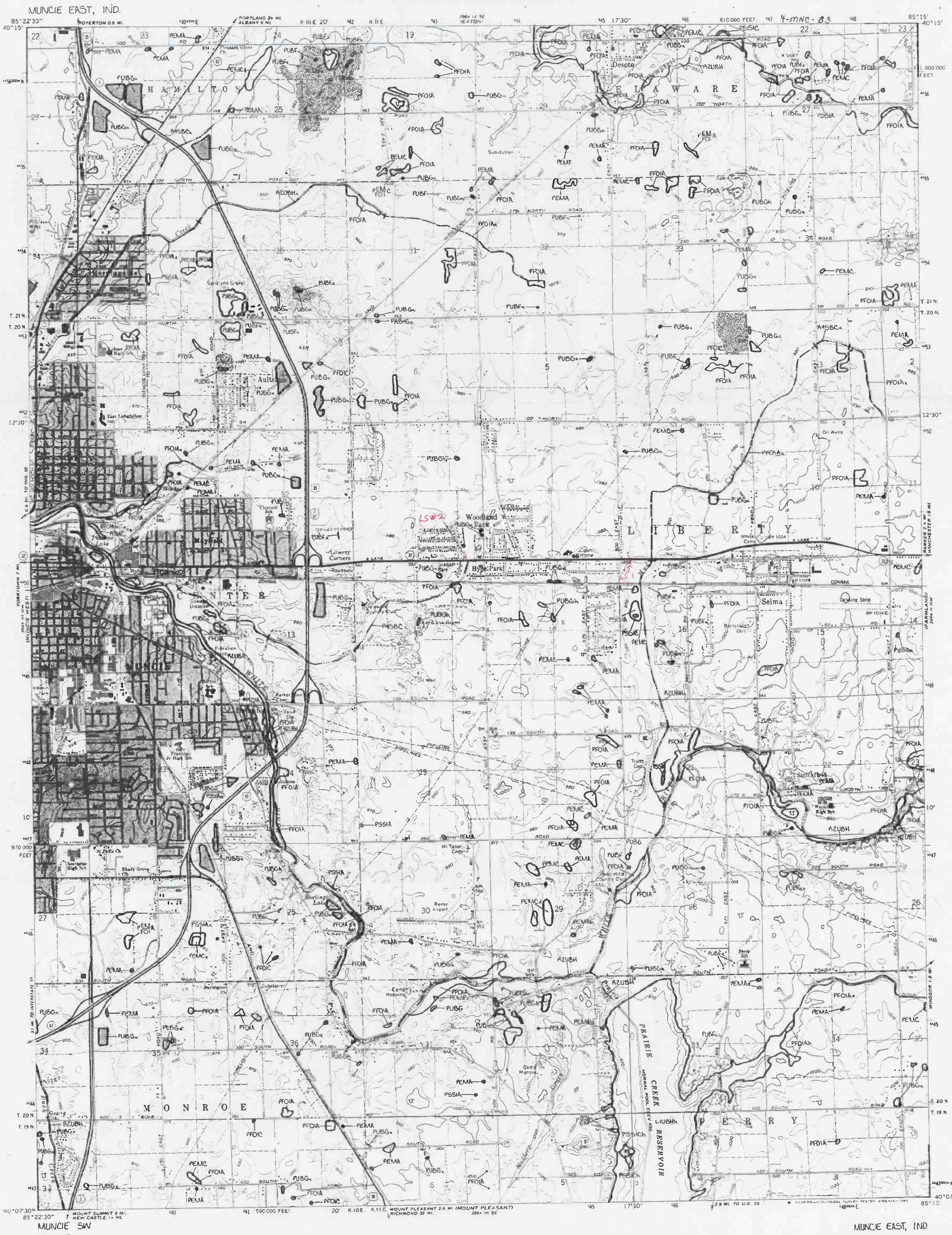
# NATIONAL WETLANDS INVENTORY

**UNITED STATES DEPARTMENT OF THE INTERIOR**

MUNCIE EAST, IND.




SCALE 1:24 000

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

☐ 1 acre — 10 acres — 20 acres

ACREAGE GUIDE

Other information including a narrative report 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 Deepwater Habitats of the United States** (FWS/OBS - 79/31 December 1979). 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**

SYSTEM
SUBSYSTEM
CLASS
L2EM2F
SUBCLASS, WATER REGIME
UPLAND (NON-WETLAND)
R2OWH
(LINEAR DEEPWATER HABITAT)

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

**NOTES TO THE USER**

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.
- Subsystems, Classes, Subclasses, and Water Regimes in *italics* were developed specifically for NATIONAL WETLANDS INVENTORY mapping.
- Some areas designated as R4SB, R4SBW, OR R4SBJ (INTERMITTENT STREAMS) may not meet the definition of wetland.
- This map uses the class Unconsolidated Shore (US). On earlier NWI maps that class was designated Beach/Bar (BB), or Flat (FL). Subclasses remain the same in both versions.

**AERIAL PHOTOGRAPHY**

| | | | |
|---|---|---|---|
| DATE: | 4 / 83 | DATE: | / / |
| SCALE: | 1:58 000 | SCALE: | |
| TYPE: | CIR | TYPE: | |

**U.S. DEPARTMENT OF THE INTERIOR**
**FISH AND WILDLIFE SERVICE**
Prepared by National Wetlands Inventory

**1989**

SYSTEM: M — MARINE
SUBSYSTEM: 1 — SUBTIDAL; 2 — INTERTIDAL
CLASS: RB — ROCK BOTTOM; UB — UNCONSOLIDATED BOTTOM; AB — AQUATIC BED; RF — REEF; OW — *OPEN WATER/ Unknown Bottom*; AB — AQUATIC BED; RF — REEF; RS — ROCKY SHORE; US — UNCONSOLIDATED SHORE
Subclasses: 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Algal; 3 Rooted Vascular; 5 *Unknown Submergent*; 1 Coral; 3 Worm; 1 Algal; 3 Rooted Vascular; 5 *Unknown Submergent*; 1 Coral; 3 Worm; 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic

SYSTEM: E — ESTUARINE
SUBSYSTEM: 1 — SUBTIDAL; 2 — INTERTIDAL
CLASS: RB — ROCK BOTTOM; UB — UNCONSOLIDATED BOTTOM; AB — AQUATIC BED; RF — REEF; OW — *OPEN WATER/ Unknown Bottom*; AB — AQUATIC BED; RF — REEF; SB — STREAMBED; RS — ROCKY SHORE; US — UNCONSOLIDATED SHORE; EM — EMERGENT; SS — SCRUB-SHRUB; FO — FORESTED
Subclasses: 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Algal; 3 Rooted Vascular; 4 Floating Vascular; 5 *Unknown Submergent*; 6 *Unknown Surface*; 2 Mollusc; 3 Worm; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Persistent; 2 Nonpersistent; 1 Broad-Leaved Deciduous; 2 Needle-Leaved Deciduous; 3 Broad-Leaved Evergreen; 4 Needle-Leaved Evergreen; 5 Dead; 6 Deciduous; 7 *Evergreen*; 1 Broad-Leaved Deciduous; 2 Needle-Leaved Deciduous; 3 Broad-Leaved Evergreen; 4 Needle-Leaved Evergreen; 5 Dead; 6 Deciduous; 7 *Evergreen*

SYSTEM: R — RIVERINE
SUBSYSTEM: 1 — TIDAL; 2 — LOWER PERENNIAL; 3 — UPPER PERENNIAL; 4 — INTERMITTENT; 5 — UNKNOWN PERENNIAL
CLASS: RB — ROCK; UB — UNCONSOLIDATED BOTTOM; *SB — STREAMBED; AB — AQUATIC BED; RS — ROCKY SHORE; US — UNCONSOLIDATED SHORE; **EM — EMERGENT; OW — *OPEN WATER/ Unknown Bottom*
Subclasses: 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated; 1 Bedrock; 2 Rubble; 3 Cobble-Gravel; 4 Sand; 5 Mud; 6 Organic; 7 Vegetated; 1 Algal; 2 Aquatic Moss; 3 Rooted Vascular; 4 Floating Vascular; 5 *Unknown Submergent*; 6 *Unknown Surface*; 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated; 2 Nonpersistent

*STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS. The remaining CLASSES are found in all SUBSYSTEMS.

SYSTEM: L — LACUSTRINE
SUBSYSTEM: 1 — LIMNETIC; 2 — LITTORAL
CLASS: RB — ROCK BOTTOM; UB — UNCONSOLIDATED BOTTOM; AB — AQUATIC BED; OW — *OPEN WATER/ Unknown Bottom*; RB — ROCK BOTTOM; UB — UNCONSOLIDATED BOTTOM; AB — AQUATIC BED; RS — ROCKY SHORE; US — UNCONSOLIDATED SHORE; EM — EMERGENT; OW — *OPEN WATER/ Unknown Bottom*
Subclasses: 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Algal; 2 Aquatic Moss; 3 Rooted Vascular; 4 Floating Vascular; 5 *Unknown Submergent*; 6 *Unknown Surface*; 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated; 2 Nonpersistent

SYSTEM: P — PALUSTRINE
CLASS: RB — ROCK BOTTOM; UB — UNCONSOLIDATED BOTTOM; AB — AQUATIC BED; US — UNCONSOLIDATED SHORE; ML — MOSS-LICHEN; EM — EMERGENT; SS — SCRUB-SHRUB; FO — FORESTED; OW — *OPEN WATER/ Unknown Bottom*
Subclasses: 1 Bedrock; 2 Rubble; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 1 Algal; 2 Aquatic Moss; 3 Rooted Vascular; 4 Floating Vascular; 5 *Unknown Submergent*; 6 *Unknown Surface*; 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated; 1 Moss; 2 Lichen; 1 Persistent; 2 Nonpersistent; 1 Broad-Leaved Deciduous; 2 Needle-Leaved Deciduous; 3 Broad-Leaved Evergreen; 4 Needle-Leaved Evergreen; 5 Dead; 6 Deciduous; 7 *Evergreen*; 1 Broad-Leaved Deciduous; 2 Needle-Leaved Deciduous; 3 Broad-Leaved Evergreen; 4 Needle-Leaved Evergreen; 5 Dead; 6 Deciduous; 7 *Evergreen*

**MODIFIERS**

In order to more adequately describe wetland and deepwater 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 | | | WATER CHEMISTRY | | | SOIL | SPECIAL MODIFIERS | |
|---|---|---|---|---|---|---|---|---|
| Non-Tidal | | Tidal | Coastal Salinity | Inland Salinity | pH Modifiers for all Fresh Water | | | |
| A Temporarily Flooded | H Permanently Flooded | K Artificially Flooded | 1 Hypersaline | 7 Hypersaline | a Acid | g Organic | b Beaver | D Diked/Impounded |
| B Saturated | J Intermittently Flooded | L Subtidal | 2 Euhaline | 8 Euhaline | 1 Circumneutral | n Mineral | d Partially Drained/Ditched | h Artificial Substrate |
| C Seasonally Flooded | E Artificially Flooded | M Irregularly Exposed | 3 Mesohaline (Brackish) | 9 Mesohaline | i Alkaline | | f Farmed | s Spoil |
| D Seasonally Flooded/ Well Drained | W Intermittently Flooded/Temporary | N Regularly Flooded | 4 Polyhaline | 0 Fresh | | | | x Excavated |
| E Seasonally Flooded/ Saturated | Y Saturated/Semipermanent/ Seasonal | P Irregularly Flooded | 5 Mesohaline | | | | | |
| F Semipermanently Flooded | Z Intermittently Exposed/Permanent | | 6 Oligohaline | | | | | |
| G Intermittently Exposed | U Unknown | | 0 Fresh | | | | | |

*These water regimes are only used in tidally influenced, freshwater systems.