Vol.4, No.1
December 6, 2006

WETLANDS DEMYSTIFIED
Wetlands Defined, Part I
By Paul Hennen

By popular demand "Wetlands Demystified" is back, at least for a while. Readers who are new to this series of articles sponsored by the Pomfret Inlands Wetlands and Watercourses Agency (also known as the wetlands Commission) and who have an interest in Pomfret's wetlands and watercourses and some of the internal workings of the Agency can review previous articles listed on our web site at www.pomfretct.org. In this new series I will focus more on the specific kinds of wetlands found in Pomfret, their geology and habitat value and why they are so important to us and the creatures that depend on them. After discussing wetlands, I will focus on watercourses, which while more easily defined than soils, are just as varied and important to our environmental ecology. I will also attempt to make these articles more reader friendly by not trying to cover too much information at one time.

Wetlands are complex ecological systems that involve soil hydrology, which pertains to the degree of soil saturation and flooding under various conditions, and wetland vegetation known as hydrophytes, which are plants that have adapted to and thrive under wet hydric soil conditions. We generally refer to a hydric soil, as one in which there is sufficient ground water saturation to stress plants and animals at some point during the growing season. Farmers and home gardeners know not to plant most crops too early in the spring since plants not adapted to wet soil conditions will fail. Plant roots need free oxygen in the soil to survive and unless plants have developed alternative means to accomplish this they will not thrive in saturated soil. Under these conditions it would appear that wetlands identification would be a rather simple matter. If your tomatoes won't grow and die and you sink up to your ankles in the garden, it must be a wetland? That's logical, but not usually the case.

Areas that are inundated or frequently saturated by surface or ground water and support hydrophilic vegetation could be a wetland by definition. In fact, this is essentially the definition used by the US Fish and Wildlife Service and the US Army Corps of Engineers. The U.S.D.A Soil Conservation Service, now known as the Natural Resources Conservation Service (NRCS) and most states use essentially this definition to designate a wetland as well. Connecticut, however, chose to be different. It became clear to our legislators that too much of the State's valuable wetlands lost to developers and their clients were being destroyed by such a definition. In this State wetlands are defined as land, including submerged land, which consists of any soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative

Soils Survey, as may be amended from time to time by the NRCS. As can be seen, under this definition hydric soils are not necessarily wetlands, since many soils may drain sufficiently in time to be considered at least moderately well drained or well drained soils on a seasonal basis, and, of course, some soils are well drained the year round. There are exceptions, however. One soil described as extremely well drained is actually designated a wetlands soil. You will never get your feet wet tromping through this soil, but such soils exist on Town owned property in Pomfret, namely the Murdock Property. The Murdock Property is an interesting case of soil and watercourse diversity and one that I will discuss in a future article. The lesson here is that Connecticut wetlands are only identified by soil type, that is soils that are poorly drained, very poorly drained, alluvial and floodplain. Vegetation and wetness may be indicators, but they cannot be used to identify wetlands alone. Only a recognized Soil Scientist is qualified to determine the location and boundary of a wetland in our State by using the NRCS soil maps as a guide.

As I have stated, my initial intent is to review some of the history behind the delineation of wetlands, how they were mapped their accuracy in terms of actual boundary delineation, the types of wetlands found in our corner of the State and their habitat values. In the meantime if you are interested you can download an official NRCS Connecticut soil map for your location or any other from the web site http:// websoilsurvey.nrcs.usda.gov. This site is easy to use and it allows one to focus on a specific area of interest. You only need to know a street address to get started. It's that simple. From this site you can also obtain information on soil types, their hydrology, frequency of flooding and water table depth. The Soil Survey of Windham County issued by the U.S.D.A. Soil Conservation Service in 1981, while very accurate and an excellent reference is no longer used to designate wetlands in our State. It should be noted also that flooding frequency described by the NRCS is by soil type and should not be confused with flood zones designated by the Federal Emergency Management Agency (FEMA).

As always your comments and suggestions are appreciated.