



Mid-Atlantic Network

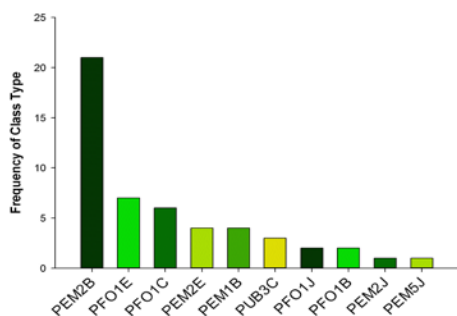
Wetlands Information Brief



Wetlands Delineation, Valley Forge NHP

Wetland and associated waterways subject to jurisdiction under Section 404 of the Clean Water Act and all wetlands subject to National Park Service (NPS) procedures for implementing Director's Order #77-1: Wetland Protection within Valley Forge were inventoried from 2 May – 28 July 2011. Due to the presence of adequate wetland vegetation and soil characteristics throughout the park the primary methodology utilized for making wetland boundary determinations

in the field was the U.S Army Corps of Engineers (USACE) Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (2010). Potential wetland habitats were also assessed under National Park Service D.O. #77.1, which utilizes the broader Cowardin et al. (1979) definition of wetlands and deepwater habitats. Lands within the park that satisfied either the 2010 USACE regional supplement or the D.O.



Frequency histogram showing a breakdown of Cowardin et al. (1979) wetland habitats at Valley Forge NHP.



View southeast of Wetland – 15.

Objective

Describe, document, and map all wetland habitats within Valley Forge from 2 May 2011 to 28 July 2011 following U.S. Army Corps of Engineers, Pennsylvania Department of Environmental Protection, and U.S. National Park Service protocols.

#77.1 definition had their boundaries flagged and located using a Trimble GeoXH global positioning system receiver.

Results

A total of 51 palustrine wetlands encompassing 63.96 acres / 25.89 ha of land were identified and delineated during the survey. Of those 51 wetland ecosystems, 17 wetlands met the PA Title 25, Chapter 105 Exceptional Value (EV) wetland designation due to their location in or along the floodplain of a wild-reproducing trout stream that runs through the park (Valley Creek). All of the identified and mapped palustrine wetland systems met both the USACE



Importance

Wetlands play a vital role in our environment. Fish, wildlife, specially-adapted plant species, and human beings receive direct and indirect benefits from these unique ecosystems. For example, wetland habitats such as those found at Valley Forge National Historical Park (Valley Forge) benefit mankind through flood water storage, stream stabilization, water treatment, and nesting,

resting, and escape cover for local wildlife. Situated at the boundary between land and water, wetlands are endowed with unique hydrologic, chemical, and biological processes that other lands do not possess. It is because of these factors that wetland habitats receive federal and state protection that most upland habitats have not been afforded.

Management Applications

The revised boundary information and associated wetland mapping will significantly improve the park's ability to effectively manage, protect, and monitor its wetland resources. The discovery of several new wetland habitats previously unknown to park staff will also provide the park with additional research, interpretation, and wildlife inventory opportunities.

How to delineate a wetland

Wetland boundaries were primarily determined by establishing a series of transects from a known wetland into known upland locations surrounding the wetland under examination. At random intervals along the transect investigators looked for evidence of hydric soils, hydrophytic vegetation, and wetland hydrology. The wetland/upland boundary was identified as the point where one of the three criteria

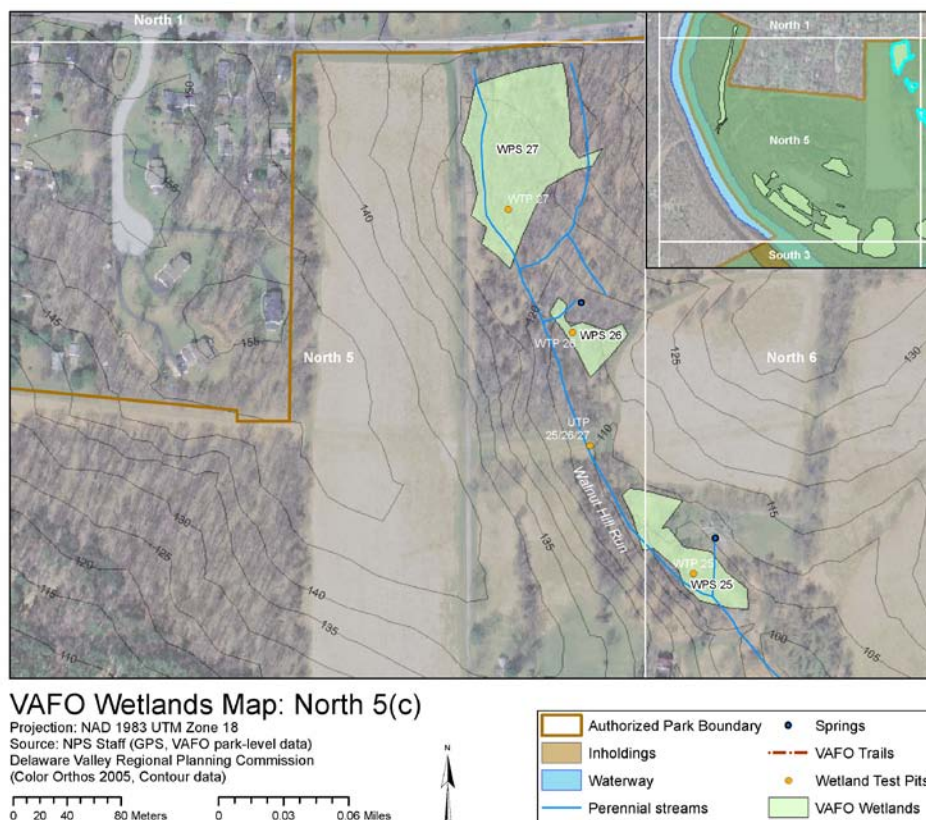
was eliminated.



criteria and the Cowardin et al. (1979) definitions. No new riverine systems were identified and mapped over the course of this investigation within the park boundary. The majority of the larger wetlands were located in areas previously identified by park staff; however, a significant number of previously smaller unmapped wetland areas were identified over the course of this investigation.



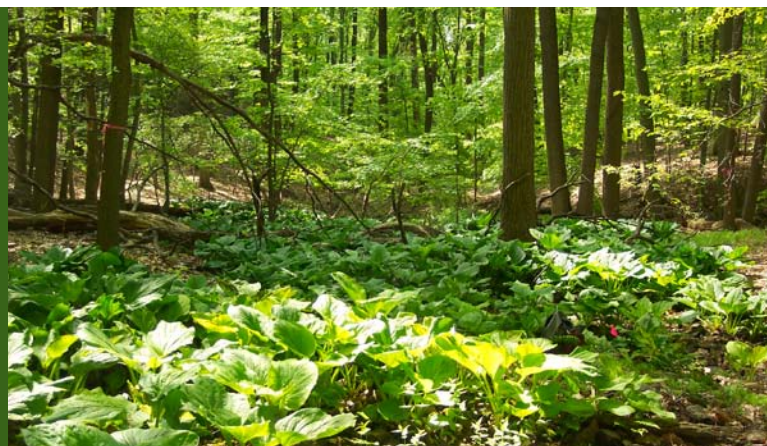
View south of Wetland – 21.



Example of investigation wetland mapping.

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Parks delineated: Valley Forge NHP

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