

APPENDIX 7. Streams Tables Guidance

HOW TO COMPLETE THE STREAM TABLES

The following information is included in the stream tables. Unknowns in the tables indicate that we have insufficient data to assess the given stream(s). In the future we hope to provide data on these unassessed waterbodies.

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 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 All waterbodies require a waterbody I.D. in order to link them to other databases. When an I.D. can't be found, one can be requested from Don Fago 221-6366

Length: The 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 the Master Waterbody System, developed from a 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 biological use that the stream or stream segment currently supports. This is not a designation or classification; it is based on the current condition of the surface water and the biological community living in that surface water. Information in this column is not designed for, and should not be used for, regulatory purposes. If the existing use is unknown, "UNK" should be entered. The biological use categories are defined in NR102(04)(3) under fish and aquatic life uses, which are the same categories used to describe the stream's codified use. The following abbreviations for existing stream uses are used in the table. See also *Guidelines for Designating Fish and Aquatic Life Uses for Wisconsin Surface Waters (6/98 Draft)*. This draft guidance should be used for determining existing and potential use for Cold (generally) WWSF, WWFF, LFF, and LAL. Until this draft is formally adopted, the categories listed below will be used, as opposed to the proposed revisions incorporating CWT-1-3, CWF, and GLM waters.

COLD Cold Water Community; 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. The cold water community may be indicated by a trout class based on the document, *Wisconsin Trout Streams* (DNR Publ. 6-3600[80]). The approximate length or portion of stream meeting each of the use classes is indicated.

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.

WWSF Warm Water Sport Fish Communities; includes 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 Fishery (intermediate surface waters); includes surface waters of limited 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 (marginal surface waters); includes surface waters severely limited 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.

Potential (Attainable) 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 naturally occurring low flows are generally not problems that can be controlled.

The potential (or attainable) use may be the same as the existing use or it may be higher. Abbreviations for "potential use" are the same as those used in the "existing use" column. Information sources used to determine stream potential are indicated by footnotes in each table. Unless otherwise noted, the source for trout streams was *Wisconsin Trout Streams* (DNR Publ. 6-3600[80]), Wis. Adm. Code NR102.10 and NR102.11, and the professional judgment of WDNR personnel.

Integrity Indicator This is the HBI score for the stream. Very good, good, poor, very poor are the categories (indicated by VG, G, P, or VP).

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 this column shows the relationship between the stream's current and potential biological use. To determine if a waterbody or segment supports a potential use, one or more of the following is used: chemical, physical (habitat, morphology, etc.), or biological information, or direct observation and professional judgment. When biological data contrary to chemical or physical data exists, the biological data overrides the other data.

Fully Supporting "FULLY"

A stream or stream segment's existing biological use is the same as its potential biological use (E = P). This includes stream or stream segments that are *not affected* and stream or stream segments that have *culturally irreversible* impacts. An example of culturally irreversible impacts are those effects in a river system with an "optimally operating" dam—a dam that operates with minimal to no effect on the fish and aquatic life community assemblage, productivity, and diversity. Note that fairly to poorly operating dams are not considered "culturally irreversible" and their effect on biological resources is factored into the use support designation (see partially supporting).

Fully Supporting/Threatened "FULLY-THR"

A stream or stream segment's existing biological use is the same as its potential biological use (E = P), but there is a *clear and imminent* "threat" to the existing use remaining at its current level of biological productivity and ecological health. This threat could be due to actions likely to occur on or to the stream and/or in the watershed, such as:

- ! Rapid commercial, residential, and/or industrial development in the watershed,
- ! The advent of large-scale industrial operations in the watershed,
- ! Planned or active channel modifications that have been, or will be permitted, or cannot be regulated under existing state or federal rules (i.e., drainage districts).

Partially Supporting "PART"

A stream or stream segment's existing biological use is the same as its potential biological use, except that implementation of management practices could enhance the overall ecological health of the biological community. Management practices in this category include modification of hydro-regimes to reduce the impact of dam operations on the biological community.

Thus, E = P, but the potential use assessment is below the stream or stream segment's maximum biological potential and this "less than optimal" condition is reversible.

Not Supporting "NOT"

When a stream or stream segment's existing biological use is less than its potential biological use by a factor of 1 or more of the following codified use classifications:

- Cold (includes Cold I, II, IIN, and III in one group);
- WWSF
- WWFF
- LFF
- LAL

Thus, E < P, with problems considered reversible by implementation of management actions.

Miles Assessed -- Monitored, Evaluated, or Unassessed: To substantiate the Use Support of "fully," "partially," "not" or "threatened," the terms *monitored*, *evaluated* or *unassessed* are defined as the following:

Monitored: A stream has been "monitored" for the purposes of Wisconsin water quality management plans and/or Wisconsin's Water Quality Assessment Report to Congress (305[b]) if:

! Site-specific data has been collected on that stream or stream segment in the past five years;

For the purposes of this document, data is defined as structured information gathered to assess the quality or integrity of a resource. Data from outside the WDNR can be used to help determine the quality or integrity of waters in the State of Wisconsin.

! The data are adequate to develop a best professional judgment about the existing and potential biological use of that stream or stream segment;

! The data should be adequate to judge the difference between the "existing" versus "potential" biological use for that stream or stream segment.

This information is used to determine if the Existing Biological Use matches or supports the Potential Biological Use "fully," "partially," or "not:"--and if that use is "threatened."

Evaluated: A stream has been "evaluated" if information other than site-specific data is adequate to determine a Potential Biological Use and to determine if the stream is currently meeting that level of biological use.

Sources of "evaluated" information include:

! Site-specific data that is more than five years old,

! Information on file provided by the public or others,

! Best professional judgment of a WDNR biologist or a WDNR fish manager.

Unassessed: A stream has been not been assessed.

Codified Use This is the waterbody's classification that is formally and legally recognized by NR102 and 104, Wis. Adm. Code. This column shows the classification that will be used to determine water quality criteria and effluent limits. A stream can obtain a codified use by applying formal stream classification procedures, which are undergoing revision in 1996. Classifications in this column are derived from:

1. Streams classified in NR102 and NR104;

2. Trout streams as defined by *Wisconsin Trout Streams* (1980) and listed in NR 104.

3. ORW and ERW streams officially approved as such by the DNR board and listed in NR102.10 and NR102.11. [In addition, a stream's fish and aquatic life use designation is in this column. Officially, ORW/ERW waterbodies are not fish and aquatic life use designations but are a separate category for the WDNR antidegradation program. These waterbodies also receive a fish and aquatic life use designation for the purpose of determining water quality criteria.]

All other waters will be codified Warm Water Sport Fishery (WWSF) which is the default (DEF) classification.

Streams that are listed in a wastewater permit as "cold," that are not codified as a cold water fish and aquatic life use should not be listed as cold in the codified classification column. The codified class for these streams should be the "default."

Streams classified as trout streams under 1.02(7) by the Bureau of Fisheries Management since publication of *Wisconsin Trout Streams* (1980), are not formally classified as trout waters. These streams will be added to NR102 and/or NR104 during 1996 code revisions. Until the code is revised and approved, however, the "default" code is used for these streams and stream segments (WWSF).

Streams classified as ORW and ERW in NR102.10 and NR102.11:

Outstanding Resource Waters, have excellent water quality and high-quality fisheries. They do not receive wastewater discharges; these point source discharges will not 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.

Exceptional Resource 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.

Use Impairment:

Use Problems, Source/Impact: This column indicates probable sources of pollution in the stream and types of water quality problems present (impact). All streams other than FULLY or UNKNOWN will show use problems and impacts in this column. These situations are usually explained in the narrative.

Following is a key to abbreviations in the stream tables:

Source (cause of problem). This is the source of threat or impairment. Be as specific as possible.

ACC - No or limited access
CM - Cranberry marsh
BDAM - Beaver dam
DRDG - Dredging
EX - Introduced species
F - Forestry activities (logging, logging roads, stream crossings)
HM - Hydrological modification (dam, ditching, wetland drainage)
LF - Landfill
NMM - Non-metallic mining
NPS - Unspecified nonpoint sources
Specified Nonpoint sources:
CL - Cropland erosion
SB - Streambank erosion
PSB - Streambank pasturing
PWL - Woodlot pasturing
BY - Barnyard or exercise lot runoff
CE - Construction site erosion
RS - Roadside erosion
URB - Urban storm water runoff
DEV - Intense development pressure
PSM - Point source, municipal treatment plant discharge
PSI - Point source, industrial discharge
MS - Mine wastes and/or roaster piles

Impact (effect or impact of source on a stream) Various known as the cause, impact or stressor, this column lists the effect on the stream as a result of the source.

AD - Animal deformity
BAC - Bacteriological contamination
CL - Chlorine toxicity
COM - Competition (i.e, encroachment by introduced species)
DO - Dissolved oxygen
FAD - Fish advisory
FLOW - Stream flow fluctuations caused by unnatural conditions
HAB - Habitat (in-stream sedimentation, scouring, etc.)
HM - Heavy metal toxicity
MAC - Undesirable rooted aquatic plant (macrophyte) or algal growth
MIG - Fish migration interference
NH₃ - Ammonia toxicity
NUT - Nutrient enrichment
ORG - Organic chemical toxicity or bioaccumulation
PCB - PCB bioaccumulation
pH - pH (fluctuations or extreme high or low)
PST - Pesticide/herbicide toxicity
SC - Sediment contamination
TEMP - Temperature (fluctuations or extreme high or low)
TOX - General toxicity problems
TURB - Turbidity

Trend This column can be based upon best professional judgment, or by comparing data from past plans to find that a waterbody has improved over previous assessments, or declined. This decline/improvement should not be the result of gaining data, but a relative assessment of changes occurring on the waterbody. The stream may be improving (I), stable (S), declining (D) or unknown (U).

Comments (Com): This column should contain an "N" if there is a narrative for the stream, and/or "R" if there is a management or monitoring recommendation. A detailed recommendation is included in the narrative section for the watershed. Any recommendation specific to a stream should be addressed with a

narrative. Overall narratives for a watershed can sufficiently cover general recommendations such as for watershed wide data collection. Other comments may be included in this column and will be described in footnotes at the bottom of the table, such as the stream's inclusion in a priority watershed project (PW), listing as a critical habitat (CH), or a site containing endangered species (ES), etc.

Data Level In this column, indicate what level of data was used to make your decisions on this stream/segment. Ideally, the number is a composite of physical, chemical, biological and habitat data. EPA guidance is available on how to fill in this column.

References: The reference material used to complete the table for each stream is indicated by a number. A numeric list of references is provided for each watershed. Streams for which there are recommendations, or identified water quality impairments should have at least one reference listed in this column.