Preliminary Wetland Screening

XXXXX XXXXX Farm

Franklin Township Adams County, Pennsylvania



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Franklin Township Adams County, Pennsylvania

Prepared for:

Prepared by:

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INTRODUCTION

Water & Wetlands Consulting, LLC (WWC) was retained by XXXXXXXX Engineering to conduct a preliminary screening of wetlands and other water features within the XXXXX Farm located in Franklin Township, Adams County, Pennsylvania. The location of the study area is shown on Figure 1. The purpose of this investigation was to identify potentially regulated wetlands and other water features that may require further delineation and permitting if a new riding arena is to be constructed on the property. The study area included approximately 50 acres of mature forested floodplain, wooded slopes, and open agriculture fields.

METHODOLOGY

Prior to the field study, the U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation, Wetlands Geodatabase, Wetlands Mapper was used to identify mapped National Wetlands Inventory (NWI) wetlands in the vicinity of the study area. Figure 2 shows the results of this review, with a key to the abbreviations provided by Figure 3. Soils information was obtained from the Web Soil Survey 2.0 National Cooperative Soils Survey. Figure 4 shows the soils map for the study area, with Figure 5 providing a key to this map and Figure 6 the hydric characteristics of the individual map units.

The site investigation was a review of the study area as shown on mapping prepared from the landowners' comments. The perimeter of the study area was walked, and internal traverses were made to observe habitat conditions that could be considered potential wetland areas under the Routine method described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) as applied using the *Eastern Mountains and Piedmont Regional Supplement* (Environmental Laboratory, 2010). Soil probes were conducted where needed to confirm visual assessments of vegetation and hydrology, but test pits were not dug or documented at this level of inspection. Color photographs, included in Appendix A, were taken of representative wetland and upland areas to document site conditions at the time of the study.

The preliminary wetland screening was conducted on October 16th, 2013 by Kevin L. Hoover of WWC. Mr. Hoover is a registered Professional Geologist, a certified Professional Hydrologist – Groundwater with the American Institute of Hydrology, and a certified Professional Wetland Scientist with the Society of Wetland Scientists. He has 24 years' experience with the jurisdicational delineation of wetlands in Pennsylvania. The weather conditions at the time of the screening were late fall vegetation with no ground obstructions for snow or freezing.

RESULTS

Results of the preliminary wetland screening are shown by Figure 7, and the following discusses the NWI mapping, soils, and field observation results for the site:

National Wetland Inventory Mapping

NWI mapping identifies the two man-made ponds on the property as freshwater ponds adjacent to Conewago Creek. A palustrine emergent (PEM) wetland area is identified downstream of the ponds, and this area was field-confirmed as being wetland. An area of palustrine forested (PFO) wetlands are shown straddling the boundary with the property to the southeast, and this area was also confirmed as wetlands contiguous with the large forested wetland complex surrounding Conewago Creek.

USDA Soils Mapping

Soils mapping for the site indicates a broad band of hydric Hatsboro silt loam flooring the floodplain of Conewago Creek. Field review indicates that the mapped hydric area is almost entirely forested wetlands. Predominantly hydric Rohrersville silt loam zones are also indicated at the east and west ends of the property. From field review, the western zone correspondes well with observed ground indicators of wetlands, but the eastern zone likely extends farther uphill to the north than indicted by the USDA soil mapping; additional springs and wetland pockets were observed in this area that may be based on local hydric soils development.

Field Observations

Forested wetlands are present throughout the wooded bottomlands surrounding Conewago Creek, and floodplain wetlands extend into the open pasture adjacent to the creek at the eastern end of the property. A drainage channel (appearing perennial) crosses these pastures at the eastern end of the property from northwest to southeast carrying stormwater drainage from a detention pond on the adjacent firehall property. The pastures surrounding this drainage show numerous small seeps and springs with associated wetlands draining to the channel or the creek floodplain complex. These springs may represent shallow piping from the detention pond or natural groundwater expressions near the base of the Piney Mountain ridgeline.

The large open pasture along the northwest side of the property shows no sign of sustaining hydrology at its higher elevations; however, the western end of this field transistions to emergent wetlands near an ephemeral road runoff channel trending from north to south from Route 234 to the creek. The remaining open fields to the west are interpreted to be dominantly wetland.

RECOMMENDATIONS

The top of the northwest pasture shown on Figure 7 as "Potential Upland Construction Area" appears to be entirely free of wetlands or other water features. Sufficient area is likely available immediately west of the existing bank barn to construct a 70 foot by 140 foot enclosed arena and outslopes with no impacts to wetlands or water features. This zone extends from the barn barn westward to the power line feeding the cabin on the adjacent property to the south, and from Route 234 southward to the existing high tensile fence line. For any work elsewhere on this property, <u>a jurisdicational wetland delineation is strongly recommended</u> due to the high prevelance of wetland indicators observed during the field review.

A preliminary wetland screening does not confirm the presence or absence of wetlands or other water features under a regulatory context, but is intended to provide land development planners with information as to whether these regulated features may be present on a project site and deserve further consideration. The US Army Corps of Engineers (COE) is the only regulatory agency that can confirm the presence or absence of wetlands and other water features on any given site. The COE will review the delineation work of others on two levels: a Preliminary Determination that involves a desktop review of a consultant's findings; and an Approved Determination where the COE comes onto the site to review the wetland boundaries in the field. While a negative finding of the presence of wetlands and other water features within a conceptual project area represents WWC's expressed opinion that these features are not present, it is always recommended that a COE Jurisdicional Determination be obtained for the project site before proceeding with final permitting.

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- USDA Natural Resources Conservation Service, Web Soil Survey 2.0
- U.S. Fish & Wildlife Service, Division of Habitat and Resource Conservation. Wetlands Geodatabase, Wetlands Mapper.



Source: USGS Caledonia Park 7.5' Quadrangle





Source: USFWS Wetlands Geodatabase, Wetlands Mapper

Scale as Shown

Figure 2: National Wetland Inventory Map



STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
 EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

Classification of Wetlands and Deepwater Habitats of the United States Cowardin ET AL. 1979 as modified for National Wetland Inventory Mapping Convention

Source: Cowardin, et al., 1979

Figure 3: Key to National Wetland Inventory Mapping



Source: Cowardin, et al., 1979

Figure 3 (continued): Key to National Wetland Inventory Mapping



Site Soils Map

MAP INFORMATION	The soil surveys that comprise your AOI were mapped at 1:24,000.		Warning: Soil Map may not be valid at this scale.	Enlargement of maps beyond the scale of mapping can cause	misuriderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting	soils that could have been shown at a more detailed scale.		Please rely on the bar scale on each map sheet for map measurements		Source of Map: Natural Resources Conservation Service Web Soil Survey URI http://websoilsurvey.nrcs.usda.gov	Coordinate System: Web Mercator (EPSG:3857)	Maps from the Web Soil Survey are based on the Web Mercator	projection, which preserves direction and shape but distorts	uistance and area. A projection utat preserves area, such as ure Albers equal-area conic projection, should be used if more accurate	calculations of distance or area are required.	This product is generated from the USDA-NRCS certified data as of	the version date(s) listed below.	Soil Survey Area: Adams County Pennsylvania	Survey Area Data: Version 7, Dec 14, 2013	Soil man unite ara labalad /ac enara allowe) for man eralae 1-50 000	our map units are racered (as space anows) for map scares 1.50,000 or larger.		uate(s) aerial images were protographed. Jun 18, 2010—Nov o, 2011		The orthophoto or other base map on which the sour lines were compiled and digitized probably differs from the background imagery distaled on these maps. As a result some minor shifting	of map unit boundaries may be evident.
END	Spoil Area	Stony Spot Stony Spot Stony Stony	🔘 Very Stony Spot	🕎 Wet Spot	△ Other	 Special Line Features 	ater Features	 Streams and Canals 	ansportation	Interstate Highways	US Routes	Major Roads	Local Roads	ckground	Aerial Photography											
MAP LEG	erest (AOI)	Area or Interest (AUI)	Soit Man Linit Polynons	Soil Map Unit Lines	Soil Map Unit Points	Point Features	Blowout	Borrow Pit	Clay Spot	Closed Depression	Gravel Pit	Gravelly Spot	Landfill	Lava Flow Ba	Marsh or swamp	Mine or Quarry	Miscellaneous Water	Perennial Water	Rock Outcrop	Saline Spot	Sandy Spot	Severely Eroded Spot	Sinkhole	Slide or Slip	Sodic Spot	
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Source: USDA NRCS Web Soil Survey

Figure 5: Key to USDA Soils Map

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Mapunit symbol	Map symbol and map unit name	Hydric Percent of map unit	Hydric category		
Hc	Hc—Hatboro silt loam	95	Predominantly hydric		
HgB	HgB—Highfield channery silt loam, 3 to 8 percent slopes	0	Nonhydric		
HgC	HgC—Highfield channery silt loam, 8 to 15 percent slopes	0	Nonhydric		
HHD	HHD—Highfield and Catoctin channery silt loams, 15 to 25 percent slopes	0	Nonhydric		
RoB	RoB—Rohrersville silt loam, 3 to 8 percent slopes	5	Predominantly nonhydric		
W	W—Water	0	Nonhydric		

Source: USDA NRCS Web Soil Survey

Figure 6: Hydric Characteristics of Soils in Study Area



Source: PASDA Air Photo, 2010

Figure 7: **Potential Water Feature Map**