Maximizing Habitat Diversity under Widely Varying Hydrologic Conditions

Steven Collins
Johnson, Mirmiran & Thompson, Lake Mary, FL, USA

How do you establish and maximize survivorship of native plantings in a system intended to have wide water level fluctuations, and when future conditions are predicted to differ from current conditions? Diversity and flexibility are key. The primary objectives of the John Paul Landing project were to provide regional water quality and flood detention (650 ac-ft) in northwestern Harris County, TX. In our design, we took the opportunity to maximize ecological lift and restore lost regional function and values by adding wildlife habitat islands, both forested and unforested with prairie plantings, and submerged aquatic vegetation shelves of varying depths. Located within a public park, the design also includes recreation and educational opportunities for the community, including a kayak trail, walking trail, floating boardwalk, outdoor classroom, and an imported sand beach. Scheduling construction and removal of berms to manage water levels was challenging. However, the critical challenge was establishing wetland plants under both flood and drought conditions.

Contact Information: Steven Collins, Johnson, Mirmiran & Thompson, Lake Mary, FL USA 32746, Phone: 407-562-4970,
Email: sdcollins@jmt.com