			1C	2	2	32	N	D	R	R	R	R	R	R	R	R	R			
LARRABEE LAKE	9	50	31	2352000			X	1C	2	2	8	N	A	R	R	R	R	R	R	R	R	R			
LEO JOERG LAKE	9	12	16	1860100			X	1C	2	2	7	N	C	R	R	R	R	R	R	R	R	R			
LITTLE PLUMMER LAKE	9	10	25	2348800	Y		X	1C	2	2	50	N	C	R	R	R	R	R	R	R	R	R			
LOGGER LAKE	9	19	19	1862700				1C	1	1	6	N	A	C											
LONG LAKE T32N R8W S8	9	1062	101	2351400	Y		X	1A	2	2	42	N	A	C											
MARSH LAKE	55	43	4	2349200				2D	1	1	18	N	G	R	R	R	R	R	R	R	R	R			
MCCANN LAKE	55	133	38	2350400	BR	46		1A	2	2	68	N	A	X	C									LMO	
MEADOWS LAKE	9	10	20	2345500			X	1C	2	2	54	N	A	R	R	R	R	R	R	R	R	R			
PICNIC LAKE	9	25	48	2347000			X	1C	2	2	5	N	A	R	R	R	R	R	R	R	R	R			
PINE LAKE	9	262	115	2092900			32	X	1A	2	91	N	A	X,R	X,R	X,R	X,R	X,R	X,R	X,R	X,R	X,R			
PLUMMER LAKE	9	41	28	2348700	Y	55	X	1A	2	2			A	R	R	R	R	R	R	R	R	R			

Appendix Figure 2.2

WATER QUALITY STANDARDS FOR EACH CLASS OF WATER

CATEGORY	STANDARD
<p><i>Outstanding Resource Waters</i></p> <ul style="list-style-type: none"> ● National wild and scenic rivers ● State wild and scenic rivers 	<p>Waters may not be lowered in quality, except as provided in ch. NR 207 (Water Quality Antidegradation).</p>
<p><i>Exceptional Resource Waters</i></p> <ul style="list-style-type: none"> ● Class I trout waters listed in WI Trout Streams publication 6-3600 ● Other Class I trout waters 	<p>Waters may not be lowered in quality, except as provided in ch. NR 207 (Water Quality Antidegradation).</p>
<p><i>Great Lakes System</i></p>	<p>Waters identified are to be protected from the impacts of persistent, bioaccumulating toxic substances by avoiding or limiting practicable increases in these substances.</p>
<p><i>Fish and Aquatic Life Waters</i></p> <ul style="list-style-type: none"> ● Cold water communities ● Warm water sport fish communities ● Warm water forage fish communities ● Limited forage fish communities ● Limited aquatic life 	<p>Except for natural conditions, all waters in this category shall meet the following criteria:</p> <ul style="list-style-type: none"> ● Dissolved oxygen content no less than 5 mg/L at any time. ● There shall be no temperature changes that may adversely affect aquatic life. ● pH shall be within the range of 6.0 to 9.0. ● Unauthorized concentrations of substances are not permitted that alone or in combination with other materials present are toxic to fish or other aquatic life. ● Temperature and dissolved oxygen for cold waters may not be altered from natural background temperature and dissolved oxygen levels to an extent that trout populations are affected.