

# APPENDIX A

## WETLAND RESOURCES AND REFERENCES

### ORGANIZATIONS THAT CAN HELP:

[NH Association of Natural Resource Scientists](#)

[NH County Conservation District Offices](#)

[NH Natural Resources Conservation Service](#)

[Regional Planning Commissions in NH](#)

[UNH Cooperative Extension](#)

[NH Association of Conservation Commissions](#)

### FUNDS TO PROTECT WETLANDS

#### [Aquatic Resource Mitigation Fund – NH DES Wetlands Bureau](#)

The Aquatic Resource Mitigation (ARM) Fund has been created as an additional compensatory mitigation option available to applicants for impacts to wetlands and other aquatic resources. This mitigation option is available for use after avoidance and minimization of impacts to these aquatic resources has been achieved. DES is authorized to collect mitigation funds in lieu of other forms of wetland mitigation as part of a wetlands application. DES holds and manages funds to be offered as grants for potential projects that will accomplish long-term environmental results.

#### [Wetlands Reserve Program – Natural Resources Conservation Service](#)

The Wetlands Reserve Program (WRP) is currently a part of the USDA's Agricultural Conservation Easement Program (ACEP) that was most recently reorganized and reauthorized in 2014. It offers private landowners a source of funds to restore and conserve wetlands and their buffers. Project ranking is competitive, and reimbursement rates are set by geographic area. Once awarded and approved, projects are funded according to availability on an annual basis.

### NEW HAMPSHIRE WETLANDS RULES AND LAWS

#### [NH DES Wetlands Bureau](#)

##### [NH DES Wetlands Rules - Env-Wt 100-900](#)

**Env-Wt 100 ORGANIZATIONAL RULES**

**Env-Wt 200 RULES OF PRACTICE AND PROCEDURE**

**Env-Wt 300 CRITERIA AND CONDITIONS FOR PERMITS**

**Env-Wt 400 SHORELINE STRUCTURES**

**Env-Wt 500 PERMIT PROCEDURE**

**Env-Wt 600 TIDAL WETLANDS**

**Env-Wt 700 PRIME WETLANDS**

**Env-Wt 800 COMPENSATORY MITIGATION**

**Env-Wt 900 STREAM CROSSINGS**

[Law: RSA 482-A: Fill and Dredge in Wetlands](#)

[Prime Wetlands](#)

RSA 482-A:15 has a provision that allows a municipality to designate certain wetlands within its borders as being worthy of extra protection because of their size, uniqueness, fragility, unspoiled character or other relevant factors that make them of substantial significance. Env-Wt 700 of the Wetlands Rules provides detailed criteria for the adoption of designated prime wetlands (see web link below).

The first step in designating prime wetlands is to conduct an inventory of wetlands in town consistent with current statutory requirements. Following the inventory, threshold conditions may be set for one or more measurable functions or characteristics (e.g. all wetlands important for flood control and wildlife habitat, or wetlands greater than a certain size). These threshold conditions reflect the priorities of the community and limit the set of wetlands that can reasonably be studied, without eliminating significant candidates from consideration. The candidate wetlands are then evaluated using a wetland evaluation method such as the NH Method.

Note that wetlands proposed for prime designation must be greater than 2 acres in size, contain at least 50% very poorly drained soils, and have all three of the technical criteria for wetlands, namely, hydric soils, hydrophytic vegetation **and** wetland hydrology.

[Prime Wetlands \(RSA 482-A:15\)](#)

Prime Wetlands RSA 483-A:11-IV - Forestry in and around Prime Wetlands

*These rules allow a property owner to apply for a waiver "...to perform forest management work and related activities in the forested portion of a prime wetland or its 100-foot buffer". "A waiver shall be issued only when the department [NH DES] is able to determine there will be no significant net loss of wetland values as identified in ...RSA 482-A:1"*

[NH DES Wetlands Rules - Chapter Env-Wt 700 Prime Wetlands](#)

## WATER RESOURCES

### NH Department of Environmental Services

[Drinking Water and Groundwater Protection Bureau](#)

[Water Division](#)

[NH Geological Survey](#)

[Biomonitoring Program](#)

[NH DES List of 4<sup>th</sup> Order Streams](#)

### [UNH Cooperative Extension - Lakes Lay Monitoring Program](#)

## WETLAND CLASSIFICATION AND NATIONAL WETLANDS INVENTORY

### [US Fish & Wildlife Service – National Wetlands Inventory](#)

#### [Classification of Wetlands and Deepwater Habitats of the United States.](#)

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. U.S. Fish and Wildlife Service. FWS/OBS – 79/31.

## FOREST MANAGEMENT INFORMATION

### UNH Cooperative Extension

[Good Forestry in the Granite State](#)

[Best Management Practices for forestry to protect water quality in New Hampshire](#) (PDF document)

### [Society for the Protection of NH Forests](#)

*Education programs include forest and wildlife ecology, forestry and forest management, logging, land conservation, N.H. forest history, winter tree identification and more*

## WILDLIFE INFORMATION

### NH Fish & Game Dept.

[Non Game & Endangered Wildlife Program](#)

[NH Wildlife Action Plan](#)

[Fisheries Management](#)

### [UNH Cooperative Extension Wildlife Resources](#)

[Taking Action for Wildlife](#) (UNH Cooperative Extension and NH Fish and Game Dept)

[NH Audubon](#)

## RARE PLANTS AND EXEMPLARY NATURAL COMMUNITIES

### [NH Division of Forests and Lands - Natural Heritage Bureau](#)

[Natural Communities of NH, including Key to Natural Communities](#) (PDF Document)

*Includes a key to natural communities and a reporting form for suspected rare or exemplary natural communities*

[The Nature Conservancy – NH](#)

## VERNAL POOLS

Vernal pools are wetlands with a seasonal cycle of flooding and drying. Some vernal pools flood in the spring with water from melting snow, rain or high groundwater and then typically dry by summer's end. Other pools follow a similar pattern, but fill with rain in autumn, hold water all winter and spring, and then dry out by late summer. The annual drying cycle of vernal pools makes them different from other wetlands and plays a key role in determining which wildlife species uses which pools as habitat.

### NH Fish & Game Department

[Vernal Pool Habitat Profile in the NH Wildlife Action Plan](#) (starts p. 155)

[Identification and Documentation of Vernal Pools in New Hampshire](#) (PDF document)

### UNH Cooperative Extension

[Vernal Pool Habitats and Resources](#)

[NH Wetlands Bureau – Vernal Pools Resources](#)

## MAPPING INFORMATION

[Favorable Gravel Well Analysis](#)

[Google Earth](#)

### GRANIT

[NH GRANIT](#) – New Hampshire's Statewide GIS Clearinghouse

[GRANITView Mapper](#)

[NH Wetlands Mapper](#)

### NH Fish & Game

[Using the Wildlife Action Plan Maps](#)

[Wildlife Action Plan Maps by Town](#)

[Terrain Navigator](#) (commercial product)

[US Fish & Wildlife Service – National Wetlands Inventory](#)

## ADDITIONAL WETLAND REFERENCE MATERIALS

Adamus, P.R., E.J. Clairain, Jr., R.D. Smith, and R.E. Young. 1987

Wetland Evaluation Technique (WET): Volume II: Methodology, Operational Draft Technical Report Y-87-?, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Adamus, P.R. and L.T. Stockwell. 1983.

A Method of Wetland Functional Assessment: Volumes I and II Report No. FHWA-1P-82-23 and FHWA-1P-82-24 Offices of Research and Development, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C.

DeGraaf, R.M. and M. Yamasaki, 2000.

New England Wildlife: Habitat, Natural History, and Distribution. University Press of New England.

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Faber-Langerdoen, D., J. Riocchio, M. Schafale, C. Nordman, M. Pyne, J. Teague, T. Foti, and P. Comer. 2006.

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Magee, D.W., 1981.

[Freshwater Wetlands – A guide to Common Indicator Plants of the Northeast](#). The University of Massachusetts Press.

Mitsch, W.J. and J.G. Gosselink. 2007.

[Wetlands](#), 4th ed., John Wiley & Sons, Inc., New York

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[High Intensity Soil Maps for New Hampshire, Standards](#).

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Tiner, R. 1996

[Winter Guide to Woody Plants of Wetlands and Their Borders: NE US](#). Institute for Wetland and Environmental Education and Research.

Tiner, R. 1988

[Field Guide to Nontidal Wetland Identification](#).

U.S. Army Corps of Engineers. 2012.

[Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region](#), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center

U.S. Dept. of Agriculture, Natural Resources Conservation Service, 2010. Version 7.0. [New Hampshire State-Wide Numerical Soils Legend](#).

U.S. Fish & Wildlife Service, US Army Corps of Engineers, US Environmental Protection Agency, and USDA Soil Conservation Service, 1989. [Interagency Manual for Identifying and Delineating Jurisdictional Wetlands](#)

Wetland Plant Indicator Status

[NRCS Wetland Indicator Status web page](#)  
[Regional Wetland Plant Lists Northeast \(Region 1\)](#)