DRAFT

User Notes for National Wetlands Inventory Maps for Maine*

U.S. Fish and Wildlife Service
Region 5
Habitat Resources
Newton Corner, MA 02158

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*This report covers the following 1:100,000 mapping units: Bangor NE, SE, SW; Portland NE, SE; Bath NW; Eastport NE, NW, SW; Fredericton NW, SW.

Introduction

The U.S. Fish and Wildlife Service, Office of Habitat Resources is conducting an inventory of the wetlands of the United States using conventional photointerpretation techniques. All wetlands are classified according to the Service's new system - Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979). The National Wetlands Inventory (NWI) is establishing a wetland data base, in both map and computer forms for the entire country. The present emphasis is on map production and in the future, wetland data will be digitized to create an automated wetland data base, as funding becomes available. The NWI information will serve to identify the current status of U.S. wetlands and can be used as a reference point from which future changes in wetlands can be evaluated. Final wetland maps for Maine can be ordered from the Maine State Planning Office, Mail Station 38, State House, Augusta, MA 04333 (John DelVecchio 207-289-3261).

Subject Area

Areas of Maine inventoried by this survey include the following 1:100,000 mapping units: Bangor, NE, SE, NW; Bath NW; Eastport NE, NW, SW; Fredericton NW, SW; Portland NE, SE. The entire area falls within the Laurentian Mixed Forest Province where northern hardwoods and spruce predominate (Bailey 1978).

Map Preparation

Two series of wetland maps were produced: (1) large-scale (1:24,000) series and (2) small-scale (1:100,000) series. The National Wetlands Inventory employs conventional aerial photointerpretation techniques, i.e. high-altitude photography, to map wetlands and deepwater habitats. Wetlands were identified on aerial photographs based on vegetation, visible hydrology, and geography in accordance with the Fish and Wildlife Service's wetland definition and classification system (Cowardin et al., 1979). There is a margin of error inherent in the use of aerial photographs. Thus, a detailed on-the-ground survey may result in revision of the wetland boundaries. Maps should therefore be used to locate the presence of wetlands and not to identify precise boundaries between wetlands and uplands.

Outlined below are relevant data about the wetlands inventory for Maine.

Contractor for Photointerpretation

University of Massachusetts
Department of Forestry and Wildlife Management
Amherst, Massachusetts 01003

(Martel Laboratories of Clearwater, Florida did Bangor SE and Bath NW).

Aerial Photography Used

Most of the subject area was interpreted from 1:80,000 black and white panchromatic transparencies. The data of this imagery is mostly 1975, although some 1977 photos were used. In two areas, i.e., Bath NW and Bangor SE 1:130,000 color infrared (1972) transparencies were utilized. Photography used for a given area is listed on each large-scale NWI map.

Field Checking

Approximately six weeks of field checking were performed for this inventory from the fall of 1977 to the summer of 1980.

Collateral Data Used

U.S. Geological Survey Topographic Maps
Maine Bureau of Geology Marine Geology Charts
Maine Dept. of Inland Fisheries and Wildlife Wetland Maps
National Oceanic Survey Charts
U.S.D.A. Soil Conservation Service Soil Surveys

Minimum Mapping Unit

In general, the minimum mapping unit was between three to five acres in size, although conspicious wetlands less in size were commonly mapped.

Reviewers of Draft Maps

Maine Department of Inland Fisheries and Wildlife
Maine Department of Marine Resources
National Marine Fisheries Service
U.S.D.A. Soil Conservation Service
U.S. Army Corps of Engineers
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service

Photointerpretation Problems

A few problems were encountered in photointerpreting wetlands in Maine. These problems and their solutions are presented below:

1. Determination of Estuarine/Marine systems break in coastal water. Due to the irregular high-energy coastline of Maine, in most cases a clear distinction between these two systems was not apparent. Salinity information found on the State's Marine Geology Charts was particularly useful to look for measurable dilution of seawater with freshwater which is a major feature of the Estuarine System. This in combination with semi-enclosed basins were used to separate Estuarine systems from Marine Systems. Dr. Peter Larson, Bigelow Marine Laboratories, also provided considerable input into this effort.

2. Determination of questionable wetland areas. Soil surveys were used in combination with field checking when possible. State wetland maps were also consulted.

Wetland Communities

The Fish and Wildlife Service is preparing a list of wetland plants (i.e. hydrophytes) to help identify wetlands. A tentative regional list is now available for distribution. In the future, the Service plans to develop a list of the Nation's wetland plant communities. At this time, however, such information is not available.

Table 1 represents a list of major wetland plant communities observed during inventory work in Maine. Map symbols are also given; they reflect dominant vegetative life-form and water regimes (i.e. the degree of flooding and/or soil saturation).

Hydric Soils

The presence of undrained hydric soil is one of the three major criteria used to define wetlands (Cowardin et al., 1979). The U.S.D.A. Soil Conservation Service is preparing a list of hydric soils to accompany the Fish and Wildlife Service's wetland classification system. Table 2 is a draft list of hydric soils for Maine. For specific information regarding hydric soils in Maine, contact the State Soil Scientist, U.S.D.A. Soil Conservation Service, U.S.D.A. Building, Orono, ME 04473.

Table 1 Examples of Maine wetland plant communities. Note: This is not a comprehensive list, but is based on actual field observations. Plant names generally follow Gray's Manual of Botany (1970).

Wetland Type (Mapping Symbol)	Dominance Types	Common Names	Water Regions
E2EM	Spartina alterniflora (tall form)	Smooth Cordgrass	Regularly Flooded
	Spartina patens	Marsh Hay	Irregularly Flooded
	Distichlis spicata	Salt Grass	
	Juncus balticus	Baltic Rush	
	Puccinellia spp.		
	Typha angustifolia	Cattail	
	Juncus gerardi	Black Grass	
PEM	Typha angustifolia	Cattail	Seasonally Flooded and Saturated
	Typha latifolia	Cattail	
	Calamagrostis canadensis	Bluejoint	
	Cladium mariscoides	Twig Rush	
	Pontederia cordata	Pickerelweed	
	Carex spp.	Sedges	
	Scirpus cyperinus	Woolgrass	
	Juncus effusus	Soft Rush	Temporarily Flooded and Saturated
PSS1	Alnus spp.	Alders	Seasonally Flooded or less often; also saturated
	Acer rubrum (saplings)	Red Maple	Seasonally Flooded
	Betula populifolia	Gray Birch	
	Salix spp.	Willows	
	Vaccinium corymbosum	Highbush Blueberry	
	Cephalanthus occidentalis	Buttonbush	Semi-Permanently Flooded
	Myrica gale	Sweet Gale	Saturated
	Rhododendron canadense	Rhodora	
	Kalmia angustifolia	Sheep Laurel	
PSS3	Chamaedaphne calyculata	Leatherleaf	Saturated
PFO1	Acer rubrum	Red Maple	Seasonally Flooded and Others
PFO2	Larix laricina	Larch	Saturated
PFO4	Picea mariana	Black Spruce	Saturated
	Tsuga canadensis	Hemlock	
	Thuja occidentalis	Northern White Cedar	
	Abies balsamea	Balsam Fir	
PFO5	Dead Trees (beaver influenced)		Permanently Flooded
R1EM	Zizania aquatica	Wild Rice	Regularly Flooded
	Scirpus validus	Soft-stem Bulrush	
	Scirpus americanus	Three-square	
	Spartina pectinata	Slough Grass	

Table 2 Draft list of the hydric soils of Maine.

Soil Series	Soil Series
*Appleton	Monarda
*Au Gres	*Munson
Biddeford	*Naumberg
Binghamville	Newstead
Birdsall	Ossipee
*Boothbay	Panton
*Boxford	Peacham
Burnham	Pipestone
*Cabot	*Raynham
Canadaigua	Rumney
Carlisle	Saco
*Charles	*Scantic
*Chaumont	Scitico
Chocurua	Searsport
*Covington	Sebago
Dannemora	*Stafford
*Elmridge	*Stissing
Enosburg	Swanton
*Fredon	Togus
Guffin	Tughill
Halsey	Vassalboro
Hanlain	Wallkill
Kingsbury	*Walpole
*Limerick	Waseca
Livingston	Wayland
Mansfield	*Westbury
Massena	Whately

*On-site evaluation is needed to determine whether soil is hydric or not.