

HUNTLEY MEADOWS WETLAND RESTORATION

Alexandria, VA

CONNECTING ECOLOGY and COMMUNITY through INNOVATIVE ENGINEERING

Located in Alexandria, VA, the ±40 acre central wetland area in Huntley Meadows Park is the largest non-tidal wetland in Northern Virginia. Due to the vast ecological value of hemi-marsh systems, the Fairfax County Park Authority decided to recreate the wetland's previous hemi-marsh condition, which is known to have one of the highest levels of biodiversity and ecological function.

Wetland Studies and Solutions, Inc. (WSSI) collaborated with the Park Authority and members of the local community to creatively implement a water-management system via an innovative application of engineering technology to meet the hemi-marsh system's unique management needs. This has created a healthy, diverse ecosystem for wildlife, and the community, to enjoy for generations.



8/24/2013



WSSI designed water control structures, which blend seamlessly into the natural environment. Vinyl sheet-pile was combined with an earthen-dam rock structure to allow large storm events to overtop the structure without degradation while eliminating the need for a dedicated emergency spillway.

- A. Conceptual rendering of the Water Control Structure
- B. Installation of vinyl sheet-pile
- C. Habitat pool adjacent to water control structure

WSSI incorporated Clemson Beaver Pond Levelers into the design to control the water surface elevation in the system without any risk from beaver damming activities. Because beavers tend to construct dams where significant surface flow is present, WSSI designed a submerged inlet to convey base flows which discourages further damming activities by beavers as surface flows are eliminated. This technique, along with adjustable slide gates, allows management of the water level to achieve the biological diversity goals of the hemi-marsh system while allowing for continued habitation of beaver.

- D. Concept rendering of the Clemson Beaver Pond Levelers, with the Water Control Structure (seen above and left of the observation platform)
- E. Image of the installed Clemson Beaver Pond Levelers during construction, including downed trees to be utilized for additional habitat



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SUBMITTED BY: Wetland Studies and Solutions, Inc.
LOCATION: Prince William County, VA



CLIENT/OWNER: Fairfax County Park Authority
LOCATION: Fairfax County, VA

