

Vernal Pool Ecology and Monitoring

**CONNECTICUT'S MUNICIPAL INLAND WETLANDS AGENCY
AUTHORITY REGARDING VERNAL and OTHER TEMPORARY WATERCOURSES**

I. Connecticut's Inland Wetlands and Watercourses Act (IWWA)

A. *Definitions.* - *Section 22a-38(16):* "Watercourses" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation;

1. Definition of "watercourse" provides municipal inland wetlands agencies with the jurisdiction to regulate activities that are likely to impact or affect "*all other bodies of water*"

a. Bodies of water may be natural or artificial

b. Bodies of water may be vernal or intermittent

2. Intermittent watercourse is defined but a vernal watercourse is not defined - no definition for "vernal" exists in the IWWA or in the DEEP Inland Wetlands and Watercourses Model Municipal Regulations

a. Therefore use the commonly understood dictionary definition

b. "Vernal" means of, relating to, or happening in the spring; typical of or suggestive of spring*

i. The definition does not reference specific biology/ecology

ii. Vernal Pools, which DO contain a specific ecology, are one TYPE of vernal watercourse

3. What about other temporary bodies of water? Not just those associated with the spring?

a. Remember, the definition of "watercourses" under the IWWA includes "all other bodies of water"

- b. The presence of water in Swamps, Marshes, Brooks, etc. can be temporary
- c. It is important to note that other temporary bodies of water (i.e. those present in the autumn) can provide the same habitat benefits as vernal pools

B. Factors for Consideration - Section 22a-41:

1. Subsection (c) allows municipal inland wetlands agencies to consider the impacts or affects to aquatic, plant or animal life and habitats in a wetland or watercourse
 - a. "Habitats" means areas or environments in which an organism or biological population normally lives or occurs.
 - b. Vernal pools and other temporary bodies of water provide important habitat for a high diversity of organisms including species with life cycles adapted exclusively to this specific watercourse
2. Subsection (d) does NOT allow municipal inland wetlands agencies to consider the impacts to aquatic, plant or animal life and habitats if the regulated activity is OUTSIDE the wetland or watercourses without FIRST making a finding that such activity will likely impact or affect the PHYSICAL CHARACTERISTICS of such wetland or watercourse
 - a. Vernal pools and other temporary bodies of water are ecologically connected to the surrounding upland; often activities occurring in the upland will affect the physical characteristics of such watercourses (remember to first make such finding before considering the impact or affect to aquatic, plant or animal life and habitats)
 - b. What are "the physical characteristics"? Next lecture will review the ecology of vernal pools and other temporary bodies of water
 - i. Physical characteristics = water temperature, water chemistry, etc.
 - ii. Physical characteristics affect the ecology of the organisms and the vernal pool/temporary body of water