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GUIDANCE ON WETLAND D TEST PARAGRAPH 62-340.300(2)(d), F.A.C.

TO: The Department, Water Management Districts, and local governments

THROUGH: Richard Cantrell 
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This memo provides additional guidance to that given in THE FLORIDA WETLANDS DELINEATION MANUAL for application of the rule language within paragraph 62-340.300(2)(d), F.A.C. It must be read in concert with THE FLORIDA WETLANDS DELINEATION MANUAL and should not be interpreted as replacing the existing guidance. Rather, the following is to be interpreted as an expansion of the former discussion.

Paragraph 62-340.300(2)(d), F.A.C. states that wetlands include “those areas where one or more of the hydrologic indicators listed in Rule 62-340.500, F.A.C., are present, and which have hydric soils, as identified using U.S.D.A.-N.R.C.S. approved hydric soil indicators for Florida, and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19) F.A.C. These areas shall not extend beyond the seasonal high water elevation”.

Along with the ongoing caution to apply reasonable scientific judgment (applies to the use of all provisions of Chapter 62-340 F.A.C.; see Rule 62-340.300 F.A.C.), the use of the D test provision(s) is limited to areas within the seasonal high water elevation. The seasonal high water elevation is defined in Chapter 62-340 F.A.C. as “the elevation to which the ground and surface water can be expected to rise due to a normal wet season”. One method for identifying **ground water and shallow surface water elevations** for purposes of the seasonal high water elevation defined in Chapter 62-340, F.A.C., is through the use of the methodologies for the identification of

the seasonal high water table (SHWT) set forth in Soil and Water Relationships of Florida's Ecological Communities (Florida Soil Conservation Staff, 1992). This is the same document that provides the list of hydric soil indicators used throughout Chapter 62-340, F.A.C. According to the Soil and Water Relationships of Florida's Ecological Communities, four (4) of the hydric soil indicators have been routinely associated with field identification of the seasonal high water table at or above the soil surface. These indicators are: muck (A8 Muck Presence or A9 1cm Muck depending on the applicable Land Resource Region), mucky texture (A7 Mucky Mineral), gley colors (S4 Sandy Gleyed Matrix and/or F2 Loamy Gleyed Matrix depending on soil textures), and sulfidic odor (A4 Hydrogen Sulfide). The field identification procedures of Soil and Water Relationships of Florida's Ecological Communities further associates the SHWT elevation with the highest elevation at which all the criteria for ANY of the other hydric soil indicators is met. This indicator/water table relationship has also been confirmed via phone conversation with Wade Hurt (NRCS National Leader for Hydric Soils), on April 30, 2007. When a wetland area is supported only by shallow inundation or saturation to the soil surface, there is often little hydrologic evidence outside that provided for in subsection 62-340.500(8), F.A.C. The provisions of subsection 62-340.500(8), F.A.C. clearly state that "evidence of a seasonal high water table **at** or above the surface according to methodologies set forth in Soil and Water Relationships of Florida's Ecological Communities," may be used as a hydrologic indicator. Thus, in addition to the specifically identified indicators, any hydric soil indicator which begins at the soil surface may be used as a hydrologic indicator of the SHWT at the surface subject to the application of reasonable scientific judgment. Application of this concept means that areas of the landscape where one or more hydric soil indicators begin at the soil surface may pass the D test if prudent use of reasonable scientific judgment (such as whether the soils are in a drained condition, see page 32 of the Florida Wetlands Delineation Manual) determines that the area meets the definition of a wetland. If the hydric soil indicator(s) does not begin at the soil surface but within the depth requirements to qualify as a hydric soil, then one of the other hydrologic indicators listed in Rule 62-340.500, F.A.C must also be present to pass the D test.

While the hydrologic indicators in Rule 62-340.500, F.A.C. are intended as evidence of inundation or saturation of a frequency sufficient to meet the wetland definition in subsection 62-340.200(19), F.A.C., it also asserts that rare or aberrant hydrologic indicators are not to be used or extended into surrounding areas when reasonable scientific judgment indicates the surrounding areas are not wetlands. The role of reasonable scientific judgment is crucial to the correct application of these hydrologic indicators.

Another hydrologic indicator which often draws an extra degree of scrutiny is the occurrence of crayfish chimneys, which are considered evidence of aquatic fauna under the provisions of subsection 62-340.500(8), F.A.C. The Department suggests the following additional guidance when considering crayfish chimneys as hydrologic evidence:

1. Crayfish species exhibit three distinct life histories: fully aquatic (always in lotic or lentic waters, including subterranean ground waters; surface dwelling species may burrow under extreme conditions), secondary burrowers (typically alternate between dry season burrows and wet season inundation), and primary burrowers (entire life cycle is spent in burrows). Some primary burrowers may be utilizing water tables up to a foot below the surface and as such the burrows of these species may not themselves be evidence of a SHWT at the surface in sandy soils. Additionally, some individuals may temporarily burrow in areas that experience an infrequent high water table when compared to long term

conditions. Reasonable scientific judgment must be applied when considering locations of burrows in the landscape as it relates to both current and long term site conditions.

2. Presently, of the crayfish species in Florida that are recognized as primary burrowers, three (3) species are known to burrow one foot or deeper (The Crayfishes of Florida, Hobbs, 1942) and as such may be suspect as indicators of the SHWT at the soil surface in sandy soils. These species are: *Procambarus geodyte*, *Procambarus rogersi* (including several sub-species), and *Fallicambarus byersi*. The ranges of these three species are limited and as an aggregate include the following Florida counties: Calhoun, Escambia, Flagler, Gadsden, Lake, Leon, Liberty, Okaloosa, Putnam, Santa Rosa, Volusia, and Wakulla. Within these counties the exclusion of crayfish burrows as the sole hydrologic indicator in sandy soils in conjunction with paragraph 62-340.300(2)(d) F.A.C. will require identification and reasonable scientific judgment that the burrows were created by one of the three referenced primary burrowers. In the remainder of Florida, the occurrence of crayfish burrows may be applied as a normal hydrologic indicator subject to the previously noted caution related to infrequent high water tables.

All hydrologic indicators are intended to be evaluated with meteorological information, surrounding topography, reliable hydrologic data or analyses, and reasonable scientific judgment as it pertains to the intent listed in section Rule 62-340.100 F.A.C.

Please contact Eric Hickman at (850) 245-8496 with any questions or comments.