

Indicators of Hydrologic Change Examined at Indiana Dunes

National Biological Service Research Scientist Doug Wilcox of the Great Lakes Science Center has published in the *Natural Areas Journal* 15(3):240-248 a paper entitled, *Wetland and Aquatic Macrophytes as Indicators of Anthropogenic Hydrologic Disturbance*. Based on work conducted at Indiana Dunes National Lakeshore, Indiana, the paper discusses how hydrologic disturbances can affect wetland and aquatic macrophyte communities by creating temporal changes in soil moisture or water depth. Such disturbances are natural; however, human-caused changes in wetland hydrology may have negative effects on wetlands. Since plant commu-

nities respond to habitat alterations, observations of plant community changes may be used to recognize effects of hydrologic disturbances that are otherwise not well understood. A number of plants, including *Typha angustifolia* (narrow-leaf cattail) and *Lythrum salicaria* (purple loosestrife), are recognized as disturbance species; they are often found in roadside ditches, in wetland that have been partially drained, or in low areas that have been flooded. Other species commonly occur on mudflats exposed by lowering of water levels. In addition, wetland shrubs and trees invade or die as a result of draining or flooding. In more subtle terms, the relative composition of plant communities can change as a result of altered hydrology. Remote sensing (photointerpretation) and field vegetation studies, coupled with water-level monitoring, are recommended for gaining an understanding of hydrologic disturbances in wetlands.

Wilcox is also the editor of *Wetlands*, a quarterly journal concerned with all aspects of wetlands biology, ecology, hydrology, water chemistry, soils and sediment characteristics, management, and laws and regulations. Subscription and article submission information is available from the Society of Wetland Scientists; phone (913) 843-1235.