

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

MAP AREA: ALPENA NW

1:100,000 NAME: DE TOUR VILLAGE

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**



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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.

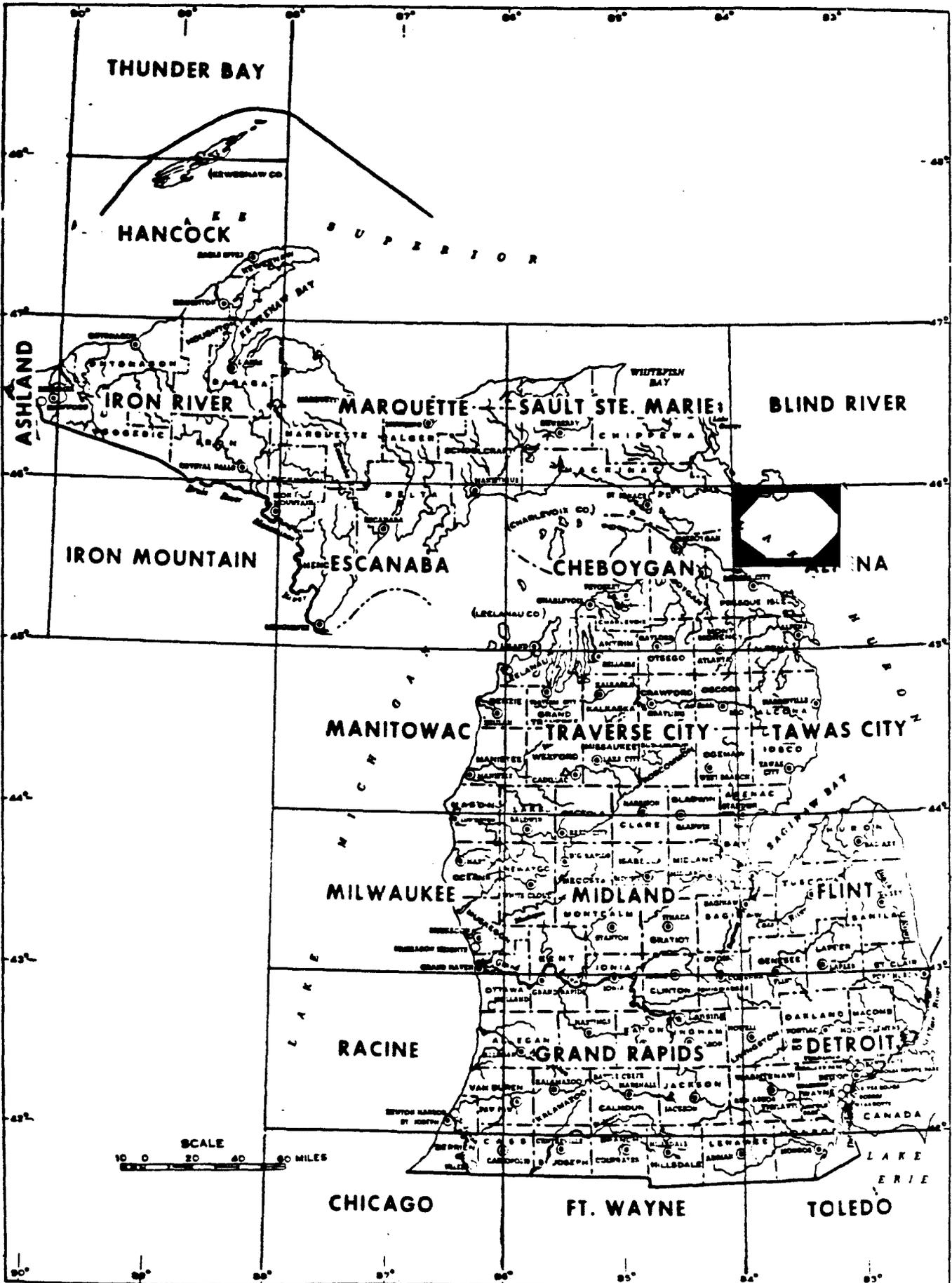
Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either design or products of this inventory, to define limits of proprietary jurisdiction of any local, State, 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 propriety 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	May 1980	100%

Field Check Dates:

1. None

Contractor(s) for Photo Interpretation:

1. Michigan Dept. 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: 83° 0' to 84° 0' West

Degrees Latitude : 45° 30' to 46° 0' North

Largest City : De Tour Village, Michigan

Alpena NW is located in the extreme eastern part of Michigan's upper peninsula. Most of the quad lies in Canada and in Lake Huron. Several islands occur within the United States boundaries, including the southern portion of Drummond Island. This map encompasses a portion of Chippewa County and is included in the Lake Huron watershed.

B. Ecoregion

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

Code: 2112L

Humid Temperate Domain (2000)

The entire Alpena NW 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 Alpena NW map area lies in 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 Alpena NW map 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 lowlands and includes all of the Alpena NW map area.

Hardwoods and firs (Abies spp.) are the principal 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

Interior Physical Division (III) - This Physical Division covers all of the Alpena NW map area.

North-Central Lake-Swamp-Moraine Plains (3) - The entire Alpena NW map lies within this Subdivision.

Irregular Plains Class (B2b) - This Class includes all of the Alpena NW map area. Fifty to 80% of the land is in gentle slopes. Fifty to 75% of these slopes occur in lowlands. Local relief ranges from 100 to 300 feet.

RESOURCES

A. Wetlands*

No wetland acreage figure is available for the Alpena NW area at the present time.

The primary wetlands occurring in the Alpena NW map area are saturated forests and saturated to semi-permanently flooded shrub/emergent and emergent types. Wetland density is higher in the inland part of the map than it is around the coastal areas.

Black spruce (Picea mariana), hemlock (Tsuga canadensis), balsam fir (Abies balsamea), northern white cedar (Thuja occidentalis) and black ash (Fraxinus nigra) are common forested species. Common plant species of the shrub/emergent wetlands include speckled alder (Alnus rugosa), willow (Salix sp.), dogwood (Cornus sp.), grasses and sedges (Carex spp.). Grasses and sedges are also common in the emergent wetlands, as are rushes (Juncus spp.). A list of plant species for wetland types can be found in Appendix C.

*Plant species named here were found in adjacent 1:100,000 map areas and are believed to be representative of species also present in the Alpena NW map area.

B. Wildlife and Fish

Some species of wildlife in the area are on the Endangered and Threatened list. Habitat loss and competition for nest usage by the brown-headed cowbird (Molothrus ater) have been the reasons for the decline of Kirtland's warblers (Dendroica kirtlandii). Bald eagles (Haliaeetus leucocephalus) and peregrine falcons (Falco peregrinus) have also decreased in numbers, 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.

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), mergansers (Mergus spp.), goldeneyes (Bucephala clangula), buffleheads (B. albeola), old squaws (Clangula hyemalis), Canada geese (Branta canadensis) and whistling swans (Olor columbianus). The wetlands surrounding Potagannissing Bay and wooded wetlands flooded by beavers provide important waterfowl nesting sites (Great Lakes Basin Commission 1975b, Panzner 1955, Rounds 1956).

While some other wildlife species in the map area have been decreasing, furbearers, including beaver (Castor canadensis), muskrats (Ondatra zibethica), raccoons (Procyon lotor), weasles (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.

Other wildlife species of Alpena NW 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 inland lakes and in Lake Huron. Commercial fishing is limited to Lake Huron.

Crappies (Pomoxis sp.), yellow perch (Perca flavescens), bluegills (Lepomis macrochirus) and other panfish (Lepomis spp., Pomoxis spp.) are the predominant fish species of inland lakes, although largemouth bass (Micropterus salmoides), smallmouth bass (M. dolomieu), northern pike (Esox lucius), muskellunge (E. masquinongy) and walleyes (Stizostedion vitreum vitreum) are also common. Filling of shore marshes for building purposes has reduced spawning area in some lakes, particularly for northern pike.

Predominant sport fish of Lake Huron include rainbow smelt (Osmerus mordax), walleyes, yellow perch, smallmouth bass and northern pike. Other sport fish include panfish, suckers (Catostomus), muskellunge, catfish (Ictalurus sp.), coho salmon (Oncorhynchus kisutch), chinook salmon (O. tshawytscha), steelhead (Salmo gairdneri) and lake trout (Salvelinus namaycush). Commercial fish species include lake whitefish (Coregonus clupeaformis), lake herring (C. artedii), chubs (Semotilus), catfish and carp (Cyprinus carpio) (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 p.
- Hammond, E.H. 1965. 1:17,000,000 scale Physical Subdivisions. 1 map. p. 61. In Gerlach, 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.
- Panzer, 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 the 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. pp. 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 four: Lake Huron. U.S. Fish and Wildlife Service, Washington, D.C. FWS/OBS-81/02-v4. 792 p.

Appendix B

SPECIAL MAPPING PROBLEMS

Problem 1: It was often 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>
PFOB PFOY	Swamp	<u>Thuja occidentalis</u> <u>Tsuga canadensis</u> <u>Betula papyrifera</u> <u>Abies balsamea</u>	Saturated Seasonal
PFO1B	Swamp	<u>Acer rubrum</u> <u>Fraxinus nigra</u> <u>Abies balsamea</u> <u>Populus spp.</u>	Saturated
PFO4B PFO4Y	Swamp	<u>Abies balsamea</u> <u>Tsuga canadensis</u> <u>Picea mariana</u> <u>Thuja occidentalis</u>	Saturated Seasonal
PFO4/1B	Swamp	<u>Fraxinus nigra</u> <u>Thuja occidentalis</u> <u>Tsuga canadensis</u> <u>Populus spp.</u> <u>Abies balsamea</u> <u>Betula papyrifera</u>	Saturated
PFO/SSB PFO/SSY	Swamp	<u>Tsuga canadensis</u> <u>Picea mariana</u> <u>Populus spp.</u> <u>Betula papyrifera</u> <u>Alnus rugosa</u>	Saturated Seasonal
PFO5/OW2b	Beaver feeding	Dead trees Open water	Intermittently exposed Permanent
PSSB PSSY	Swamp Bog	<u>Alnus rugosa</u> <u>Salix spp.</u> <u>Cornus spp.</u> <u>Chamaedaphne calyculata</u> <u>Ledum groenlandicum</u>	Saturated Seasonal
PSS/EMB PSS/EMY	Swamp	<u>Alnus rugosa</u> <u>Salix spp.</u> <u>Cornus spp.</u> Misc. grasses and sedges	Saturated Seasonal
PEMC PEMF PEMY	Marsh	<u>Carex spp.</u> <u>Juncus spp.</u> Misc. grasses	Seasonal Semi-permanent

<u>MAP SYMBOLS</u>	<u>LOCAL NAME</u>	<u>DOMINANT VEGETATION</u>	<u>WATER REGIME</u>
POWH	Pond	Open water	Permanent

*Plant species listed here were found in adjacent 1:100,000 map areas and are believed to be representative of species also present in the Alpena NW map area.

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.

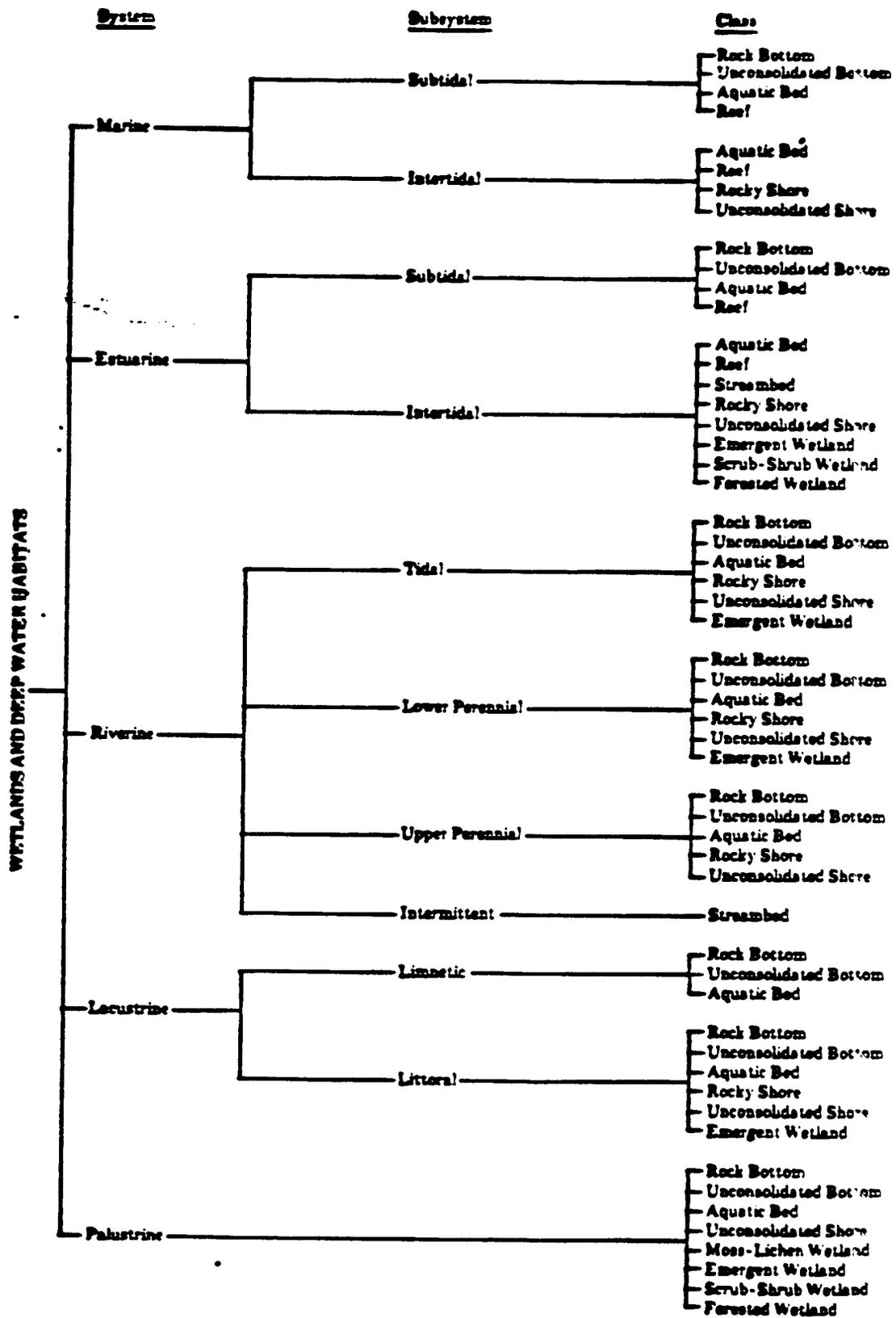


Fig 1. Classification hierarchy of wetlands and deepwater habitats, showing systems, subsystems, and classes. The Palustrine System does not include deepwater habitats

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

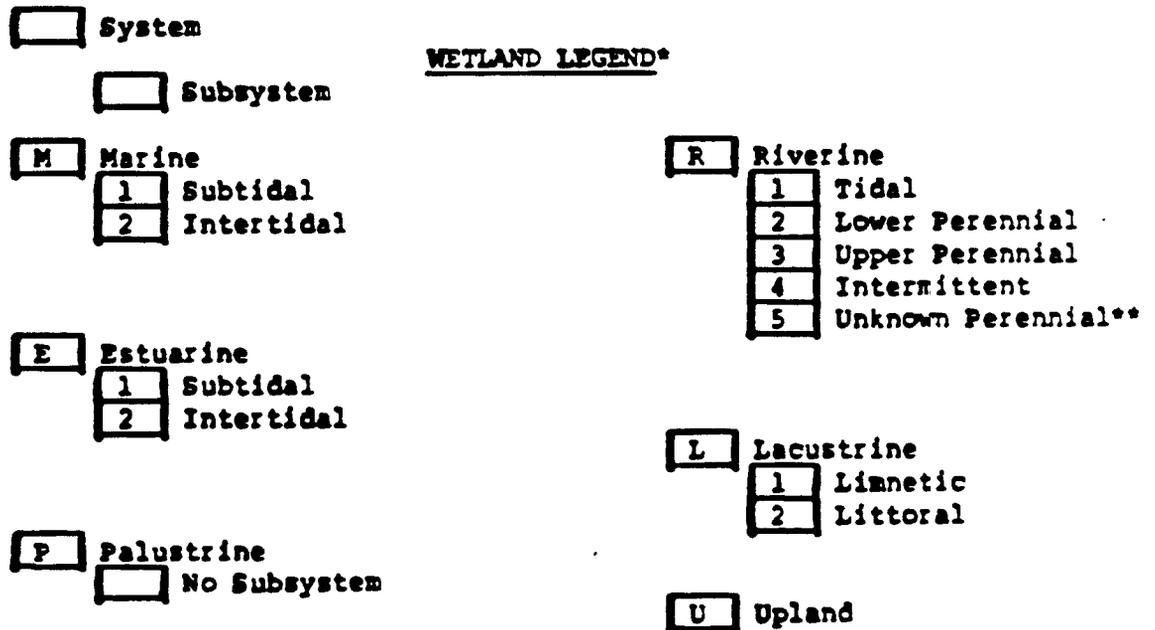
a. Classification of wetlands to water regime and special modifier:

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/Gra
 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
i	Artificial
s	Spoil
x	Excavated

Soils

o	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.

