

NATIONAL WETLAND INVENTORY USER REPORT 1:100,000 MAP AREA

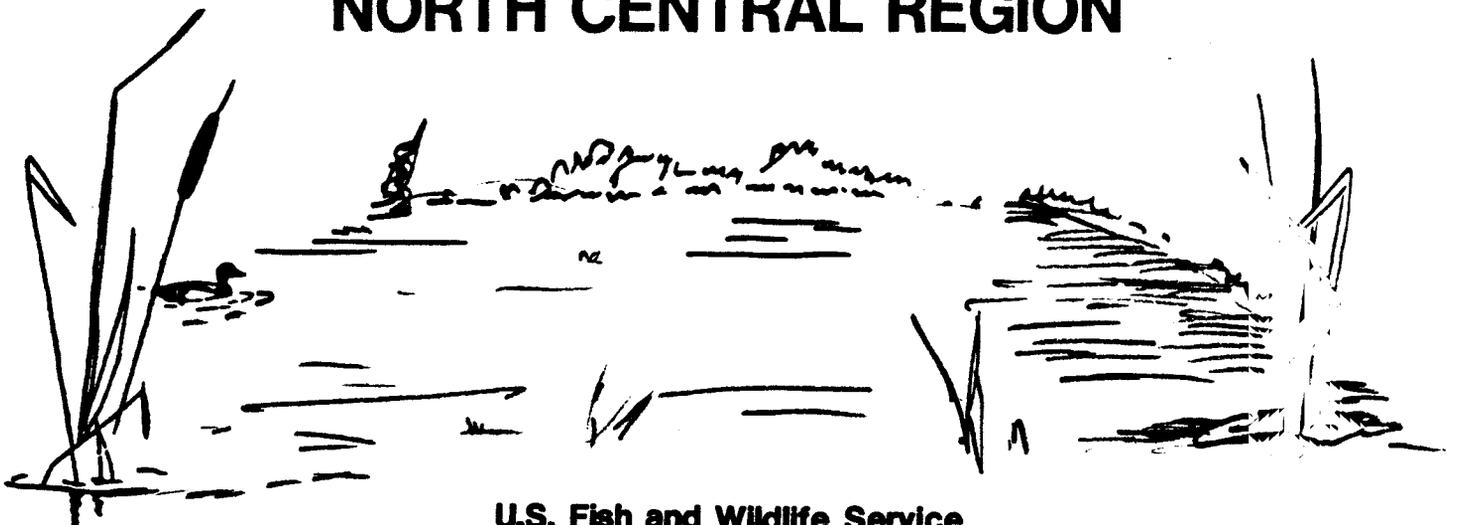
MAP AREA: ASHLAND NE

1:100,000 NAME: ASHLAND

STATE: MICHIGAN



NORTH CENTRAL REGION



U.S. Fish and Wildlife Service

Federal Building, Fort Snelling Twin Cities, Minnesota 55111

**USER REPORT
NATIONAL WETLAND INVENTORY
U.S. FISH AND WILDLIFE SERVICE
REGION 3**



PREPARED BY

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USER CAUTION

Maps for this 1:100,000 scale map were prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deepwater Habitats of the United States, Cowardin, et al., 1979. The aerial photographs reflect conditions during the specific year and season when they were taken. Some small wetlands and those obscured by dense forest cover may not be included on the map document. In addition, there is a margin of error inherent in the use and interpretation of aerial photographs. Thus a detailed on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation.

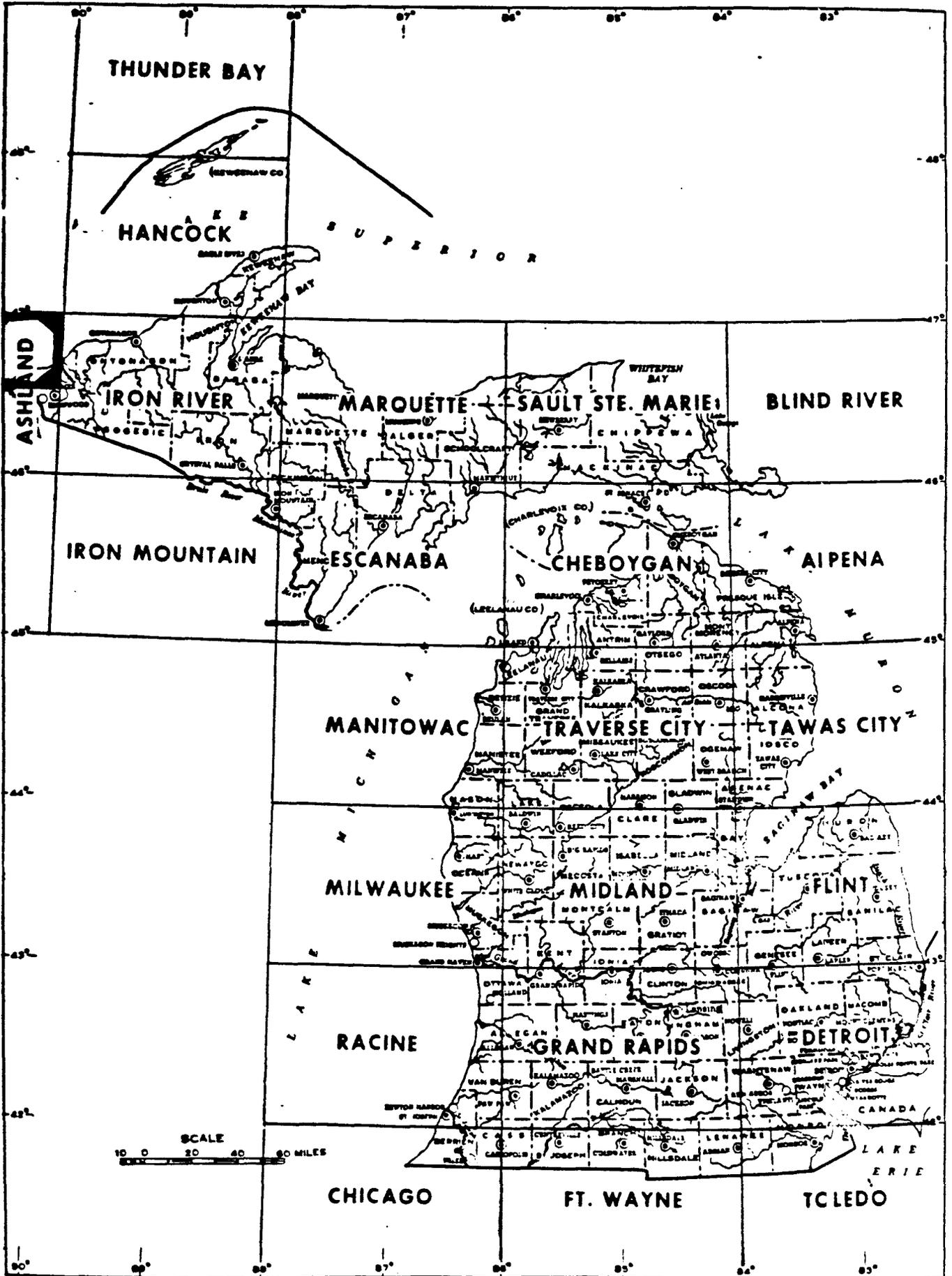
Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either design or products of this inventory, to define limits of proprietary jurisdiction of any local, State, or Federal government or to establish the geographical scope of regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State, or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

Additional information regarding this map or other National Wetland Inventory activities may be obtained by contacting:

Regional Director, Region 3 (AH/TS)
Attn: Regional Wetlands Coordinator
United States Fish and Wildlife Service
Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

Michigan Dept. of Natural Resources
Land Resources Program
Box 30028
Lansing, Michigan 48909

LOCATION OF REPORT
STATE OF MICHIGAN



DATE: December 1983

MAP PREPARATION

Basic Data

Photography Used:

<u>Emulsion</u>	<u>Scale</u>	<u>Date</u>	<u>Percent Coverage</u>
1. Black and white	1:80,000	October 1975	100%

Field Check Dates

1. None

Contractor(s) for Photo Interpretation

1. Michigan Department of Natural Resources

Collateral Data Used

1. USGS topographic quad sheets
2. USDA soil surveys

Mapping Legend: (See Appendix D)

Farmed Wetlands

It is the policy of the Fish and Wildlife Service to not map farmed wetlands in the National Wetlands Inventory unless the wetland is a pothole-like depression, such as those found in the Prairie Pothole Region, intermittently flooded lake bottoms, cranberry bogs, or diked former tidelands in California. Therefore this map area may contain various amounts of non-depression type wetlands which were farmed on the date of the photography and intentionally not included in the inventory. Many of these omitted wetlands commonly occur in floodplains.

GEOGRAPHY

A. General Location

Degrees Longitude: 90° 0' to 91° 0' West

Degrees Latitude : 46° 30' to 47° 0' North

Largest City : North Ironwood, Michigan

This report covers only the Michigan portion of Ashland NE. The Michigan portion covers the western-most tip of Michigan's Upper Peninsula. The map is bordered on the North by Lake Superior, and encompasses a portion of Gagebic County. This map is included in the Black River drainage basin and the Lake Superior watershed. Ottawa National Forest covers a portion of the map area.

B. Ecoregion

Bailey's Ecoregion Classification and Description (Bailey 1978):

Code: 2112 L

Humid Temperate Domain (2000)

The entire Ashland NE map is in this Domain.

The climate of this Domain has strong seasonal temperatures and precipitation cycles, and a distinctive winter season. The Humid Temperate Domain comprises the humid midlatitude forests of broadleaf deciduous and needleleaf evergreen trees.

Warm Continental Division (2100)

All of the Ashland NE map lies within this Division.

This Division characteristically has warm summers and cold, snowy winters. The natural vegetation is needleleaf and mixed needleleaf-deciduous forest. The soils of this Division are Spodosols, which are strongly leached but have a top layer of humus. Spodosols are usually acidic and lack calcium, potassium and magnesium. Despite these deficiencies, Spodosols are very suitable for growing the conifers found in this Division.

Laurentian Mixed Forest Province (2110)

The entire Ashland NE map area falls within this Province.

The vegetation of this Province is representative of the transitional zone in which it lies, between the boreal and deciduous forest zones. Forests consist either of mixed conifer-deciduous stands or mosaic-like arrangements with pure stands of deciduous forest growing on good soil sites and pure stands of conifers growing on poor soil sites.

Pines (Pinus spp.) are the most representative conifers of the mixed forest stands, with white pine (P. strobus) dominating in the Great Lakes region. Pines are often a pioneer woody species following forest fires. Eastern hemlock (Tsuga canadensis) and eastern redcedar (Juniperus virginiana) also grow in this Province.

Northern Hardwoods-Fir Forest Section (2112L)

This section occurs in lowland areas and covers all of the Ashland NE map area.

Hardwoods and firs (Abies spp.) are the predominant tree species of this Section.

C. Topography and Land Forms

Hammond's Land Surface Form and Physical Subdivision (Hammond 1965, 1969):

Codes: (III-3) B2b, (III-3) B4b

Interior Physical Division (III) - This Physical Division covers the entire Ashland NE map area.

North Central Lake-Swamp-Moraine Plains Subdivision (3) - All of the Ashland NE map lies within this Subdivision.

Irregular Plains Class (B2b) - This class includes 40% of Ashland NE, extending from the southeast and south-central portions to the central and extreme west-central portions of the map. The extreme northwest corner of the map is also covered by this Class. Fifty to 80% of the land is in gentle slopes, of which 50 to 75% is found in lowlands. Local relief ranges from 100 to 300 feet.

Plains With High Hills Class (B4b) - This Class covers 40% of the map area, extending from the extreme east-central and northeast portions to the northwest portion. This Class also covers an additional 20%, including the extreme southern edge and extending into the central part of the map. Fifty to 80% of the land is gently sloping, with 50 to 75% of the slopes occurring in lowlands. Local relief ranges from 500 to 1000 feet.

RESOURCES

A. Wetlands

No wetland acreage figure is available for the Ashland NE area at the present time.

Steep topography has precluded extensive wetland formation in the northern third of the map area. Wetland density in the southern two-thirds of the map ranges from medium in the southeast to medium high in the south-central and southwestern portions.

Wetlands in the Ashland NE map area are primarily forested, dominated by black spruce (Picea mariana) and northern white cedar (Thuja occidentalis), with saturated to seasonally flooded water regimes. Forested/scrub-shrub wetlands are also common in uplands and in river floodplains. Some scrub-shrub and emergent wetlands are present as well. A list of plant species for wetland types can be found in Appendix C.

B. Wildlife and Fish

Some wildlife species in the map area are on the Endangered and Threatened list. Bald eagles (Haliaeetus leucocephalus) and peregrine falcons (Falco peregrinus) have decreased in numbers in recent years, primarily because of reproductive failure attributed to the use of pesticides. However, Madsen et al. 1982 report that bald eagle production in Michigan showed an overall increase during the period 1973-1981.

While some wildlife species in the map area have been decreasing, furbearers, including beaver (Castor canadensis), muskrats (Ondatra zibethica), raccoons (Procyon lotor), weasels (Mustela spp.) and mink (M. vison), have maintained relatively stable populations. Pine martens (Martes americana) and fishers (Martes pennanti), which were once wiped out by overharvesting and logging, have been reintroduced into Michigan's upper peninsula. Canada lynx (Lynx canadensis) are also making a comeback.

Several species of waterfowl inhabit the area, including scaups (Aythya spp.), canvasbacks (A. valisineria), redheads (A. americana), ring-necked ducks (A. collaris), mallards (Anas platyrhynchos), black ducks (Anas rubripes), wood ducks (Aix sponsa), goldeneyes (Bucephala clangula), buffleheads (B. albeola), old squaws (Clangula hyemalis), Canada geese (Branta canadensis) and whistling swans (Olor columbianus) (Great Lakes Basin Commission 1975b, Panzner 1955, Rounds 1956).

Other wildlife species of Ashland NE include white-tailed deer (Odocoileus virginianus), black bears (Ursus americanus), snowshoe hares (Lepus americanus), eastern cottontails (Sylvilagus floridanus), squirrels (Sciurus sp.) and ruffed grouse (Bonasa umbellus).

Sport fishing opportunities are available in many inland lakes and streams, and in Lake Superior and its immediate tributaries. Commercial fishing is limited to Lake Superior.

Common fish of inland lakes and mainstream portions of rivers include smallmouth bass (Micropterus dolomieu), rock bass (Ambloplites rupestris), yellow perch (Perca flavescens), northern pike (Esox lucius), muskellunge (E. masquinongy) and walleyes (Stizostedion vitreum vitreum). Largemouth bass (M. salmoides) and bluegills (Lepomis macrochirus) are found in impounded backwater areas of streams; brook trout (Salvelinus fontinalis) and brown trout (Salmo trutta) are prevalent in headwater areas.

The primary sport fish of Lake Superior are lake trout (Salvelinus namaycusch), rainbow trout (Salmo gairdneri), coho salmon (Oncorhynchus kisutch) and chinook salmon (O. tshawytsha). Rainbow trout (steelhead), and coho and chinook salmon are also fished in Lake Superior tributaries, as are brook and brown trout, suckers (Catostomus), rainbow smelt (Osmerus mordax), walleyes, northern pike, panfish (Lepomis spp., Pomoxis spp.) and bass.

Lake herring (Coregonus artedii), chubs (Semotilus), and lake whitefish (C. clupeaformis) dominate the commercial fish catch in Lake Superior. Lake trout are of minor importance commercially; sea lampreys (Petromyzon marinus) have prevented this species from establishing a self-sustaining population (Great Lakes Basin Commission 1975a).

Appendix A

REFERENCES

- Bailey, R. G. 1978. Descriptions of the Ecoregions of the United States. USDA For. Serv. Intermtn. Reg. Ogden, Utah. 77 p.
- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Fish and Wildlife Service, Washington, D. C. FWS/OBS-79/31. 103 p.
- Great Lakes Basin Commission. 1975a. Fish: Great Lakes Basin Comm. Great Lakes Basin Framework Study, App. 8. Ann Arbor, Mich. 290 p.
- 1975b. Wildlife: Great Lakes Basin Comm. Great Lakes Basin Framework Study, App. 17. Ann Arbor, Mich. 140.
- Hammond, E. H. 1965. 1:17,000,000 scale Physical Subdivisions. 1 map. p. 61. In Gerlack, A. C., ed. 1970. National Atlas of the United States of America. USDI Geol. Surv. Washington, D. C. 417 p.
- 1969. 1:7,500,000 Scale Classes of Land Surface Form. USDI Geol. Surv. 1 map. p. 62-63. In Gerlach, A. C., ed. 1970. National Atlas of the United States of America. USDI Geol. Surv. Washington, D. C. 417 p.
- Madsen, C. R., T. J. Sheldrake, and J. T. Leach, eds. 1982. Bald Eagle Production in the Great Lakes States 1973-1981. U. S. Fish and Wildlife Service, Reg. 3. Twin Cities, Minn. p.
- Panzner, E. R. 1955. Wetlands Inventory of Michigan. U. S. Fish and Wildlife Service, Office of River Basin Studies. Minneapolis, Minn. 19 p.
- Rounds, B. W. 1956. Inventory of Permanent Water Habitat Significant to Waterfowl in Michigan. U. S. Fish and Wildlife Service, Office of River Basin Studies. Minneapolis, Minn. 10 p.

ADDITIONAL INFORMATION

The purpose of this report is to provide general information regarding the production of the map and wetlands found within the area of this map. It does not include descriptions of all wetlands found in the area nor complete species information. For additional information, the following references are recommended:

- Hammond, E. H. 1964. Analysis of Properties in Land Form Geography: An Application to Broad-Scale Land Form Mapping. Annals, Assoc. Amer. Geog. v. 54. p. 11-23.
- Herdendorf, C. E., S. M. Hartley, and M. D. Barnes, eds. 1981. Fish and Wildlife Resources of the Great Lakes Coastal Wetlands Within the United States. Volume six: Lake Superior. U. S. Fish and Wildlife Service, Washington, D. C. FWS/OBS-81/02-v6. 846 p.

Appendix B

SPECIAL MAPPING PROBLEMS

Problem 1: It was difficult to determine the upland/wetland break for some species [e.g. alder (Alnus sp.) and cedar (Thuja occidentalis)] which grow on both upland and wetland sites. It was particularly true along rivers.

Resolution: Use of USGS topographic maps as collateral data. Field checking was conducted when possible. A conservative approach was taken to mapping vegetation which occurs frequently on upland/wetland and where no distinct separations (i.e. contours) are apparent. Only low lying areas should be delineated as wetland. Upon review of draft maps, some wetland polygons containing alder were reduced, or changed to upland. However, users should be aware that wetlands can occur on slopes.

Problem 2: It was difficult to accurately identify specific water regimes from the 1:80,000 black and white photography.

Resolution: Combined water regimes (Z,W,Y) were used where necessary.

Appendix C

WETLAND COMMUNITIES

<u>MAP SYMBOLS</u>	<u>LOCAL NAME</u>	<u>DOMINANT VEGETATION</u>	<u>WATER REGIME</u>
PFOY PFO4Y	Cedar Swamp	<u>Thuja occidentalis</u> <u>Picea mariana</u>	Saturated
PFOY	Swamp	<u>Populus tremuloides</u> <u>Thuja occidentalis</u>	Saturated Seasonal
PFO/SSY	Swamp	<u>Populus sp.</u> <u>Thuja occidentalis</u> <u>Alnus sp.</u>	Saturated Seasonal
PSSY	Swamp	<u>Alnus sp.</u>	Saturated Seasonal Semi-permanent
PSS/EMY	Swamp	<u>Alnus sp.</u> <u>Carex sp.</u> <u>Juncus sp.</u>	Saturated Seasonal
PEMY	Wet meadow	<u>Carex sp.</u> <u>Juncus sp.</u>	Saturated Seasonal
PEMY	Marsh	<u>Typha latifolia</u>	Seasonal Semi-permanent

Appendix D

NATIONAL WETLAND INVENTORY
Information and Legend
For Map Products

Classification System: The U.S. Fish and Wildlife Service uses the "Classification of Wetlands and Deepwater Habitats of the United States", December, 1979, by L. M. Cowardin, et al., to delineate and identify wetlands. This system is hierarchical and structured around a combination of ecological, biological, hydrological and substrate characteristics which permits universal use across the United States, its territories and possessions. It consists of five systems: Marine, Estuarine, Riverine, Lacustrine (lake) and Palustrine (swamps, bogs, marshes) and proceeds in a hierarchical manner through subsystem, class, and subclass. It also contains provisions to use water regime, water chemistry, soil, and special modifiers to provide additional levels of detail.

Figure 1 is an illustration of the classification system to the class level.

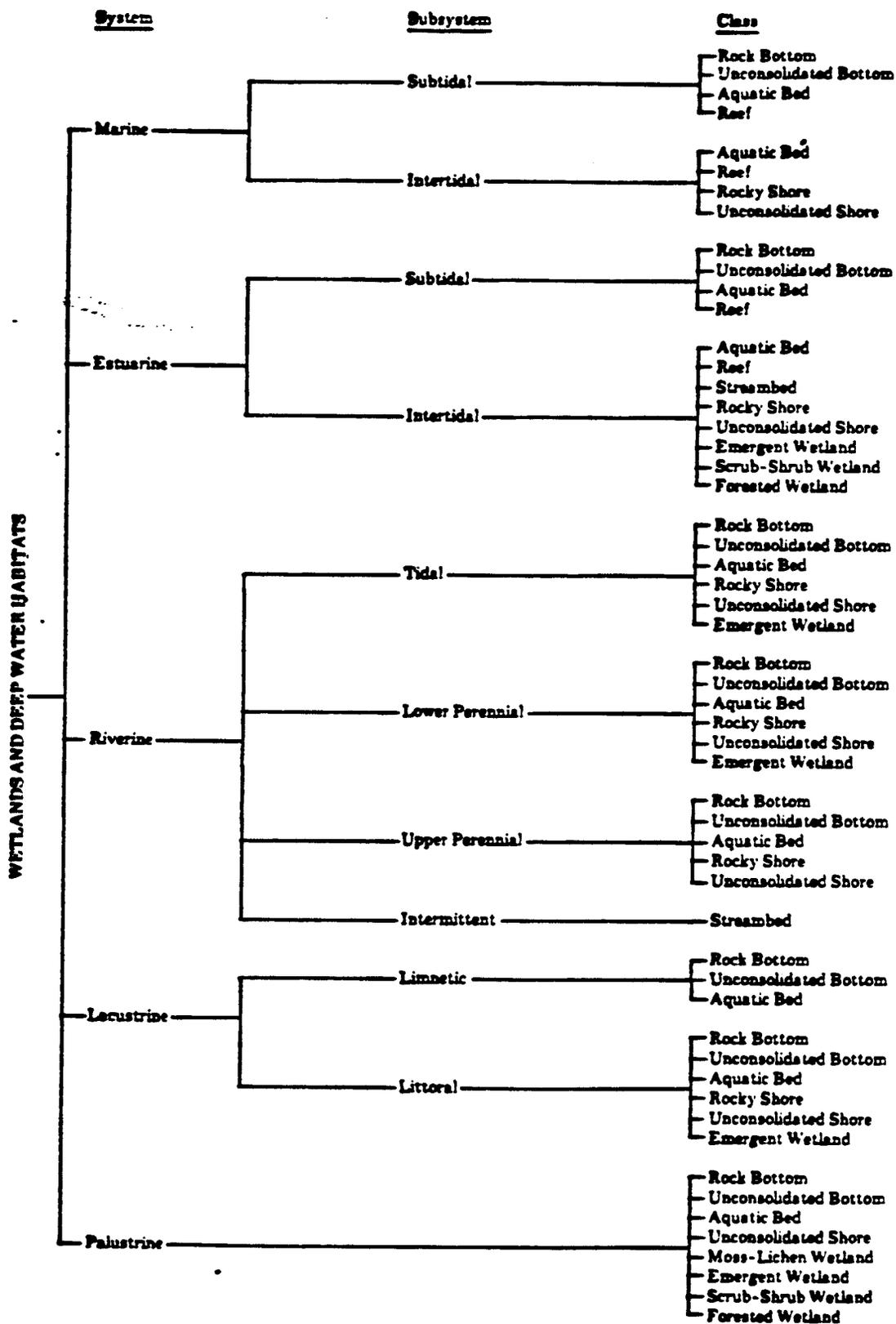


Fig. 1. Classification hierarchy of wetlands and deepwater habitats, showing systems, subsystems, and classes. The Palustrine System does not include deepwater habitats.

Use of Wetland Legend: Wetland data are displayed on overlays or maps by a series of letters and numbers (alpha numerics) with the first letter representing the system and subsequent alpha numerics representing, in a sequential manner, the subordinate levels of detail down to the modifiers. Where classes and subclasses have been mixed, they are separated by a diagonal line.

Examples

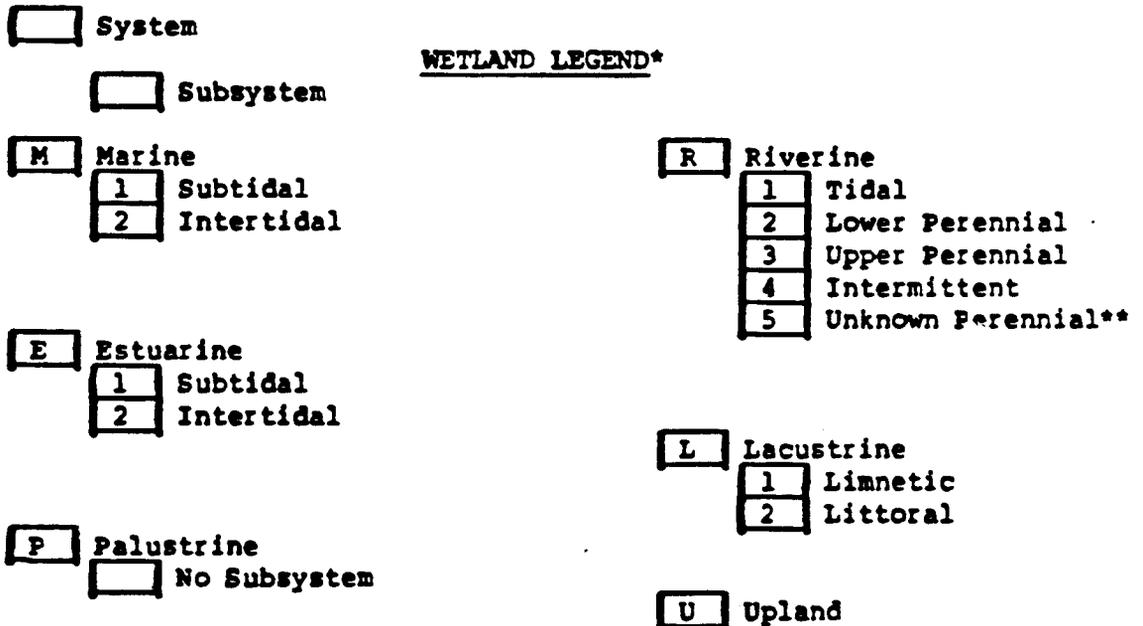
a. Classification of wetlands to water regime and special modifier:

System:	Lacustrine
Subsystem:	Limnetic
Class:	Unconsolidated Bottom
Subclass:	Mud
Water Regime:	Intermittently Exposed
Special Modifier:	Diked/Impounded

L 1 UB 3 G h

b. Mixing of wetland classes and subclasses:

PFO2/EM1F = Palustrine, Forested, Needle-leaved deciduous (PFO2) mixed with Palustrine, Emergent, Persistent (PEM1) with semipermanent water regime (F).



*Should be used in conjunction with "Classification of Wetlands and Deepwater Habitats of the United States," by L. M. Cowardin et al.

**Not included in "Classification of Wetlands and Deepwater Habitats of the United States." Created specifically for National Wetland Inventory mapping effort.

Wetland Legend (continued)

Class

Subclass

CLASSES AND SUBCLASSES

- AB** Aquatic Bed
- 1 Algal
 - 2 Aquatic Moss
 - 3 Rooted Vascular
 - 4 Floating Vascular
 - 5 Unknown Submergent**
 - 6 Unknown Surface**

- EM** Emergent
- 1 Persistent
 - 2 Nonpersistent

- FO** Forested
- 1 Broad-Leaved Deciduous
 - 2 Needle-Leaved Deciduous
 - 3 Broad-Leaved Evergreen
 - 4 Needle-Leaved Evergreen
 - 5 Dead
 - 6 Deciduous**
 - 7 Evergreen**

- ML** Moss/Lichen
- 1 Moss
 - 2 Lichen

- OW** Open Water/
Unknown Bottom**

- RB** Rock Bottom
- 1 Bedrock
 - 2 Rubble

- RF** Reef
- 1 Coral
 - 2 Mollusk
 - 3 Worm

- RS** Rocky Shore
- 1 Bedrock
 - 2 Rubble

- SB** Streambed
- 1 Bedrock
 - 2 Rubble
 - 3 Cobble/Gravel
 - 4 Sand
 - 5 Mud
 - 6 Organic
 - 7 Vegetated

- SS** Scrub/Shrub
- 1 Broad-Leaved Deciduous
 - 2 Needle-Leaved Deciduous
 - 3 Broad-Leaved Evergreen
 - 4 Needle-Leaved Evergreen
 - 5 Dead
 - 6 Deciduous**
 - 7 Evergreen**

- UB** Unconsolidated Bottom
- 1 Cobble/Gravel
 - 2 Sand
 - 3 Mud
 - 4 Organic

- US** Unconsolidated Shore
- 1 Cobble/Gravel
 - 2 Sand
 - 3 Mud
 - 4 Organic
 - 5 Vegetated

**Not included in "Classification of Wetlands and Deepwater Habitats of the United States." Created specifically for National Wetland Inventory mapping efforts.

MODIFIERS TO WETLAND CLASSIFICATION

WATER REGIME MODIFIERS

Nontidal

A	Temporary
B	Saturated
C	Seasonal
D	Seasonally Flooded-Well Drained
E	Seasonally Flooded-Saturated
F	Semipermanent
G	Intermittently Exposed
H	Permanent
J	Intermittently Flooded

Nontidal Combined

Z	Intermittently Exposed/ Permanent (G,H above)**
W	Intermittently Flooded/ Temporary (A,J above)**
Y	Saturated Semipermanent/ All Seasonals (B,C,D,E F above)**

Nontidal and Tidal

U	Unknown**
K	Artificial

Tidal

L	Subtidal
M	Irregularly Exposed
N	Regularly Flooded
P	Irregularly Flooded
R	Seasonal - Tidal
S	Temporary - Tidal
T	Semipermanent - Tidal
V	Permanent - Tidal

WATER CHEMISTRY MODIFIERS

Coastal Halinity

1	Hyperhaline
2	Euhaline
3	Mixohaline (Brackish)
4	Polyhaline
5	Mesohaline
6	Oligohaline
0	Fresh

Inland Salinity

7	Hypersaline
8	Eusaline
9	Mixosaline
0	Fresh

pH Freshwater

a	Acid
t	Circumneutral
l	Alkaline

**Not included in "Classification of Wetlands and Deepwater Habitats of the United States." Created specifically for National Wetland Inventory mapping Effort.

OTHER MODIFIERS

Special

b	Beaver
d	Partially Drained/ Ditched
f	Farmed
h	Diked/Impounded
r	Artificial
s	Spoil
x	Excavated

Soils

g	Organic
n	Mineral

Statement to Users: The overlays/maps were prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with "Classification of Wetlands and Deepwater Habitats of the United States." The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus, a detailed on-the-ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this map. Federal, State, and local regulatory agencies with jurisdictions over wetlands may define and describe wetlands in a different manner than that used in this Inventory. There is no attempt, in either the design or products of this Inventory, to define the limits of proprietary jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory programs and proprietary jurisdictions that may affect such activities.

To Order NWI Topical Wetland Overlays/Maps: A National Wetland Inventory Order Form is required and can be obtained by writing to the address on the letterhead.

