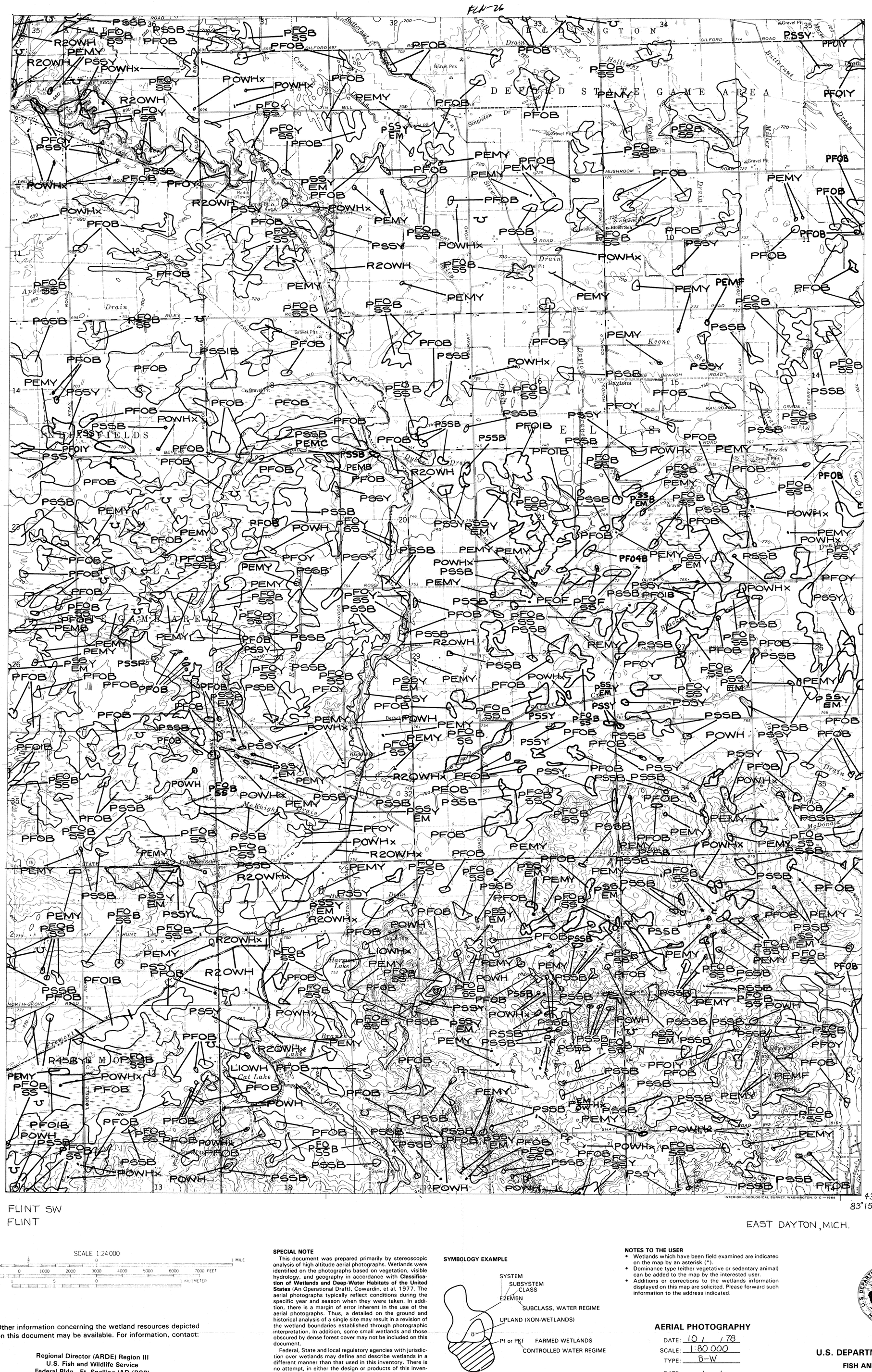
AF 14064C-D

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR



FLINT SW
FLINT

EAST DAYTON, MICH.

43°22'30"
83°15'

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1984

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

Other information concerning the wetland resources depicted on this document may be available. For information, contact:

Regional Director (ARDE) Region III
U.S. Fish and Wildlife Service
Federal Bldg., Ft. Snelling (AD/BSP)
Twin Cities, Minnesota 55111

SPECIAL NOTE

This document was 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 Deep-Water Habitats of the United States** (An Operational Draft), Cowardin, et al, 1977. 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 the 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 document.

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 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 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 specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE

NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Dominance type (either vegetative or sedentary animal) can be added to the map by the interested user.
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.

AERIAL PHOTOGRAPHY

DATE: 10 / 78
SCALE: 1:80 000
TYPE: B-W

DATE: / /
SCALE:
TYPE:

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Prepared by Office of Biological Services for the National Wetlands Inventory

WETLAND LEGEND

ʊ — Primarily represents **upland** areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

E — ESTUARINE

ECOLOGICAL SYSTEM	Ecological Subsystem	CLASS	Subclass
E	1 — Subtidal	RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 4 Floating-leaved, 5 Floating, 6 Unknown Submergent, 7 Unknown Surface
		RF — REEF	2 Mollusc, 3 Worm
		OW — OPEN WATER/ Unknown Bottom	
	2 — Intertidal	AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 6 Unknown Submergent, 7 Unknown Surface
		RF — REEF	2 Mollusc, 3 Worm
		FL — FLAT	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated Pioneer, 6 Vegetated Non-pioneer
		SB — STREAMBED	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		RS — ROCKY SHORE	1 Bedrock, 2 Boulder, 6 Vegetated Non-pioneer
		BB — BEACH/BAR	1 Cobble/Gravel, 2 Sand
		EM — EMERGENT	1 Persistent, 2 Nonpersistent, 3 Narrow-leaved Nonpersistent, 4 Broad-leaved Nonpersistent, 5 Narrow-leaved Persistent, 6 Broad-leaved Persistent
		SS — SCRUB/SHRUB	1 Broad-leaved Deciduous, 3 Broad-leaved Evergreen, 4 Needle-leaved Evergreen, 5 Dead, 6 Deciduous, 7 Evergreen
		FO — FORESTED	1 Broad-leaved Deciduous, 3 Broad-leaved Evergreen, 4 Needle-leaved Evergreen, 5 Dead, 6 Deciduous, 7 Evergreen

M — MARINE

ECOLOGICAL SYSTEM	Ecological Subsystem	CLASS	Subclass
M	1 — Subtidal	RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 6 Unknown Submergent
		RF — REEF	1 Coral, 3 Worm
		OW — OPEN WATER/ Unknown Bottom	
	2 — Intertidal	AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 6 Unknown Submergent
		RF — REEF	1 Coral, 3 Worm
		FL — FLAT	1 Cobble/Gravel, 2 Sand, 3 Mud, 6 Vegetated Non-pioneer
		RS — ROCKY SHORE	1 Bedrock, 2 Boulder, 6 Vegetated Non-pioneer
		BB — BEACH/BAR	1 Cobble/Gravel, 2 Sand

P — PALUSTRINE

ECOLOGICAL SYSTEM	No Subsystem	CLASS	Subclass
P		RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 3 Submergent Moss, 4 Floating-leaved, 5 Floating, 6 Unknown Submergent, 7 Unknown Surface
		FL — FLAT	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated Pioneer, 6 Vegetated Non-pioneer
		ML — MOSS/ LICHEN	1 Moss, 2 Lichen
		EM — EMERGENT	1 Persistent, 2 Nonpersistent, 3 Narrow-leaved Nonpersistent, 4 Broad-leaved Nonpersistent, 5 Narrow-leaved Persistent, 6 Broad-leaved Persistent
		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
		FO — FORESTED	1 Broad-leaved Deciduous, 2 Needle-leaved Deciduous, 3 Broad-leaved Evergreen, 4 Needle-leaved Evergreen, 5 Dead, 6 Deciduous, 7 Evergreen
		OW — OPEN WATER/ Unknown Bottom	

L — LACUSTRINE

ECOLOGICAL SYSTEM	Ecological Subsystem	CLASS	Subclass
L	1 — Limnetic	RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 3 Submergent Moss, 4 Floating-leaved, 5 Floating, 6 Unknown Submergent, 7 Unknown Surface
		OW — OPEN WATER/ Unknown Bottom	
	2 — Littoral	RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 3 Submergent Moss, 4 Floating-leaved, 5 Floating, 6 Unknown Submergent, 7 Unknown Surface
		FL — FLAT	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated Pioneer, 6 Vegetated Non-pioneer
		RS — ROCKY SHORE	1 Bedrock, 2 Boulder
		BB — BEACH/BAR	1 Cobble/Gravel, 2 Sand
		EM — EMERGENT	2 Nonpersistent, 3 Narrow-leaved Nonpersistent, 4 Broad-leaved Nonpersistent
		OW — OPEN WATER/ Unknown Bottom	

R — RIVERINE

ECOLOGICAL SYSTEM	Ecological Subsystem	CLASS	Subclass
R	1 — Tidal	EM — EMERGENT(1)	2 Nonpersistent, 3 Narrow-leaved Nonpersistent, 4 Broad-leaved Nonpersistent
		RB — ROCK BOTTOM	1 Bedrock, 2 Boulder
		UB — UNCONSOLIDATED BOTTOM	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		AB — AQUATIC BED	1 Submergent Algal, 2 Submergent Vascular, 3 Submergent Moss, 4 Floating-leaved, 5 Floating, 6 Unknown Submergent, 7 Unknown Surface
		FL — FLAT	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated Pioneer, 6 Vegetated Non-pioneer
		SB — STREAMBED	1 Cobble/Gravel, 2 Sand, 3 Mud, 4 Organic
		RS — ROCKY SHORE	1 Bedrock, 2 Boulder
		BR — BEACH/BAR	1 Cobble/Gravel, 2 Sand
		OW — OPEN WATER/ Unknown Bottom	
	2 — Lower Perennial	(same as 1 — Tidal)	
	3 — Upper Perennial	(same as 1 — Tidal)	
	4 — Intermittent	(same as 1 — Tidal)	
	5 — Unknown Perennial	(same as 1 — Tidal)	

(1) EM — EMERGENTS are only found in the **Riverine Tidal** and **Riverine Lower Perennial** Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.

MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(1)

Non-Tidal

- A Temporary
- B Saturated
- C Seasonal
- D Seasonal Well-drained
- E Seasonal Saturated
- F Semipermanent
- G Intermittently Exposed
- H Permanent
- J Intermittently Flooded
- K Artificial
- Z Intermittently Exposed/Permanent
- W Intermittently Flooded/Temporary
- Y Saturated/Semipermanent/Seasonals
- U Unknown

Tidal

- K Artificial
- L Subtidal
- M Irregularly Exposed
- N Regular
- P Irregular
- R Seasonal Tidal
- S Temporary Tidal
- T Semipermanent Tidal
- V Permanent Tidal
- U Unknown

WATER CHEMISTRY

Coastal Salinity

- 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 Modifiers for all Fresh Water

- a Acid
- t Circumneutral
- i Alkaline

SOIL

- g Organic
- n Mineral

SPECIAL MODIFIERS

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

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.