B

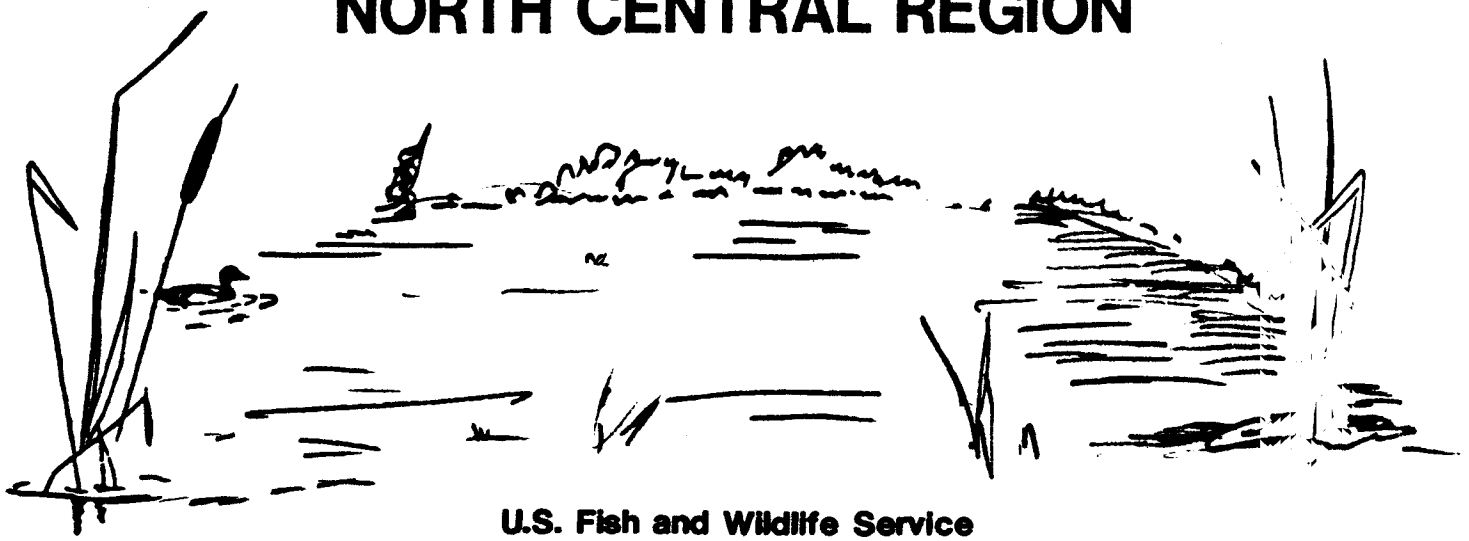
NATIONAL WETLAND INVENTORY USER REPORT 1:100,000 MAP AREA

MAP AREA: DETROIT SW

1:100,000 NAME: DETROIT

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.

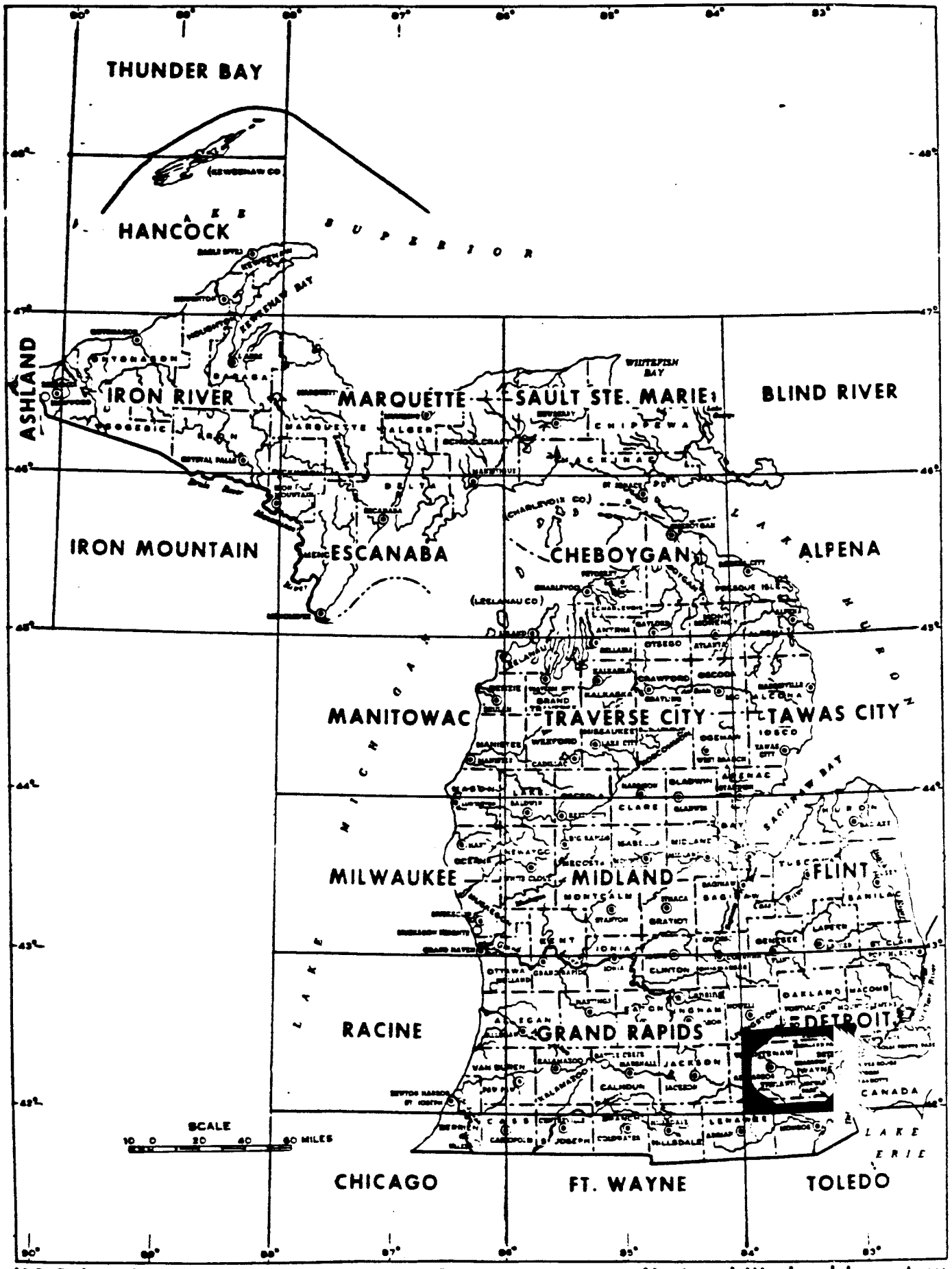
Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either design or products of this inventory, to define limits of proprietary jurisdiction of any local, State,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



U.S. Fish and Wildlife Service Region 3 National Wetland Inventory

DATE: December 1983

MAP PREPARATION

Basic Data

Photography Used:

	Emulsion	Scale	Date	Percent Coverage
1.	Black and white	1:80,000	October 1978	92%
2.	Black and white	1:80,000	November 1978	8%

Field Check Dates:

1. October 1, 1980

Contractor(s) for Photo Interpretation:

1. Michigan Dept. of Natural Resources

Collateral Data Used:

1. USGS topographic quad sheets
2. USDA Soil Surveys
3. Inland Wetlands of the United States

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 : 42° 0' to 42° 30' North

Largest City : Detroit, Michigan

Detroit SW is located in southeastern Michigan and includes the area west southwest of Detroit. This map is bordered on the southeast by the Detroit River, Lake Erie, and the Ontario, Canada border. The area encompasses portions of Wayne, Monroe, Lenawee, Washtenaw, Livingston, Oakland and Macomb Counties. The map area lies within the Huron, Rouge, Raisin and Clinton River drainage basins and the Lake Erie watershed. Wyandotte National Wildlife Refuge falls within the map boundaries.

B. Ecoregion

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

Code: 2212L

Humid Temperate Domain (2000)
The entire Detroit SW 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.

Hot Continental Division (2200)
All of the Detroit SW map area lies in this Division.

This Division characteristically has hot summers and cool winters. The natural vegetation is winter deciduous forest, where tall broadleaf trees dominate. These trees form a dense canopy in the summer, but lose their leaves in the winter. The shrub layer is weakly developed. A lush herbaceous layer develops in early spring, but diminishes as the dense tree canopy forms and shades the ground. Soils are primarily Alfisols, Inceptisols and Ultisols which are rich in humus and moderately leached.

Eastern Deciduous Forest Province (2210)
The entire Detroit SW map falls within this Province.

The vegetation of this Province represents a response to a climate that receives adequate precipitation all year long. Common tree species of the deciduous forests include beech (Fagus grandifolia),

oak (Quercus spp.), birch (Betula spp.), basswood (Tilia americana), elm (Ulmus spp.), maple (Acer spp.) and ash (Fraxinus spp.). Pines (Pinus spp.) develop quickly in forests cleared for logging.

Tree species of poorly drained forests consist of alder (Alnus spp.), willow (Salix spp.), ash and elm.

Beech-Maple Forest Section (2212L)
This Section occurs in lowland areas, and covers all of the Detroit SW map.

Beech and maple trees form the principal plant association of this Section.

C. Topography and Land Forms

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

Codes: (III-2) A1, (III-3) A2c, (III-3) B2b

Interior Physical Division (III) - The entire Detroit SW map area lies within this Physical Division.

East-Central Drift and Lake-bed Flats Subdivision (2) - This Subdivision covers 50% of the map area, extending from the northeast portion to the south-central portion, and including the entire southeast corner.

North-Central Lake-Swamp-Moraine Plains (3) - Fifty percent of the map area is covered by this Subdivision, which extends from the southwest corner to the northwest portion, including all of the north-central portion.

Flat Plains Class (A1) - This class covers 50% of the map area extending from the northeast to the south-central part of the map, and inluding the entire southeast portion. Over 80% of the land is in gentle slopes of less than 100 feet.

Smooth Plains Class (A2b) - This Class covers 40% of the map extending from the southwest corner to the north-central portion where greater than 80% of the land is in gentle slopes of less than 100 feet.

Irregular Plains Class (B2b) - This Class comprises 10% of Detroit SW in the northwest corner of the map. Fifty to 80% of the land is in gentle slopes. Fifty to 75% of these slopes occur in lowland areas. Local relief ranges from 100 to 300 feet.

RESOURCES

A. Wetlands

No wetland acreage figure is available for the Detroit SW area at the present time.

Heavy wetland losses in the Detroit SW area have been attributed to agricultural drainage, industrialization and urban development (Panzner 1955). Concentrations of wetlands still occur, primarily in the northwest portion of the map area. Wetlands in the southeastern part of the map are located primarily in river flood plains.

Although the density of wetlands in the Detroit SW map area is relatively low, wetland diversity is fairly high. Some of the most common wetland types include forested, shrub and emergent wetlands that are saturated to semi-permanent flooded. Predominant trees species of the forested wetlands include red maple (Acer rubrum) and ash (Fraxinus spp.). Important species of the shrub wetlands include alder (Alnus spp.), willow (Salix spp.), dogwood (Cornus spp.) and buttonbush (Cephalanthus occidentalis). Common plant species of the emergent marshes include rush (Juncus spp.), sedge (Carex spp.) bulrush (Scirpus spp.) and cattail (Typha latifolia). A list of plant species for other wetland types can be found in Appendix C.

Celeron Island, which is on the list of potential natural landmarks, is located in the Detroit River in the Rockwood Quadrangle of the Detroit SW. The island is owned by the state of Michigan and is an important wildfowl nesting and feeding area (Goodwin and Niering, 1975).

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.

Goodwin, R.H. and W.A. Niering. 1975. Inland Wetlands of the United States - Evaluation of Potential Registered Natural Landmarks. USDI Nat. Park Service, Nat. Hist. Theme Studies No. 2.

Great Lakes Basin Commission. 1975a. Fish: Great Lakes Basin Comm. Great Lakes Basin Framework Study, App. 8. Ann Arbor, Mich. 290 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.

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.

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 three: Lake Erie. U.S. Fish and Wildlife Service, Washington, D.C. FWS/OBS-81/02-v3. 505 p.

Appendix B

SPECIAL MAPPING PROBLEMS

Problem 1: It was sometimes difficult to distinguish PFO areas from PFO/SS areas on the photos.

Resolution: Close attention was paid to canopy closure, percent coverage and height of vegetation.

Problem 2: Much of the area is undergoing rapid development. Many wetlands are being filled for housing and industry.

Resolution: Because of extensive drainage and the dynamic nature of the area, some areas shown as wetland on USGS topos are not visible on the photos. User should be aware of changing wetland conditions.

Problem 3: Extensive draining for agriculture made it difficult to distinguish forested wetland from upland forested areas.

Resolution: USDA Soil Surveys were used as collateral data. Field checking was done when possible.

Problem 4: 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

MAP SYMBOLS	LOCAL NAME	DOMINANT VEGETATION	WATER REGIME
PFOB PFO1B PFOY PFO1Y	Lowland hardwoods Swamp	Acer rubrum Fraxinus spp. Populus tremuloides	Saturated Seasonal
PFO/SSY	Swamp	Acer rubrum Alnus spp. Cornus spp. Salix spp.	Saturated Seasonal
PSSB	Bog	Chamaedaphne calyculata	Saturated
PSSY PSS1Y	Swamp	Alnus spp. Cornus spp. Salix spp. Myrica Gale Cephalanthus occidentalis	Saturated Seasonal Semi-permanent
PSS/EMY	Swamp	Alnus spp. Scirpus spp. Salix spp. Typha latifolia	Saturated Seasonal Semi-permanent
PEMY	Wet meadow	Juncus spp. Carex spp. Scirpus spp. Phalaris arundinacea	Saturated Seasonal
PEMY	Marsh	Typha latifolia Phragmites spp. Scirpus spp.	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.

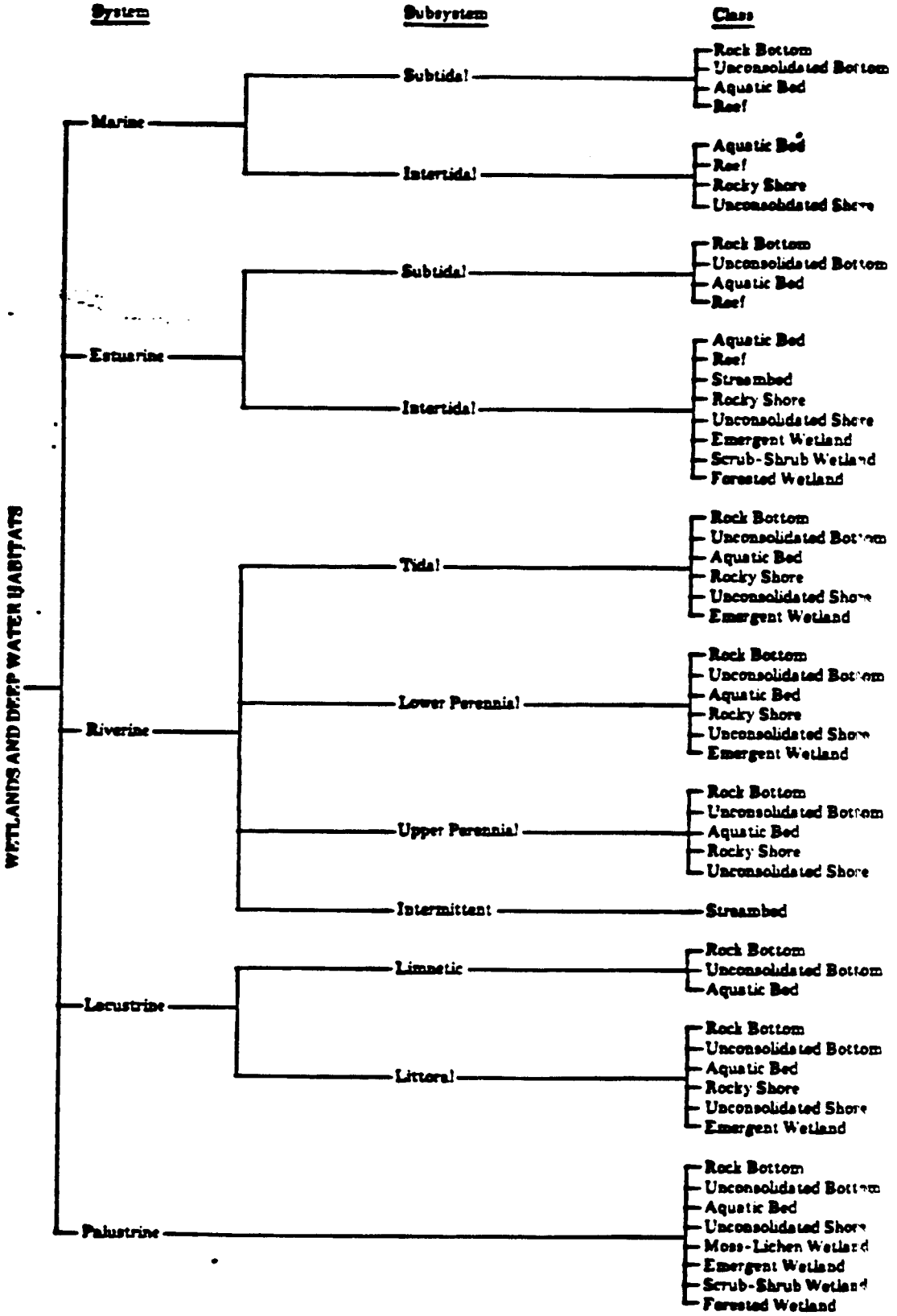


Fig 1. Classification hierarchy of wetlands and deepwater habitats, showing systems, subsystems, and classes. The Palustrine System does not include deepwater habitats.

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).

WETLAND LEGEND*

- [ ] System
- [ ] Subsystem
- [M] Marine
  - [1] Subtidal
  - [2] Intertidal
- [E] Estuarine
  - [1] Subtidal
  - [2] Intertidal
- [P] Palustrine
  - [ ] No Subsystem
- [R] Riverine
  - [1] Tidal
  - [2] Lower Perennial
  - [3] Upper Perennial
  - [4] Intermittent
  - [5] Unknown Perennial**
- [L] Lacustrine
  - [1] Limnetic
  - [2] Littoral
- [U] Upland

*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.

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

q	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 additon, 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 additon, 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 descirbe 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.