

# MOUNT AIRY LODGE PROJECT PARADISE TOWNSHIP MONROE COUNTY, PENNSYLVANIA

# WETLAND IDENTIFICATION/DELINEATION REPORT



**Prepared For** 

Mount Airy No.1 L.L.C. &
CECO Associates, Inc.



Prepared By



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## WETLAND IDENTIFICATION/DELINEATION REPORT

## PREPARED FOR

MOUNT AIRY NO. 1 L.L.C. 42 WOODLAND ROAD MOUNT POCONO, PENNSYLVANIA 18344

AND

CECO ASSOCIATES, INC.
SUITE 200, SCRANTON ELECTRIC BUILDING
SCRANTON, PENNSYLVANIA 18501

## PREPARED BY

SKELLY AND LOY, INC.
ENVIRONMENTAL-ENGINEERING CONSULTANTS
2601 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA 17110

**JUNE 9, 2005** 

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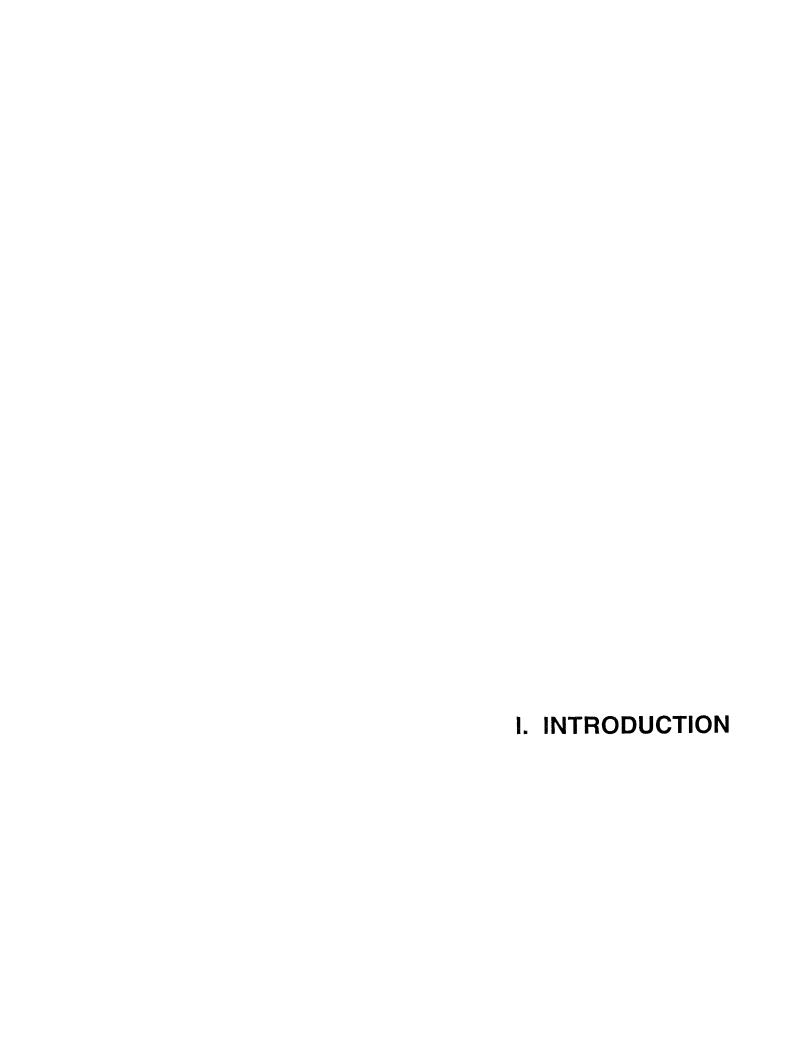
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#### I. INTRODUCTION

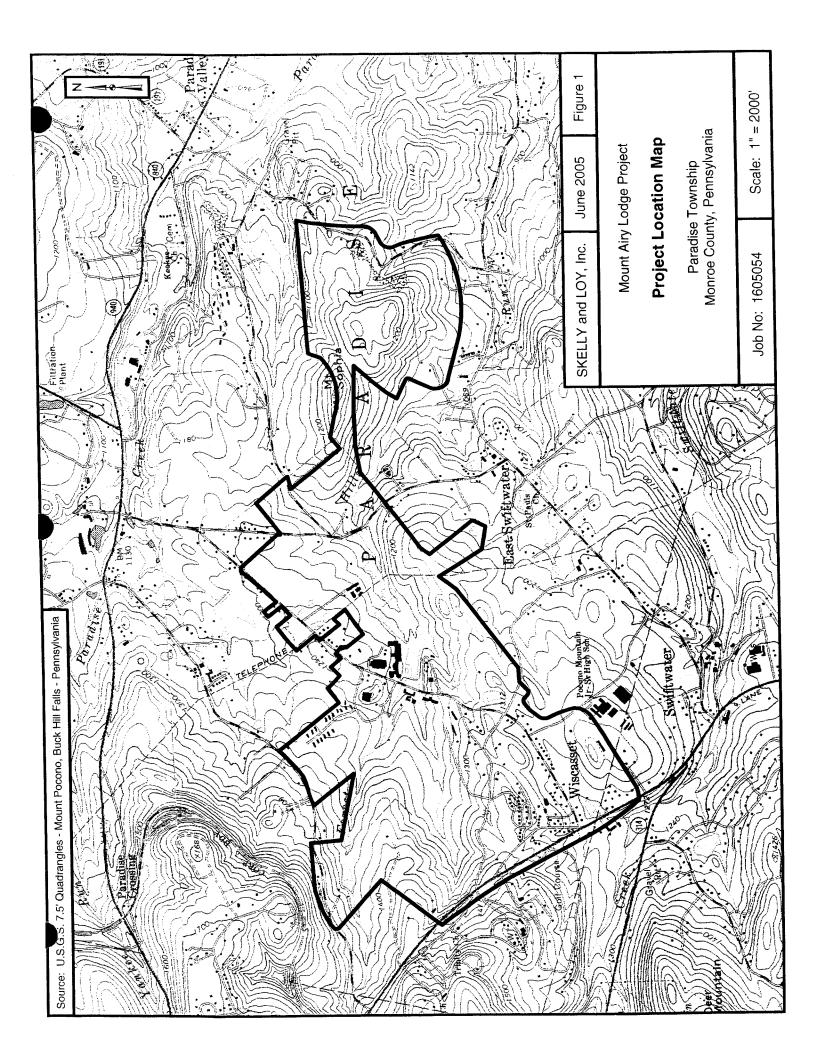
Skelly and Loy, Inc. has prepared the following wetland delineation report as part of the engineering and environmental studies associated with the Mount Airy Lodge in Paradise Township, Monroe County, Pennsylvania. The project study area is bordered by S.R. 611 to the west, Red Rock Road to the east, Bowman and Meadowside Roads to the south, and S.R. 940 to the north. The Mount Airy Lodge project will include improvements to existing facilities and the construction of new structures.

The project study area is located at approximately 41 degrees, 06 minutes, 42 seconds north latitude and 75 degrees, 19 minutes, 23 seconds west longitude according to the U.S.G.S. topographic quadrangle (Mount Pocono, Pennsylvania) (see Figure 1). The project study area is approximately 891 acres. The existing land use adjacent to the project study area includes golf courses, forest, macadam roads, commercial buildings, and single-family residences.

The wetland/watercourse study identified 73 wetlands, 35 watercourses, 15 open water habitats, three seeps, and seven vernal pools within the project study limits. The wetlands are identified by number and are labeled Wetlands 1 through 73.

The main watercourse through the project study area is Forest Hills Run. There are 33 unnamed tributary channels to Forest Hills Run. There is one watercourse (CHN-022) that drains to Indian Run Creek. Forest Hills Run and all the unnamed tributaries, including Channel 022, are protected under Pennsylvania Department of Environmental Protection (PA DEP), Chapter 93 Water Quality Regulations as a High Quality Cold Water Fishes (HQ - CWF) Resource.

This report documents descriptive information regarding the physical and biological characteristics of the wetland habitats identified in the project area. The report will serve as a supporting technical document for the project. The report includes a description of the existing conditions, methodologies used, and existing wetland habitats and watercourse. The resumes of the wetland scientists performing the investigation are provided in Appendix B. The following supportive information is also appended to the report: routine on-site wetland delineation data forms (Appendix C), photograph log (Appendix D), threatened and endangered species coordination (Appendix E) and wetland location map (Appendix F).



II. METHODOLOGY

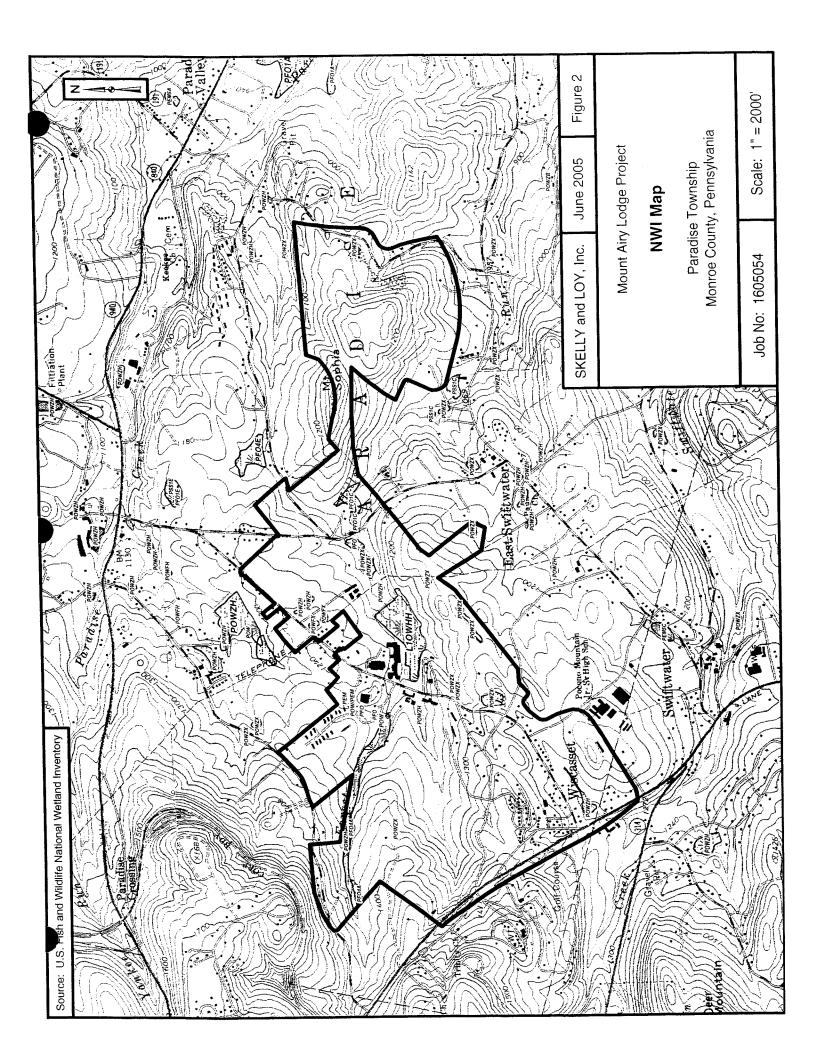
#### II. METHODOLOGY

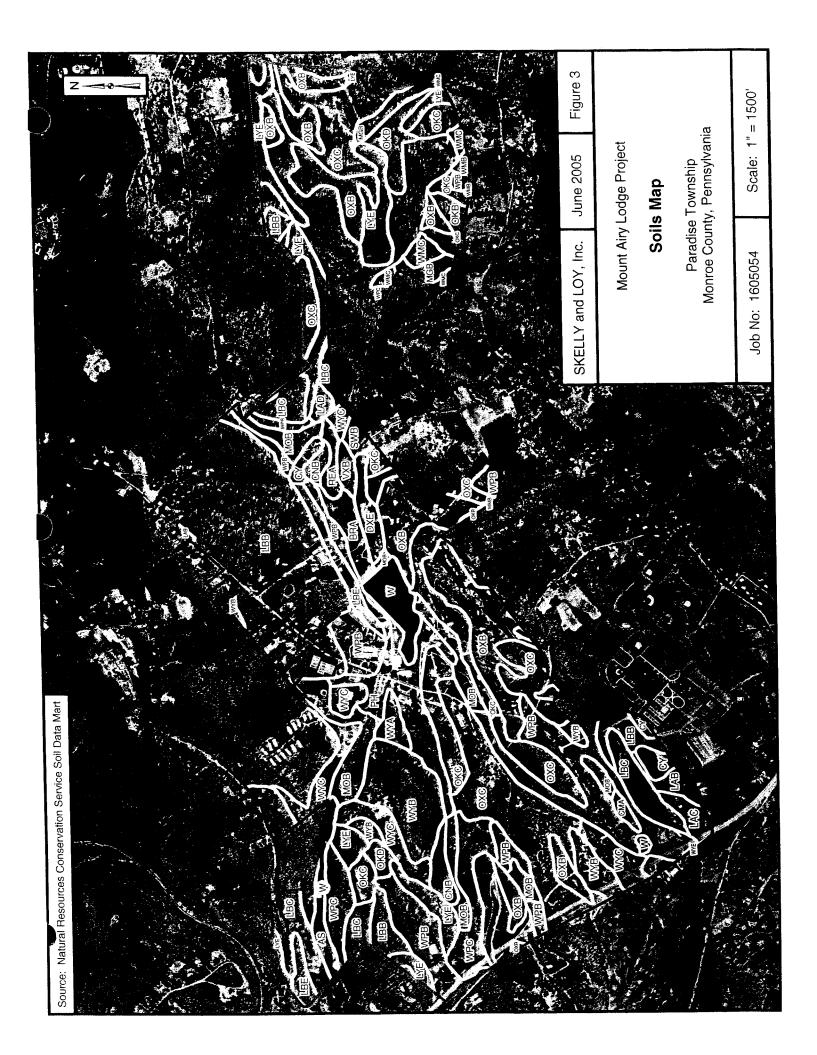
Potential wetland habitats and watercourses located within the project study area were identified, delineated, and mapped through the combined use of existing information and field investigations. Existing information including 7.5 minute quadrangle U.S.G.S. Topographic Mapping (Mount Pocono, Pennsylvania quadrangle), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (Mount Pocono, Pennsylvania, quadrangle) (Figure 2), U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Conservation Service (SCS) Monroe County Soil Survey (Figure 3), and the Monroe County Soil Conservation List of Hydric Soils was reviewed to identify potential wetland habitat areas.

The on-site field investigation was conducted on April 12, 14, 20, 21, 22, and 28, 2005. Seventy-three palustrine wetland habitats were identified and delineated in the project study area using the Routine Wetland Delineation Method for Small Areas described in the U.S. Army Corps of Engineers' Wetland Delineation Manual, Technical Report Y-87-1 (1987). The wetland habitats identified were classified in accordance with the USFWS' "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin, et al., 1979). Wetland boundaries were identified by consecutively numbered flags to facilitate surveying.

Vegetation, soil, and hydrology information were recorded by the investigators for both wetland and upland habitats present within the project study area. This information was recorded on data forms for the Routine On-Site Determination Method (Appendix C). Representative photographs were taken of the wetland and watercourse habitats (Appendix D). Each wetland and watercourse habitat was surveyed and mapped to show the extent of the wetland boundary and location within the project study area (Appendix F). Locations of the representative photographs are provided on the Wetland Location Map (Appendix F).

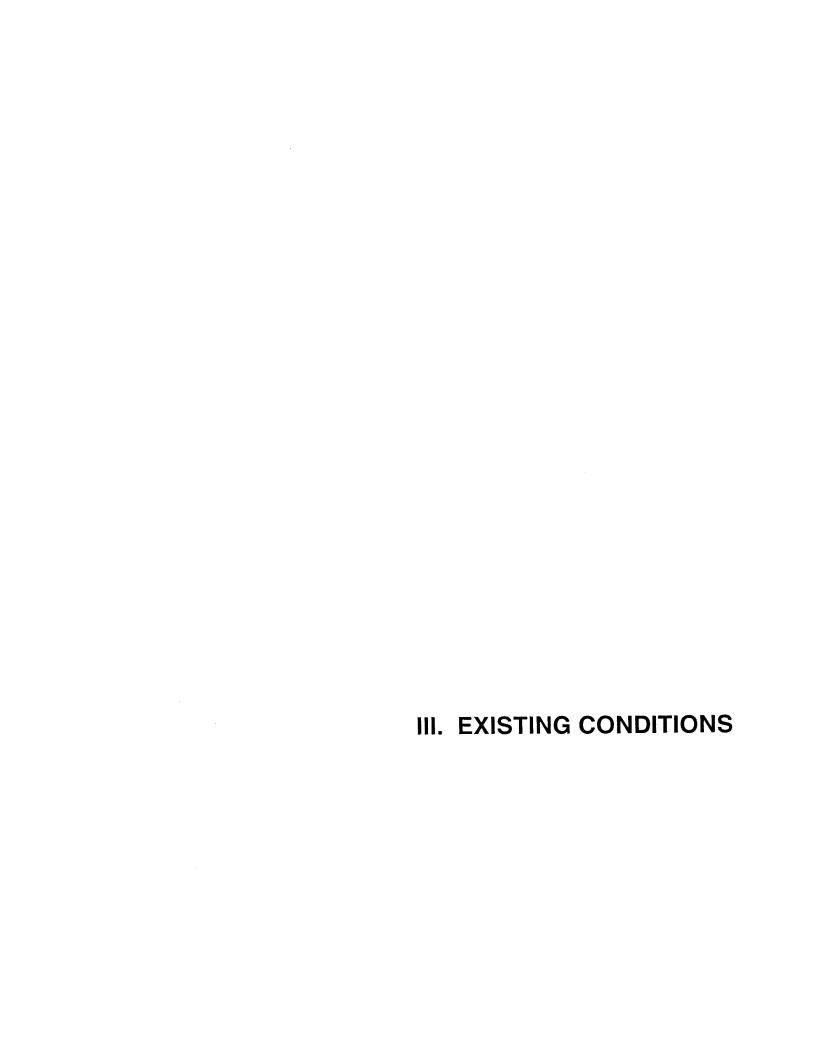
Dominant vegetation was evaluated on percent aerial cover for each vegetation stratum (tree, scrub-shrub, herbaceous, woody vine), assigned a dominance ranking, and recorded. Each dominant species was assigned an indicator status based on the species' frequency of occurrence in wetlands under normal conditions as published by the USFWS (1988) in the National List of Plant Species that Occur in Wetlands: Northeast (Region 1). The appropriate indicator status for each plant species is identified on the data forms (Appendix C) as either obligate (OBL), facultative wet (FACW), facultative (FAC), facultative upland (FACU), upland (UPL), no status (NS), or not indicted (NI).





Soil samples for each wetland habitat and adjacent areas were collected by digging corresponding soil pits. Soil information was collected to a depth of 18 inches when possible. The coloration of the soil matrix and mottling, if present, was described using the Munsell Soil Color notation. This information, along with any other appropriate soil characteristics, iron, manganese concretions, peraquic or aquic moisture regime, hydrogen sulfide odor, etc., was recorded on the Routine On-Site Determination Data Forms (Appendix C). Soil types in the wetlands were compared to soils as mapped by the NRCS (SCS) in the soil survey.

The hydrology of each potential wetland was evaluated by visual inspection during the field assessment. Field indicators such as inundation, saturation in upper 12 inches, water marks, drift lines, sediment deposits, wetland drainage patterns, oxidized rhizospheres, and water-stained leaves were recorded on the Routine On-Site Determination Data Forms (Appendix C).



#### **III. EXISTING CONDITIONS**

#### A. THREATENED AND ENDANGERED SPECIES

Coordination has been undertaken with the Pennsylvania Department of Conservation and Natural Resources (DCNR) Bureau of Forestry (PNDI), Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), and U.S. Fish and Wildlife Service (USFWS). Responses from PNDI, PFBC, and PGC have indicated no potential conflicts with species of special concern (including threatened/endangered species) and the proposed project (Appendix E). Responses from the USFWS indicate that the proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened (Appendix E). A Phase I survey was completed and conclusions will be provided in the near future. Also, there are no sanctuaries or refuges in the vicinity of the project area.

## B. SOIL CHARACTERISTICS

The Monroe County Soil Survey (1981) was reviewed in order to determine the soil types within the project study area. Table 1 identifies the characteristics associated with the soil types occurring in the project study area.

TABLE 1
SOIL CHARACTERISTICS

SOIL TYPE	DEPTH TO SEASONAL HIGH WATER TABLE (FEET)	DRAINAGE CLASSIFICATION	HYDRIC COMPONENT
Alluvial land (As)	0 to 3.0	Variable	Holly, Wayland
Braceville gravelly loam, 0 to 3% slopes (BrA)	0.5 to 3.0	Moderately well-drained	Rexford
Chenango gravelly loam, 3 to 8% slopes (ChB)	>6.0	Well-drained and somewhat excessively well-drained	Rexford
Chippewa and Norwich silt loams, 0 to 5% slopes (CmA)	0 to 0.5	Poorly drained	Chippewa/Norwich

TABLE 1 (CONTINUED)

SOIL TYPE	DEPTH TO SEASONAL HIGH WATER TABLE (FEET)	DRAINAGE CLASSIFICATION	HYDRIC COMPONENT
Chippewa and Norwich extremely stony soils, 0 to 8% slopes (CnB)	0 to 0.5	Poorly drained	Chippewa/Norwich
Cut and fill land (Cy)	1.0 to 6.0	Not rated	Wet spots
Dekalb extremely stony loam, 25 to 80% slopes (DxE)	>6.0	Well-drained	NA
Lackawanna channery loam, 2 to 8% slopes (LaB)	3.0 to 6.0	Well-drained	NA
Lackawanna channery loam, 15 to 25% slopes (LaD)	3.0 to 6.0	Well-drained	NA
Lackawanna extremely stony loam, 0 to 8% slopes (LbB)	2.0 to 3.0	Well-drained	NA
Lackawanna extremely stony loam, 8 to 25% slopes (LbC)	2.0 to 3.0	Well-drained	NA
Lackawanna and Bath extremely stony soils, steep (LBE)	3.0 to 6.0	Well-drained	NA
Lordstown and Oquaga extremely stony soils, 25 to 70% slopes (LyE)	>6.0	Well-drained	NA
Morris channery silt loam, 2 to 10% slopes (MgB)	0.5 to 1.5	Somewhat poorly drained	Norwich
Morris extremely stony silt loam, 0 to 8% slopes (MoB)	0.5 to 1.5	Somewhat poorly drained	Norwich
Oquaga-Lackawanna channery loams, 3 to 8% slopes (OkB)	2.0 to >6.0	Well-drained	NA
Oquaga-Lackawanna channery loams, 8 to 15% slopes (OkC)	2.0 to >6.0	Well-drained	NA
Oquaga-Lackawanna channery loams, 15 to 25% slopes (OkD		Well-drained	NA
Oquaga-Lackawanna extremely stony loams, 0 to 8% slopes (OxB)		Well-drained	NA

TABLE 1 (CONTINUED)

SOIL TYPE	DEPTH TO SEASONAL HIGH WATER TABLE (FEET)	DRAINAGE CLASSIFICATION	HYDRIC COMPONENT						
Oquaga-Lackawanna extremely stony loams, 8 to 25% slopes (OxC)	2.0 to >6.0	Well-drained	NA						
Philo silt loam (Ph)	1.5 to 3.0	Moderately well-drained	Holly						
Rexford gravelly silt loam, 0 to 3% slopes (ReA)	0.5 to 1.5	Somewhat poorly drained	Rexford						
Swartswood channery sandy loam, 3 to 8% slopes (SwB)	3.0 to 4.0	Well-drained	NA						
Volusia extremely stony silt loam, 0 to 8% slopes (VxB)	0.5 to 1.5	Somewhat poorly drained	Chippewa						
Wellsboro channery loam, 3 to 8% slopes (WmB)	1.5 to 3.0	Moderately well-drained	Norwich						
Wellsboro extremely stony loam, 0 to 8% slopes (WpB)	1.5 to 3.0	Moderately well-drained	Norwich						
Wellsboro extremely stony loam, 8 to 25% slopes (WpC)	1.5 to 3.0	Moderately well-drained	Norwich						
Wyoming gravelly sandy loam, 0 to 3% slopes (WyA)	>6.0	Somewhat excessively drained	Wet spots						
Wyoming gravelly sandy loam, 3 to 8% slopes (WyB)	>6.0	Somewhat excessively drained	Wet spots						
Wyoming gravelly sandy loam, 8 to 15% slopes (WyC)	>6.0	Somewhat excessively drained	Wet spots						
Source: Soil Survey of Monroe	County (1981) and M	Monroe County List of Hydric S	Source: Soil Survey of Monroe County (1981) and Monroe County List of Hydric Soils						

## C. WATERCOURSE AND WETLAND HABITAT DESCRIPTIONS

### **Watercourse Habitat**

The majority of the project study area is located within the Forest Hills Run watershed. Forest Hills Run is a tributary to Paradise Creek. The main stem of Forest Hills Run flows through the central portion of the project area, including the large on-stream lake at the Mount Airy Lodge

facility, and has a drainage area of approximately 2.77 square miles. The Pennsylvania Department of Environmental Protection, Chapter 93 Water Quality Regulations, identify Forest Hills Run as part of the Paradise Creek drainage basin and as a High Quality Cold Water Fishes (HQ-CWF) Resource. The adjacent watersheds include Paradise Creek to the northeast and Indian Run Creek to the southwest. Paradise Creek and its drainage basin are protected under PA DEP Chapter 93 as High Quality Cold Water Fishes Resources. Indian Run Creek is a tributary to Swiftwater Creek. Swiftwater Creek and its tributaries are also protected under the PA DEP Chapter 93 water quality regulations as High Quality Cold Water Fishes resource.

According to the Pennsylvania Scenic River Program Brochure (PA DCNR, June 1996), Forest Hills Run is not part of the Commonwealth's Scenic Rivers System nor is classified as priority 1-A for inclusion in the system. Forest Hills Run and its unnamed tributaries within the project area are not listed as Approved Trout Waters (for stocking) according to the Pennsylvania Fish and Boat Commission (PFBC, 2005); however the main stem of Forest Hills Run is identified on the List of Surveyed Stream Having Verified Trout Production (PFBC, 2005).

Forest Hills Run (Channel 004) flows in a northwest to southeast direction and has a wetted width of approximately 20 to 30 feet. Water depth in the channel varies from one to three feet, and the substrate composition is a mix of cobble and gravel. The following watercourse table summarizes the flow regime and length of the channels through the project area.

TABLE 2
WATERCOURSE CLASSIFICATION AND LENGTH

CHANNEL I.D.	FLOW REGIME	WATERSHED
Channel 001	Perennial	Forest Hills Run
Channel 002	Intermittent	Forest Hills Run
Channel 003	Intermittent	Forest Hills Run
Channel 004	Perennial	Forest Hills Run
Channel 005	Intermittent	Forest Hills Run
Channel 006	Intermittent	Forest Hills Run
Channel 007	Intermittent	Forest Hills Run
Channel 008	Intermittent	Forest Hills Run

TABLE 2 (CONTINUED)

CHANNEL I.D.	FLOW REGIME	WATERSHED
Channel 009	Intermittent	Forest Hills Run
Channel 010	Ephemeral	Forest Hills Run
Channel 011	Intermittent	Forest Hills Run
Channel 012	Intermittent	Forest Hills Run
Channel 013	Intermittent	Forest Hills Run
Channel 014	Perennial/Intermittent	Forest Hills Run
Channel 015	Intermittent	Forest Hills Run
Channel 016	Intermittent	Forest Hills Run
Channel 017	Intermittent	Forest Hills Run
Channel 018	Intermittent	Forest Hills Run
Channel 019	Intermittent	Forest Hills Run
Channel 020	Intermittent	Forest Hills Run
Channel 021	Ephemeral	Forest Hills Run
Channel 022	Perennial	Indian Run Creek
Channel 023	Perennial	Forest Hills Run
Channel 024	Intermittent	Forest Hills Run
Channel 025	Ephemeral	Forest Hills Run
Channel 026	Intermittent	Forest Hills Run
Channel 027	Intermittent	Forest Hills Run
Channel 028	Intermittent	Forest Hills Run
Channel 029	Intermittent	Forest Hills Run
Channel 030	Intermittent	Forest Hills Run
Channel 031	Ephemeral	Forest Hills Run
Channel 032	Intermittent	Forest Hills Run

TABLE 2 (CONTINUED)

CHANNEL I.D.	FLOW REGIME	WATERSHED
Channel 033	Intermittent	Forest Hills Run
Channel 034	Intermittent	Forest Hills Run
Channel 035	Intermittent	Forest Hills Run
Total	35	

#### D. WETLAND HABITATS

An off-site review of the USFWS NWI Map revealed four wetlands and 15 open water habitats within the project study area. An on-site field investigation resulted in the identification and delineation of 73 wetlands (Wetlands 1 through 73) and 15 open water resources in the project study area. Information regarding vegetation, soils, and hydrology characteristics for each delineated wetland habitat and adjacent upland habitat was recorded on the Routine On-Site Determination Data Forms (Appendix C). Wetland habitats are illustrated on the Wetland Location Map (Appendix F). The delineated wetland and open water habitats are summarized below in Table 3.

TABLE 3
WETLAND CLASSIFICATION, SIZE, COORDINATES, AND CONNECTIVITY

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
Wetland 001	PEM	0.0162	41º 06' 58.8" N, 75º 19' 25.6" W	Isolated
Wetland 002	PEM	0.0439	41º 06' 56.2" N, 75º 19' 28.9" W	Isolated
Wetland 003	PEM	0.0618	41º 06' 55.0" N, 75º 19' 29.7" W	Connected
Wetland 004	30% PEM, 70% POW	0.0876	41º 06' 53.6" N, 75º 19' 31.0" W	Connected
Wetland 005	PFO	0.0387	41º 06' 58.6" N, 75º 19' 46.6" W	Isolated
Wetland 006	PEM	0.0653	41º 06' 51.7" N, 75º 19' 36.8" W	Isolated

TABLE 3 (CONTINUED)

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
Wetland 007	50% PEM, 50% PFO	0.0686	41º 06' 52.3" N, 75º 19' 32.5" W	Connected
Wetland 008	PFO	0.1579	41º 06' 55.5" N, 75º 19' 37.9" W	Connected
Wetland 009	PFO	0.0271	41º 06' 56.9" N, 75º 19' 44.5" W	Isolated
Wetland 010	PFO	0.0353	41º 06' 57.2" N, 75º 19' 42.0" W	Isolated
Wetland 011	PFO	0.1292	41º 06' 48.7" N, 75º 19' 34.7" W	Connected
Wetland 012	POW	0.0966	41º 06' 47.6" N, 75º 19' 35.8" W	Connected
Wetland 013	50% PEM, 50% PSS	0.0308	41º 06' 45.6" N, 75º 19' 32.6" W	Connected
Wetland 014	PEM	0.0215	41º 06' 45.4" N, 75º 19' 31.6" W	Connected
Wetland 015	PEM	0.0629	41º 06' 46.6" N, 75º 19' 29.5" W	Isolated
Wetland 016	PFO	0.0687	41º 06' 48.0" N, 75º 19' 38.9" W	Connected
Wetland 017	PEM	0.0108	41º 06' 49.6" N, 75º 19' 40.9" W	Connected
Wetland 018	PFO	5.3075	41º 06' 47.0" N, 75º 19' 39.8" W	Connected
Wetland 019	PFO	0.4252	41º 06' 51.0" N, 75º 20' 03.3" W	Connected
Wetland 020	PFO	0.6340	41º 06' 51.2" N, 75º 20' 07.3" W	Connected
Wetland 021	PFO	1.5549	41º 06' 53.7" N, 75º 20' 10.8" W	Connected
Wetland 022	PEM	0.0285	41º 06' 55.2" N, 75º 20' 15.0" W	Connected
Wetland 023	PFO	0.0038	41º 06' 46.1" N, 75º 19' 45.5" W	Isolated

TABLE 3 (CONTINUED)

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
Wetland 024	PFO	7.8222	41º 06' 36.4" N, 75º 19' 56.4" W	Connected
Wetland 025	PEM	0.0209	41º 06' 42.4" N, 75º 19' 55.4" W	Isolated
Wetland 026	50% PEM, 50% POW	0.4501	41º 06' 45.1" N, 75º 20' 06.7" W	Isolated
Wetland 027	POW	0.3346	41º 06' 34.2" N, 75º 20' 23.5" W	Connected
Wetland 028	50% PEM, 50% PFO	0.0285	41º 06' 31.9" N, 75º 20' 18.4" W	Isolated
Wetland 029	PFO	0.1221	41º 06' 28.0" N, 75º 19' 42.8" W	Isolated
Wetland 030	PFO	0.4920	41º 06' 23.9" N, 75º 20' 08.8" W	Connected
Wetland 031	PFO	0.1714	41º 06' 03.6" N, 75º 20' 02.4" W	Connected
Wetland 032	50% PFO, 50% POW	1.3928	41º 06' 06.4" N, 75º 20' 04.3" W	Connected
Wetland 033	PFO	1.4497	41º 06' 08.3" N, 75º 19' 57.2" W	Connected
Wetland 034	PFO	0.2400	41º 06' 37.5" N, 75º 19' 34.4" W	Connected
Wetland 035	50% PFO, 50% POW	0.3146	41º 06' 39.6" N, 75º 19' 36.0" W	Connected
Wetland 036	PEM	0.0051	41º 06' 39.5" N, 75º 19' 36.5" W	Connected
Wetland 037	PEM	0.0189	41º 06' 40.0" N, 75º 28' 19.8" W	Connected
Wetland 038	PEM	0.0482	41º 06' 58.3" N, 75º 20' 24.2" W	Isolated
Wetland 039	PFO	0.2935	41º 06' 57.2" N, 75º 20' 15.0" W	Connected
Wetland 040	PEM	0.7056	41º 06' 55.5" N, 75º 20' 19.6" W	Connected

TABLE 3 (CONTINUED)

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
Wetland 041	PFO	0.1111	41º 06' 52.7" N, 75º 20' 24.6" W	Connected
Wetland 042	PFO	1.0201	41º 06' 55.2" N, 75º 20' 24.1" W	Connected
Wetland 043	PFO	0.3895	41º 06' 54.8" N, 75º 18' 46.2" W	Connected
Wetland 044	PFO	0.1631	41º 07' 05.6" N, 75º 18' 29.9" W	Connected
Wetland 045	PEM	0.0382	41º 06' 45.6" N, 75º 19' 25.8" W	Connected
Wetland 046	PEM	0.0530	41º 06' 57.0" N, 75º 17' 50.5" W	Isolated
Wetland 047	PEM	0.0518	41º 06' 46.8" N, 75º 17' 26.6" W	Isolated
Wetland 048	PEM	0.0313	41º 06' 48.2" N, 75º 17' 27.6" W	Isolated
Wetland 049	PFO	0.9054	41º 06' 48.9" N, 75º 17' 33.5" W	Connected
Wetland 050	PEM	0.0052	41º 06' 47.0" N, 75º 17' 36.7" W	Connected
Wetland 051	PEM	0.0102	41º 06' 44.9" N, 75º 17' 34.2" W	Connected
Wetland 052	POW	0.0762	41º 06' 43.3" N, 75º 17' 34.1" W	Connected
Wetland 053	50% PEM, 50% PSS	0.0071	41º 06' 43.2" N, 75º 17' 34.8" W	Connected
Wetland 054	PEM	0.0073	41º 06' 45.7" N, 75º 18' 04.6" W	Isolated
Wetland 055	PEM	0.0320	41º 06' 32.7" N, 75º 19' 30.1" W	Isolated
Wetland 056	PEM	0.0085	41º 06' 31.4" N, 75º 19' 05.1" W	Isolated
Wetland 057	PEM	0.0236	41º 06' 27.5" N, 75º 18' 47.5" W	Connected

TABLE 3 (CONTINUED)

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
Wetland 058	PEM	0.0019	41º 06' 47.0" N, 75º 18' 40.1" W	Connected
Wetland 059	15% PEM, 85% PFO	0.1433	41º 06' 53.2" N, 75º 18' 44.8" W	Connected
Wetland 060	PFO	1.6565	41º 06' 50.1" N, 75º 18' 43.4" W	Connected
Wetland 061	PEM	0.0044	41º 06' 50.8" N, 75º 18' 36.1" W	Connected
Wetland 062	50% PSS, 50% PFO	0.5641	41º 06' 51.4" N, 75º 18' 34.4" W	Connected
Wetland 063	PFO	0.0121	41º 06' 48.4" N, 75º 18' 34.8" W	Connected
Wetland 064	PFO	4.1228	41º 06' 53.5" N, 75º 18' 35.5" W	Connected
Wetland 065	PEM	0.0496	41º 06' 47.6" N, 75º 18' 31.7" W	Connected
Wetland 066	PFO	0.6187	41º 06' 50.8" N, 75º 18' 44.7" W	Connected
Wetland 067	PEM	0.0098	41º 06' 50.4" N, 75º 18' 50.2" W	Isolated
Wetland 068	PEM	0.4352	41º 06' 46.7" N, 75º 18' 48.9" W	Connected
Wetland 069	PEM	0.0163	41º 06' 46.5" N, 75º 18' 58.9" W	Connected
Wetland 070	PEM	0.0313	41º 06' 47.9" N, 75º 19' 00.7" W	Connected
Wetland 071	PEM	0.0846	41º 06' 47.4" N, 75º 19' 04.2" W	Connected
Wetland 072	PEM	0.0445	41º 06' 49.0" N, 75º 18' 43.5" W	Connected
Wetland 073	PEM	0.0092	41º 06' 44.0" N, 75º 19' 27.9" W	Connected
POW 1	POW	0.4100	41º 06' 46.1" N, 75º 19' 00.4" W	1

TABLE 3 (CONTINUED)

WETLAND I.D.	VEGETATIVE CLASSIFICATION	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
POW 2	POW	1.5600	41º 06' 47.9" N, 75º 18' 54.4" W	Connected
POW 3	POW	0.2500	41º 06' 49.1" N, 75º 18' 51.4" W	Connected
POW 4	POW	0.4700	41º 06' 32.4" N, 75º 19' 27.3" W	Isolated
POW 5	POW	0.2400	41º 06' 31.9" N, 75º 19' 28.8" W	Isolated
POW 6	POW	1.8500	41º 06' 24.7" N, 75º 19' 30.9" W	Isolated
POW 7	POW	0.5300	41º 06' 27.5" N, 75º 18' 45.4" W	Connected
POW 8	POW	0.2600	41º 06' 36.6" N, 75º 18' 57.7" W	Connected
POW 9	POW	0.1700	41º 06' 31.6" N, 75º 19' 06.1" W	Isolated
POW 10	POW	1.6300	41º 06' 29.6" N, 75º 19' 08.5" W	Isolated
POW 11	POW	0.3500	41º 07' 03.1" N, 75º 19' 05.0" W	Isolated
POW 12	POW	0.5600	41º 07' 00.6" N, 75º 19' 02.2" W	Isolated
POW 13	POW	0.6000	41º 06' 59.8" N, 75º 19' 08.7" W	Isolated
POW 14	POW	0.4700	41º 06' 58.2" N, 75º 19' 07.4" W	Isolated
LOW 1	POW	16.7600	41º 06' 42.1" N, 75º 19' 09.7" W	Connected
Tota	ıl en	59.7349		

In addition to the wetlands described above, several seeps and vernal pools were identified within the project study area. The delineated seep and vernal pool habitats are summarized below in Table 4.

TABLE 4
SEEP AND VERNAL POOL SUMMARY TABLE

I.D.	SIZE (ACRES)	LATITUDE AND LONGITUDE	CONNECTIVITY
SEEP 1	0.0035	41º 06' 57.0" N, 75º 19' 43.6" W	Connected
SEEP 2	0.0421	41º 06' 41.4" N, 75º 19' 56.3" W	Connected
SEEP 3	0.0069	41º 06' 55.5" N, 75º 18' 46.8" W	Connected
VERNAL POOL 1	0.0344	41º 06' 56.4" N, 75º 19' 45.4" W	Isolated
VERNAL POOL 2	0.0065	41º 06' 57.6" N, 75º 19' 46.7" W	Isolated
VERNAL POOL 3	0.0069	41º 06' 57.6" N, 75º 19' 47.5" W	Isolated
VERNAL POOL 4	0.0871	41º 06' 57.6" N, 75º 19' 45.5" W	Isolated
VERNAL POOL 5	0.0028	41º 06' 56.4" N, 75º 19' 43.3" W	Isolated
VERNAL POOL 6	0.0064	41º 06' 57.4" N, 75º 19' 42.8" W	Connected
VERNAL POOL 7	0.1245	41º 06' 59.2" N, 75º 19' 24.3" W	Connected
TOTAL	0.3211		

## E. WETLAND DELINEATION PROCEDURES AND INTERPRETATIONS

The majority of the wetlands identified in the wetland delineation study contained indicators of the three parameters, in accordance with the routine three-parameter approach methodology outlined in the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual. However, there are a few delineation situations that warranted atypical/problem area delineation interpretations, including wet-spring season conditions, rocky substrate terrain, vernal pools, seeps and disturbed areas.

## **Wet-Spring Season**

The delineation study was completed during the beginning of the growing season, April 2005. The timing of the study allowed for the observation of field conditions under discharge and or "wet" hydrologic conditions. The Mount Pocono area received over 51 inches of snow through the winter and spring season from 2004 to early April 2005. There was snow pack observed on the property as late as early April 2005. The delineation study was not initiated until the snow cover had melted and the bare ground surface could be observed.

When the snow pack melted, there were saturated and ponded water areas within both the uplands and wetlands. The wet conditions provided a good indication of the potential for an area to be contain hydrology (i.e. it an area did not contain evidence of hydrology in this spring season, it most likely does not contain wetland hydrology). Careful consideration was given to the seasonality of the water with respect to the beginning of the growing season for the Monroe County area. Distinction needed to be made between conditional and event hydrology. Areas determined to contain wetland hydrology contained conditional wetland hydrology. Conditional wetland hydrology is described hydrology that lasts for at least the two week minimum duration during the growing season and is sufficient to support a hydrophytic community. Field indicators of conditional hydrology inundation, saturation, water stained (black decomposed) leaves, watermarks, oxidized rhizopheres, and fac-neutral test. Event hydrology is short-term hydrology that lasts for a brief period of time after a weather event (i.e., snow melt, precipitation). Event hydrology does not last for the two-week minimum period during the growing season.

#### Wetlands with Rock Substrate

Portions of the Mount Airy project area contain rocky/extremely stony soil conditions. The extremely stony nature of the soils presents a Problem Area wetland delineation situation. In many of the areas, the substrate consists of large 6- to 24-inch rocks from the surface to a depth of 24 inches. In these areas, it was often impossible to dig a soil pit. Screw augers were used to find soil material between the rocks. There were both organic and mineral soils identified in some of these rocky areas, but in other areas, there was no observable soil within the upper 24 inches. In the absence of soil material, a reduced emphasis was placed on using soil color to evaluate the hydric soil criterion. Other indicators of hydric soils were used to evaluate this parameter, such as hydrogen sulfide odor, aquic moisture regime, presence of histic epipedon, organic soil. In

addition, in the absence of soil material and the presence of a rock substrate, increased emphasis was placed on the other two wetland parameters, hydrophytic vegetation and wetland hydrology. If the indicators for hydrophytic vegetation and wetland hydrology were strong then an area was delineated as a wetland.

### **Vernal Pools and Seeps**

During the wetland delineation study, a few areas were encountered that contained shallow ponded water (1-6 inches), but not all of the areas were identified as wetland habitats. Areas that contained hydrophytic vegetation, contained evidence of conditional wetland hydrology, and contained evidence of hydric soils were identified as wetlands. Common hydrophytic vegetation included red maple, sphagnum moss, osmunda fern, jewelweed, sedge, yellow birch, and green ash. Common upland plants included red maple, oak, beech, eastern hemlock, shagbark hickory, black cherry, hay-scented fern, true moss, witch-hazel, Canada mayflower, and sweet birch. Many of the seasonal shallow water areas contained soil matrix chromas of 2 with no mottling, 3, or 4 and the areas lacked evidence of water staining or watermarks. Areas that contained the seasonal shallow water were not identified as wetlands if the soil matrix chroma was 2 with no mottles, 3, or 4, vegetation consisted of common upland plants, and there was no indication of conditional wetland hydrology. These areas were not considered to contain sufficient evidence of the threewetland parameters. Therefore, areas with ponded water that did not contain evidence of the three-wetland parameters were identified as vernal pools. Areas that contained seep discharge but lacked evidence of the three-wetland parameters were identified as seeps. These areas were flagged in the field, surveyed and are illustrated on the project mapping.

#### Wetlands in Disturbed Areas

Areas that have been disturbed by earthmoving activities represent a problem area wetland delineation situation because the soil horizon is disturbed. In the disturbed areas, a reduced emphasis was place on soil color at the A/B interface in the horizon. Increased emphasis was place on identifying reducing conditions in the surface horizon, strength of the hydrophytic vegetation, and indicators of wetland hydrology.

Additionally, there are horse and mule trails within the wooded areas that are disturbed by the heavy trail traffic. The soils are disturbed and compacted, thus these areas collect and

temporarily pond precipitation and runoff. These areas were not included as wetlands if the subsoil contained matrix chroma colors above 2. There are a few small areas in which the trails are located adjacent to wetlands and the trails expand the wetlands. These areas were only included in the wetland delineation if the areas was considered to connect or convey wetland hydrology to another portion of a wetland.

IV. APPENDICES

APPENDIX A -JURISDICTIONAL WETLAND DETERMINATION CHECKLIST

#### MOUNT AIRY LODGE PROJECT

#### **Jurisdictional Wetland Determination – Checklist**

- 1. Written permission from property owner to access the site.
  - Attached.
- 2. Vicinity map including the exact location of the proposed project.
  - Provided in the Wetland Identification/Delineation Report as Figure 1.
- 3. Property lines with measurements
  - Extent of property lines and project study area boundary identified on Wetland Location Map provided in the Wetland Identification/Delineation Report as Appendix F – Wetland Location Map.
- 4. Area of review
  - Provided in the Wetland Identification/Delineation Report as Appendix F –
     Wetland Location Map.
- 5. Current property owners
  - Mount Airy No. 1 L.L.C.
     42 Woodland Road
     Mount Pocono, PA 18344
- 6. Name of adjacent waterway (s)
  - Provided in the Wetland Identification/Delineation Report. The main watercourse through the project study area is Forest Hills Run. There are 33 unnamed tributary channels to Forest Hills Run. There is one watercourse (Channel 022) that drains to Indian Run Creek in the eastern portion of the project study area.
- 7. Location of all watercourses and/or drainage features.
  - Provided in the Wetland Identification/Delineation Report as Appendix F Wetland Location Map.
- 8. Longitude and latitude
  - Longitude = 76 degrees, 19 minutes, 23 seconds
  - Latitude = 41 degrees, 06 minutes, 42 seconds
- 9. Plans to scale
  - Provided in the Wetland Identification/Delineation Report as Appendix F –
     Wetland Location Map.
- 10. Reference information (USGS, NWI, Soils mapping)
  - Provided in the Wetland Identification/Delineation Report as Figure 1, Figure 2, and Figure 3.
- 11. Aerial photography
  - Provided in the Wetland Identification/Delineation Report in Appendix A

## 12. Onsite, ground level photographs

 Provided in the Wetland Identification/Delineation Report as Appendix D – Photograph Log.

## 13. 1987 Corps of Engineers Wetlands Delineation Manual

 The Wetland Determination was completed in accordance with the methodologies outlined in the 1987 Corps of Engineers Wetland Delineation Manual.

## 14. Data forms of both upland and wetland points

 Provided in the Wetland Identification/Delineation Report as Appendix C – Routine On Site Wetland Determination Data Forms.

## 15. Map and survey of the jurisdictional boundary line

 Provided in the Wetland Identification/Delineation and Functional Assessment Report as Appendix F – Wetland Location Map.

### 16. Total Acreage

Wetland Sizes:

WETLAND I.D.	SIZE	WETLAND	SIZE	WETLAND	SIZE
WEILAND I.D.	(ACRES)	I.D.	(ACRES)	I.D.	(ACRES)
Wetland 001	0.0162	Wetland 030	0.4920	Wetland 059	0.1433
Wetland 002	0.0439	Wetland 031	0.1714	Wetland 060	1.6565
Wetland 003	0.0618	Wetland 032	1.3928	Wetland 061	0.0044
Wetland 004	0.0876	Wetland 033	1.4497	Wetland 062	0.5641
Wetland 005	0.0387	Wetland 034	0.2400	Wetland 063	0.0121
Wetland 006	0.0653	Wetland 035	0.3146	Wetland 064	4.1228
Wetland 007	0.0686	Wetland 036	0.0051	Wetland 065	0.0496
Wetland 008	0.1579	Wetland 037	0.0189	Wetland 066	0.6187
Wetland 009	0.0271	Wetland 038	0.0482	Wetland 067	0.0098
Wetland 010	0.0353	Wetland 039	0.2935	Wetland 068	0.4352
Wetland 011	0.1292	Wetland 040	0.7056	Wetland 069	0.0163
Wetland 012	0.0966	Wetland 041	0.1111	Wetland 070	0.0313
Wetland 013	0.0308	Wetland 042	1.0201	Wetland 071	0.0846
Wetland 014	0.0215	Wetland 043	0.3895	Wetland 072	0.0445
Wetland 015	0.0629	Wetland 044	0.1631	Wetland 073	0.0092
Wetland 016	0.0687	Wetland 045	0.0382	POW 1	0.4100
Wetland 017	0.0108	Wetland 046	0.0530	POW 2	1.5600
Wetland 018	5.3075	Wetland 047	0.0518	POW 3	0.2500
Wetland 019	0.4252	Wetland 048	0.0313	POW 4	0.4700
Wetland 020	0.6340	Wetland 049	0.9054	POW 5	0.2400
Wetland 021	1.5549	Wetland 050	0.0052	POW 6	1.8500
Wetland 022	0.0285	Wetland 051	0.0102	POW 7	0.5300
Wetland 023	0.0038	Wetland 052	0.0762	POW 8	0.2600
Wetland 024	7.8222	Wetland 053	0.0071	POW 9	0.1700
Wetland 025	0.0209	Wetland 054	0.0073	POW 10	1.6300
Wetland 026	0.4501	Wetland 055	0.0320	POW 11	0.3500
Wetland 027	0.3346	Wetland 056	0.0085	POW 12	0.5600
Wetland 028	0.0285	Wetland 057	0.0236	POW 13	0.6000
Wetland 029	0.1221	Wetland 058	0.0019	POW 14	0.4700
				LOW 1	16.7600

## 17. Optional items

 Current land use, total acreage of wetlands, and general topographical conditions are provided in the Wetland Identification/Delineation Report.

## 18. Agricultural lands

• Not applicable.

June 8, 2005

Mr. Richard Hassel Assistant Chief, Regulatory Branch U.S. Army Corps of Engineers Wanamaker Building, 100 Penn Square East Philadelphia, Pennsylvania 19107-3390

RE:

Mount Airy Lodge - Permission

to Access Property for JD

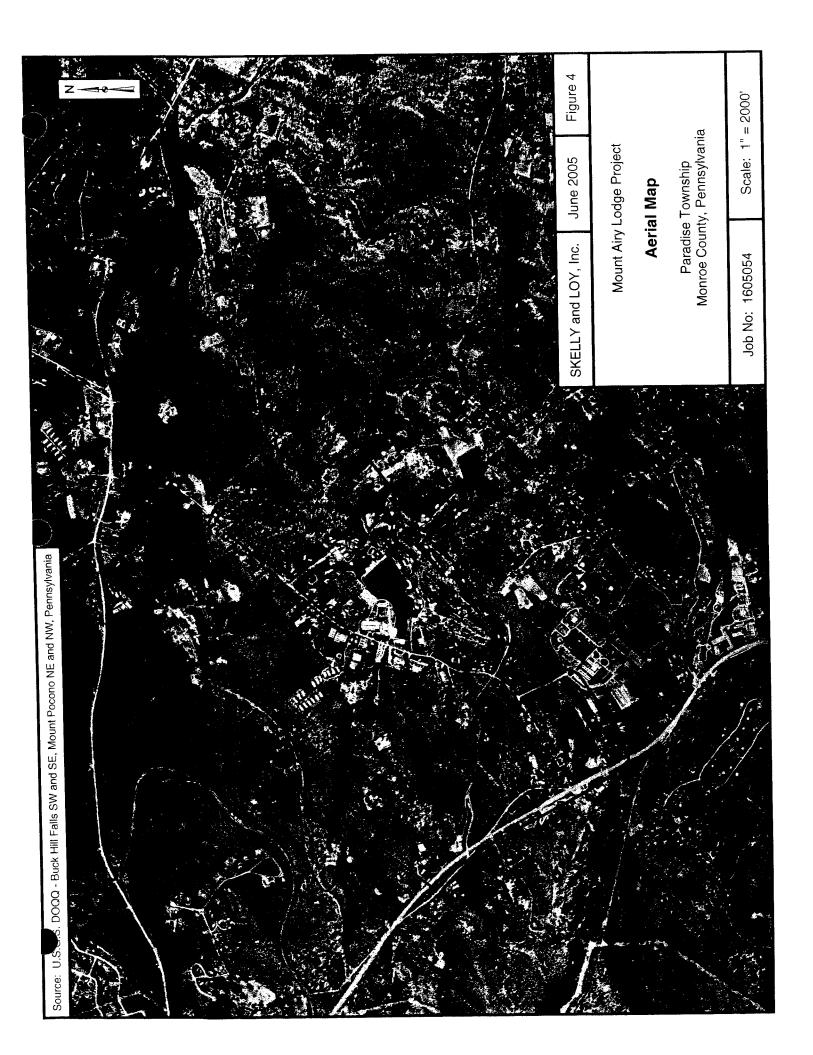
Dear Mr. Hassel;

This letter is provided by Mount Airy No.1 L.L.C. to give permission to U.S. Army Corps of Engineers and PA DEP with the accompaniment of Skelly and Loy, Inc. to access the Mount Airy Lodge Project in Paradise Township, Monroe County to perform the jurisdictional welland determination field view. If you have any questions, please contact me at your convenience at (570) 947-9026.

Sinccrely

Robert McNicols

Project Manager



APPENDIX B - RESUMES

#### PAUL J. DEANGELO

### **Director of Natural Resources Analysis**



#### **EDUCATION:**

M.S., Environmental Pollution Control, 2005, The Pennsylvania State University B.S., Environmental Biology, 1991, Millersville University

#### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:

USACE, Baltimore District, Certified Wetland Delineator, MD

For fourteen years, Mr. DeAngelo has been performing professional ecological assessment services for environmental assessments and Environmental Impact Statements in compliance with the National Environmental Policy Act. The focus of his career has been on Aquatic Ecosystems, Wetland Delineation Studies, Wetland Mitigation Design/Monitoring, Ecological Resources, and Environmental Permitting.

PROFESSIONAL EXPERIENCE
rsees technical aspects of wetland and aquatic resource projects and has served as

Mr. DeAngelo oversees technical aspects of wetland and aquatic resource projects and has served as Project Manager and/or Principal Investigator on more than 100 projects throughout Pennsylvania and the eastern United States.

Mr. DeAngelo serves as a field team leader for the evaluation of wetland habitats and aquatic ecosystems. He has conducted numerous wetland delineation studies in Pennsylvania. These studies include the Corridor O Project, S.R. 2001, Sections 401 and 402 in the Delaware Water Gap National Recreation Area, I-99 / U.S. Route 220 improvements project, Covington Industrial Park, Pike County Economic Development, Conewago Industrial Park, and bridge replacement (i.e., SR 030, 0196, SR 3007, SR 4011) and rehabilitation projects. He is experienced in using the 1987 Army Corps of Engineers Manual for Identifying and Delineating Wetlands. In the identification and delineation of wetland habitats, his assignments involve plant identification for the characterization of vegetative communities, examination of soil characteristics, and identifying indicators of hydrology. Mr. DeAngelo has received his Provisional Certification for Identifying and Delineating Jurisdictional Wetlands from the USACE, Baltimore District (USACE Wetland Delineator Certification Program, Baltimore District, Certification #WDCP94MD0310147B). In addition to field investigations, Mr. DeAngelo participates in field views with the U.S. Army Corps of Engineers for their Jurisdictional Wetland Determination. Furthermore, Mr. DeAngelo is experienced in conducting wetland functional assessments utilizing the methods described in the USACE Wetland Evaluation Technique (WET): Volume II: Methodology (Operational Draft Technical Report Y-87) and the USACE, New England Division's Descriptive Method.

Mr. DeAngelo's experience includes evaluating the physical, chemical, and biological conditions of aquatic ecosystems, specifically lotic systems (streams). His experience in evaluating the chemical conditions includes proper water sampling, flows measurement techniques, and Water Quality Assessment. His experience in evaluating the biological conditions includes performing Kick-net sampling techniques to characterize the macroinvertebrate community and electrofishing sampling techniques to characterize the fin fish community. In addition, Mr. DeAngelo has utilized the aquatic assessment techniques outlined in the 1989 EPA Rapid BioAssessment Protocols for Streams and Rivers Manual.

Mr. DeAngelo has been involved in numerous aquatic resource assessment studies including Corridor O, S.R. 2001, Section 401 and 402 Improvements Project, Lackawanna Valley Industrial Highway, I-99 / U.S. Route 220, S.R. 0015, Section G-20-G22, and Central Susquehanna Valley Transportation Projects. In addition, Mr. DeAngelo has completed the Dry Creek and Rocky River (Acid Mine Drainage) Aquatic Assessment for the Sequatchie Valley Coal Company in Tennessee and the Watershed Assessment in the Nesquehoning Creek Watershed for Dual Valley Recreation Association. Mr. DeAngelo has performed the

# PAUL J. DEANGELO Director of Natural Resources Analysis Page 2 of 2

taxonomic identification of macorinvertebrates (to genus level) for several different benthic studies, including the Dry Creek and Rocky River Stream Assessments in Tennessee, S.R. 0015, Section G20-G22 Benthic study in Tioga County, Pennsylvania, and the S.R. 2001, Section 401 and 402 in Pike County, PA. His Masters Thesis involved the comparison of acidity load capacity to stream environments.

- Mr. DeAngelo is experienced with wetland permitting. He has completed numerous Federal/State Joint Permit Applications necessary for obtaining a wetland and waterway encroachment permit. As part of the Joint Permit Application, Mr. DeAngelo is experienced with evaluating the environmental constraints (PA DEP Environmental Assessment Form) necessary to obtain State Water Quality Certification.
- S.R. 2001, Sections 401 and 402 Improvements Project Mr. DeAngelo serves as Project Manager and lead natural resource investigator for the project. This project is a seventeen mile roadway improvement project through high-quality watersheds along the Delaware Water Gap National Recreation Area in Pike County. The natural resource studies involved the delineations of over 100 wetlands and the aquatic surveys evaluated numerous high quality wild trout resources.
- S.R. 0322, Corridor O Improvement Project Mr. DeAngelo coordinated and supervised the Natural Resource studies associated with the wetland and aquatic resource investigations for the 25-mile project. The project involved detailed wetland delineations of more than 1300 wetland systems and aquatic resource sampling of more than 30 water resources. Mr. DeAngelo was involved in the development of project alternatives, providing expertise regarding avoidance and minimization measures consistent with the 404 / 105 permitting process.
- **U.S. Route 322, Section 100 Improvement Project** Mr. DeAngelo supervised and conducted the natural resource studies, including the wetland delineation study, bog turtle habitat assessment, mitigation package for the project. The project extends for approximately six miles and 65 wetlands were delineated within the project limits.
- I-99 / U.S. Route 220 Improvements Project Field Team leader for the completion of wetland delineations and aquatic surveys for the entire project area. The wetland study involved the delineation of over 500 wetlands. The aquatic resource surveys involved numerous stream resources along the Bald Eagle Valley. The aquatic assessments involved techniques outlined in the 1989 EPA Rapid BioAssessment Protocols for Streams and Rivers Manual.

### **Relevant Training**

Problem Area Wetland Delineations, U.S. Army Corps of Engineers, Baltimore District, 1997

Aquatic Entomology, Shippensburg University of Pennsylvania, 1998

Aerial Photography Interpretation, U.S. Army Corps of Engineers, Baltimore District, 2000 Environmental Aquatic Chemistry – Penn State, 2003

Master Thesis (2005)- Penn State University - Comparison of Acidity Load Capacity between North Bald Eagle Creek and Buffalo Run

### BENJAMIN T. BERRA

### **Environmental Scientist**



#### **EDUCATION:**

M.S., Geoenvironmental Studies, 1998, Shippensburg University B.S., Geoenvironmental Studies, 1996, Shippensburg University

With over 6 years of Service at Skelly and Loy, Mr. Berra's project experience has focused primarily in the area of jurisdictional wetland identification and delineation, but also included the study and evaluation of aquatic ecosystems, wetland mitigation design/monitoring, stream and river classification, threatened/endangered/rare species investigations, and environmental permitting and documentation.

Mr. Berra has completed many wetland identification / delineation, and permitting projects for transportation, infrastructure, commercial, industrial, and residential development projects in Pennsylvania, New York, Maryland, and North Carolina. He has experience in wetland function evaluation using the USACOE Wetland Evaluation Technique II, Hydrogeomorphic Classification, and New England USACOE Descriptive Method. He has experience in the identification of potential wetland mitigation sites and their subsequent design, as well as experience in natural and constructed wetland monitoring.

Mr. Berra is on the U.S. Fish and Wildlife Service/Pennsylvania Fish and Boat Commission list of Recognized Qualified Bog Turtle Surveyors (for Pennsylvania). Mr. Berra has conducted numerous potential habitat evaluations and field surveys for the bog turtle (*Clemmys muhlenbergii*), a Federally listed threatened species and State listed endangered species, and has experience with radio telemetry research for the species.

Mr. Berra has also been involved with the biological evaluations for benthic macroinvertebrates, fish, and freshwater mussel communities, ambient water quality evaluations, and physical aquatic habitat evaluations. He has participated in surveys and research for the green floater (*Lasmigona subviridis*), a State listed rare species and other freshwater mussels; the rough greensnake (*Opheodrys aestivus*), a State listed threatened species, and numerous other amphibians and reptiles associated with wetlands, vernal pools, and waterways. Additionally, Mr. Berra has experience in the design, restoration, and enhancement of streams using the methodologies and techniques of Applied River Morphology (fluvial geomorphology.)

#### PROFESSIONAL EXPERIENCE\_

Field Crew Leader, Wetland Delineator, and Water Quality/Aquatic Resources Assistant, Route 322-B02, Corridor O Project, Centre and Clearfield County, PA - Responsible for the daily organization and operation of wetland delineation crew, identification and delineation of wetlands within the project area, and assisting with the water quality and aquatic sampling evaluations. Conducted field views, coordination, and meetings with Pennsylvania DOT, state and federal regulatory agencies, and the general public regarding project development, and alternative modification and selection. Assisted staff and teaming consultants in the development of environmental documentation and reports. Approximately 1,300 wetlands and 200 watercourses were identified and delineated in the 12,000 acre study area.

Field Crew Leader, Wetland Delineator, and Water Quality/Aquatic Resources Assistant, State Route 2001, Sections 401/402, Improvement Project, Pike County, PA - Responsible for the daily organization and operation of wetland delineation crew, identification and delineation of wetlands, and assisting with the water quality and aquatic sampling evaluations. Approximately 125 wetlands and 40 watercourses were identified and delineated within the 17 mile long project area.

Wetland Delineator, Surveyor, and Water Quality/Aquatic Resources Assistant, Central Susquehanna Valley Transportation Improvement Project, Snyder County, PA - Responsible for the

### BENJAMIN T. BERRA Environmental Scientist Page 2 of 2

identification and delineation of wetlands within the project area. Also responsible for the GPS surveying of delineated wetlands, and assisting with the water quality and aquatic sampling evaluations.

**Field Crew Leader, Wetland Delineator, Freestone Golf Course, Centre County, PA** - Responsible for field reconnaissance, and wetland delineations on this 270 acre site. More than 90 wetlands were delineated along with over 50 watercourses. Also assisted with the project development and layout, and permit application package and regulatory agency coordination.

Wetland Delineator, Surveyor, and Water Quality/Aquatic Resources Assistant, Route 15 Construction Project, Tioga County, PA and Steuben County, NY - Responsible for the identification and delineation of wetlands within the project area, the surveying of delineated wetlands, and assisting with the water quality and aquatic sampling evaluations. Mr. Berra also conducted the preliminary analysis and investigations for potential wetland mitigation sites.

Project Manager and Wetland Delineator, Hershey Trust Property #148, Conewago Township, Dauphin County, PA - Responsible for assisting with proposal development, initial field reconnaissance, and wetland delineations on this 500+ acre site. More than 85 acres of wetlands were delineated. Was also responsible for the preparation of the Wetlands Identification / Delineation and Functional Assessment Report.

Wetland Delineator and Assistant Field Crew Leader, Covington Industrial Park, Lackawanna County - Responsible for field reconnaissance, and wetland delineations on the 850 acre project area. Approximately 25 wetlands were delineated totaling over 43 acres.

Aquatic Resources Assistant, Rush Township Aquatic Survey, Schuylkill County, PA - Responsible for assisting with the in-field sampling for water quality and benthic macroinvertebrates at select sites on township streams. Also assisted with the lab processing of the benthic macroinvertebrates, and the report preparation.

Aquatic Resources and Wetland Monitoring Assistant, S.R. 0220, Sections C10, C11, and C12 Highway Improvement Project, Centre and Blair Counties, PA - Responsible for assisting in the establishment of permanent monitoring points throughout the South Bald Eagle Creek, North Bald Eagle Creek, and Buffalo Run Watersheds. Included with the monitoring were evaluations of stream flow, ambient water quality, aquatic biota, and fluvial geomorphic conditions. Wetland monitoring consists of routine monitoring of conditions in select wetlands (pre, during, post construction).

Pennsylvania Department of Conservation and Natural Resources - While a student, Mr. Berra was employed for three years with the Bureau of Recreation and Conservation, Division of Conservation Partnerships. His duties included coordinating and administering Rivers Conservation Grants for the Rivers Conservation Program, and performing Scenic River Reviews for projects located within the corridors of Pennsylvania's designated Scenic and Priority 1A Rivers.

#### ANDREW J. LONGENECKER

Wetland Delineator/Stream Assessment Specialist/Aquatic and Terrestrial Biologist



#### **EDUCATION:**

M.S., Biological Sciences, 2000, Marshall University B.S., Wildlife and Fisheries, 1997, West Virginia University

Mr. Longenecker has been involved in numerous projects in a variety of roles over the past 3 years at Skelly and Loy. He has experience in many wetland Identification and delineation projects as well as studies and evaluations of aquatic ecosystems. As an integral member of Skelly and Loy's multidisciplinary watershed management team, Mr. Longenecker applied the principles of fluvial geomorphology (FGM) to natural stream channel design projects. To support the long-term success of these stream restoration and relocation projects, he routinely participates in site evaluation, stream type classification, regional curve development, restoration plan design, and construction management. From individual stream projects to comprehensive watershed assessments, Mr. Longenecker has employed FGM principles in both rural and urban environments.

Mr. Longenecker's watershed management capabilities are further strengthened by his expertise in the areas of aquatic and terrestrial biology. He has completed wide-ranging biological baseline surveys dealing with multiple flora and fauna. As a result, Mr. Longenecker is experienced in implementing today's widely used assessment protocols including the U.S. Environmental Protection Agency's Rapid Bioassessment Protocols (RBP III), U.S. Department of Agriculture's Stream Visual Assessment Protocol (SVAP), Stream Reach Inventory and Channel Stability Evaluation, Habitat Evaluation Protocols (HEP), and the Wildlife Habitat Assessment Guide (WHAG). In addition, Mr. Longenecker has written successful grant applications, conducted environmental education workshops, and participated in community outreach projects.

#### PROFESSIONAL EXPERIENCE

Wetland Delineator, South Valley Parkway, S.R. 3046, Section 301, Luzerne County - Mr. Longenecker was responsible for the identification and delineation of wetlands and watercourses in the study area for this project. The study area of this project, approximately 5 miles long, consisted of mostly abandoned mine land and most of the wetland delineations occurred in disturbed landscapes.

Wetland Delineator, U.S. Route 220 Improvement Project/Interstate 99, Centre County - Mr. Longenecker was responsible for the identification and delineation of wetlands and watercourses in numerous areas associated with an expanded project area as a result of construction. These delineations enabled the highway construction project to continue to progress towards completion.

Wetland Delineator and Assistant Project Manager, Lehigh Gorge State Park Improvements, Luzerne County - Working for the Department of General Services on this project, Mr. Longenecker conducted a reconnaissance of the expanded project area, and a review and redelineation of previously identified systems.

Pennsylvania Department of Transportation, Adams County, PA – As Field Team Leader, Mr. Longenecker directed data collection activities for the development of detailed design drawings to restore more than 4,000 linear feet of stream associated with 4 individual bridge replacement projects. Using the principles of FGM, he classified the streams and verified their natural channel dimension, pattern, and profile. The final restoration design will include plans, profiles, cross sections, and details for the proposed stream route, width, depth, and slope; habitat structures; and energy-dissipating structures.

# RYAN C. LEIBERHER Wildlife Biologist USFWS Certified Indiana Bat Surveyor



### **EDUCATION:**

B.S., Environmental Biology, 2000, Edinboro University A.S., Wildlife Technology, 1998, The Pennsylvania State University

Mr. Leiberher, with over 4 years of service at Skelly and Loy, has gained experience through many wetland identification and delineation projects as well as wetland monitoring and land surveying using conventional apparatus and Global Positioning Systems (GPS). He has also been involved in many wildlife/threatened and endangered species projects for transportation, infrastructure, commercial, industrial, and residential development project clients and is a USFWS-certified Indiana bat surveyor. He has experience doing surveys for the Indiana bat, a federally and state endangered species and has training and experience specific to various bat species working in conjunction with the Pennsylvania Game Commission and Bat Conservation International. This training includes but is not limited to mist netting surveys, harp trap surveys, habitat assessment, bat handling and identification, mine opening surveys, flyway surveys, hibernacula surveys, maternity colony surveys, and radio telemetry surveys. In addition, Mr. Leiberher is experienced with species including osprey, rough green snake, great blue heron, and bog turtle, a federally and state listed endangered species. He has completed land cover surveys for various wildlife species and habitats. Mr. Leiberher has been involved with the studies and evaluations of aquatic ecosystems. These activities include biosurveys of aquatic resources, water quality assessments, and individual surveys for the eastern spadefoot toad. Mr. Leiberher also has experience in the design, restoration, and enhancement of streams using the methodologies and techniques of Applied River Morphology (Fluvial Geomorphology [FGM]).

### PROFESSIONAL EXPERIENCE

Wetland Delineator, Surveyor, Water Quality/Aquatic Resource Assistant - Corridor O, Clearfield County, PA - Mr. Leiberher was responsible for the identification and delineation of wetlands in the 1,300 acre project area. He was also responsible for the surveying of wetlands and assisting with the water quality and aquatic sampling evaluations.

Wetland Delineator - Covington Industrial Site, Lackawanna County, PA - Mr. Leiberher was responsible for the identification and delineation of wetlands within the 850 acre project area.

Wetland Delineator, U.S. Route 220 Improvement Project/Interstate 99, Centre County, PA - Mr. Leiberher was responsible for the identification and delineation of wetlands and watercourses in numerous areas associated with an expanded project area as a result of construction. These delineations enabled the highway construction project to continue to progress towards completion.

Wildlife Biologist - Bear Creek Watershed Reclamation Project, Dauphin County, PA - Mr. Leiberher was responsible for preliminary mine opening surveys. Opening suitability was determined using Pennsylvania Game Commission, "Criteria for determining whether abandoned coal mines provide potentially suitable bat habitat."

Wildlife Biologist - Route 15 Construction Project, Tioga County, PA - Mr. Leiberher was responsible for the location and identification of the Indiana bat habitat and the creation of a study plan following USFWS protocol. He was responsible for studies concerning the osprey, great blue heron, and vernal pool habitat.

RYAN C. LEIBERHER Wildlife Biologist USFWS Certified Indiana Bat Surveyor Page 2 of 2

Wildlife Biologist, Aquatic Resource Assistant - Central Susquehanna Valley Transportation Improvement Project, Snyder County, PA - Mr. Leiberher assisted in the mine surveys for the Indiana bat and was responsible for locating the habitat of the eastern spadefoot toad in the project area. He assisted in FGM stream work in the project area, and assisted in location and identification of the rough green snake and its habitat.

Wildlife Biologist- San Souci Parkway Project, Luzurne County, PA - Mr. Leiberher handled the field investigations pertaining to the Indiana bat; including habitat assessment and preliminary survey plans. In addition, he has handled concerns pertaining to the Virginia rail, a state threatened species. Mr. Leiberher has also conducted the wildlife habitat research and mapping for the project.

Wildlife Biologist- Route 9 Jefferson County, WV - Mr. Leiberher assisted in the identification of potential roost trees for the Indiana bat using a transect sampling method.

Wildlife Biologist-S.R. 2001 Pike County PA - Mr. Leiberher identified the land cover features and wildlife habitats throughout the project area. He also handled threatened and endangered species studies for the project.

Wildlife Biologist, Aquatic Resource Assistant, Wetland Delineator - Interstate 99 Blair and Center Counties, PA - Mr. Leiberher has conducted stream and wetland investigations throughout the project study area. Many of these investigations are mitigation projects or ongoing monitoring studies.

Wildlife Biologist- Warren Street, Berks County, PA - Mr. Leiberher has assisted in Phase I and II surveys following USFWS protocol for the bog turtle. He has also assisted in the marking and radio tagging of bog turtles.

Wildlife Biologist - Interstate 83 Master Plan, Dauphin and Cumberland Counties, PA - Mr. Leiberher has conducted wildlife and vegetative studies pertaining to roadway improvements along the I-83 highway corridor. In addition, he has completed wildlife and land cover mapping for the project area.

Aquatic Resource Assistant - Spring and Paxton Creek Watershed FGM Assessment, Dauphin County, PA - Mr. Leiberher conducted a fluvial geomorphological assessment based on the Rosgen classification methodology for both watersheds supported by Trout Unlimited and the Paxton Creek Watershed Association.

Aquatic Resource Assistant - South Branch Codorus Creek Watershed FGM Assessment, York County, PA - Mr. Leiberher conducted a fluvial geomorphological assessment based on the Rosgen classification methodology of the South Branch Codorus Creek watershed in support of the Isaac Walton League of York and their effort to determine existing and future watershed problems and development measures for the reestablishment of stream stability and reduction of non-point source pollution.

Aquatic Resource Assistant - East Branch Codorus Creek, Watershed FGM Assessment/Restoration, York County, PA - Mr. Leiberher conducted a fluvial geomorphological assessment based on the Rosgen classification methodology of the East Branch Codorus Creek watershed in support of the Isaac Walton League of York and their effort to determine existing and future watershed problems and development measures for the reestablishment of stream stability and reduction of non-point source pollution.

## ERIC R. BRUGGEMAN Environmental Specialist



#### **EDUCATION:**

B.S., Geography Land-Use, 2004, Shippensburg University Minor, Business, 2004, Shippensburg University

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:

Geographic Information Systems, PA

A new addition to Skelly and Loy in 2004, Mr. Bruggeman brings a diverse background and plans to focus his expertise in land use towards environmental planning; greenways and trail planning; wetland delineation and environmental resources. In his short tenure, he has been involved in various projects with various clients and has proven professional knowledge. Mr. Bruggeman's GIS knowledge displays his enthusiasm towards comprehending current planning trends and techniques, while understanding spatial analysis in our developing environment.

#### PROFESSIONAL EXPERIENCE

Wetland Delineator, South Valley Parkway, S.R. 3046, Section 301, Luzerne County - Mr. Bruggeman assisted in the identification and delineation of wetlands and watercourses in the study area for this project. The study area of this project, approximately 5 miles long, consisted of mostly abandoned mine land and most of the wetland delineations occurred in disturbed landscapes.

Agricultural Analysis – Mr. Bruggeman's involvement in the Central Susquehanna Valley Transportation project allowed him to acquire agricultural security area data, agricultural zoning data, and the total farms enrolled in Clean and Green. Researching potential development information associated with this project was used in a Farmland Assessment Report.

**NEPA Documentation/Alternatives Analysis** – Two of the main projects that Mr. Bruggeman is actively involved in is the South Valley Parkway project and the Juniata River Bridge project. Preparing environmental documentation in compliance with NEPA requirements is a common occurrence for both projects, but he is deeply involved in the alternative analysis and secondary and cumulative impacts of the South Valley Parkway Project. In addition, Mr. Bruggeman is assisting in the wetland delineation of the preferred alignment. Mr. Bruggeman compiled an Environmental Justice Analysis for the Juniata River Bridge and performed community growth studies for this project.

**Technical Intern, Department of Environmental Protection, Harrisburg** – Responsible for the location of abandoned landfills with Trimble GPS units, the compilation of reports and formation of maps using ArcView/ArcGIS and the collection of water samples from residential wells.

GIS Intern, Martin and Martin, Inc., Chambersburg - Responsible for base map development using ArcView and AutoCad and data research for county comprehensive plans.

**RELATED EXPERIENCE** - Mr. Bruggeman is devoted to all aspects of trail planning and its future development. He has **14 years of experience riding on Pennsylvania's legal ATV trails** where he visited 80% of these trails. As a member of the Snow Shoe Rail Trail Association (SSRTA) he is aware of the opposition to expanding the first ATV legal Rail Trail in Pennsylvania. In addition, he has visited the Hatfield-McCoy National Millennium Trail located near Logan, WV. While visiting this internationally known trail system three consecutive years, Mr. Bruggeman met with the Director to learn some of the strategies used on this professionally designed and recognized trail.

## GREGORY A. ORRIS Environmental Specialist



### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:

EPA Asbestos Inspector Certified Asbestos Inspector, PA

In his 12 years at Skelly and Loy, Mr. Orris has performed a variety of duties. Since joining the Environmental Service Group, Mr. Orris's responsibilities include surveying wetlands during wetland delineation projects, surveying and creating site maps on various projects, and surveying stream channels and cross sections for stream restoration projects. He has experience utilizing surveying equipment such as Global Positioning System (GPS) technology, conventional total station surveying, and laser level equipment. Mr. Orris is also proficient at water quality sampling and analysis.

Mr. Orris was a member of the Waste Management Service Group of Skelly and Loy. His experience with this service group consisted of environmental field sampling and research for various waste management projects. He participated in all phases of underground storage tank and waste site characterizations. Mr. Orris also participated in site investigations including asbestos inspections and monitoring.

PROFESSIONAL EXPERIENCE	

Wetland Delineation Field Crew Member and Wetland Surveyor, Route 322-B02, Corridor O Project, Centre and Clearfield County, PA - Mr. Orris was a valuable member of the wetland delineation field crew due to his ability to sweep and identify wetlands, in addition to fulfilling his role as chief GPS surveyor for the project. Approximately 1,300 wetlands and 200 watercourses were identified and delineated in the 12,000 acre study area.

Wetland Delineation Field Crew Member and Wetland Surveyor, U.S. Route 220 Improvement Project/Interstate 99, Centre County - Mr. Orris was responsible for sweeping numerous areas where the project area had expanded during construction in an effort to identify wetlands and watercourses. Once identified and delineated, Mr. Orris was responsible for surveying all wetlands and watercourses in these expanded areas of study.

Pennsylvania Department of General Services - Mr. Orris was involved with on-site monitoring and coordination associated with the Commonwealth of Pennsylvania's Transportation and Safety Building project in Harrisburg, Pennsylvania. A fire in the building spread asbestos and PCBs throughout several floors of this 14-story building. His initial duties involved sampling and characterizing contaminants on the fire-impacted floors as well as sampling both high-cost equipment and furniture on the occupied floors. Before demolition, Mr. Orris performed on-site air monitoring during asbestos abatement that included personal air monitoring and background (area) monitoring. He maintained and calibrated the sampling equipment and completed appropriate chain-of-custody forms and documentation.

Pennsylvania Department of Transportation - Under an IDTC for Waste Management Services, Mr. Orris completed asbestos inspections of more than 25 residential and commercial structures. These structures were subject to acquisition and demolition to facilitate highway construction projects. These inspections included a tactile assessment of accessible ACMs and upon identification of; a sampling scheme was developed and implemented. The results of the surveys were used to complete asbestos abatement specifications and mitigation plans. Mr. Orris also monitored asbestos abatement activities of the selected contractor and collected final clearance samples.

### KEVIN J. STARNER Environmental Specialist



#### **EDUCATION:**

B.S., Geoenvironmental Studies, 1998, Shippensburg University

Since joining Skelly and Loy in 1998, Mr. Starner has participated in a wide variety of transportation improvement and environmental planning projects within many different counties across Pennsylvania. His project experience includes the preparation of environmental impact assessments and Section 4(f) evaluations for both FHWA- and PennDOT-sponsored transportation improvement projects; comprehensive plans and hazard mitigation plans for both county and municipal governments; wetland issues, watershed-level stormwater management plans for the PA DEP; and community improvement plans for multi-jurisdictional regions. As such, Mr. Starner has a working knowledge of many environmental and planning-related laws and regulations, including the National Environmental Policy Act, Section 4(f) of the U.S. Department of Transportation Act, Section 106 of the National Historic Preservation Act, Section 2002 of PA Act 120, the Pennsylvania Municipalities Planning Code, the Disaster Mitigation Act, and Pennsylvania's Stormwater Management Act.

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Wetland Delineator, State Route 2001, Sections 401/402, Improvement Project, Pike County, PA - Mr. Starner assisted in the identification and delineation of wetlands and watercoursesin the 17 mile long, 400 acre study area. Approximately 125 wetlands and 40 watercourses were identified and delineated in the study area.

**Transportation Improvement Planning** – Having participated in over 30 different projects in 20 Pennsylvania counties, Mr. Starner serves as Skelly and Loy's Categorical Exclusion and Section 4(f) Evaluation specialist for FHWA- and PennDOT-sponsored transportation improvement projects. Mr. Starner has authored in excess of 25 Categorical Exclusion Evaluations and 14 Section 4(f)/2002 Evaluations for projects ranging from simple bridge replacements to major roadway widening/reconstruction projects. Most recently, Mr Starner served as the assistant project manager for the Adams County Bridges Replacement Project, which involved the completion of environment impact and Section 4(f) documents for four bridge replacements in Adams County.

Comprehensive Planning – Mr. Starner served as the assistant project manager for the recently completed Joint Comprehensive Plan for Chapman and Union Townships, Snyder County. Mr. Starner's primary responsibilities for this project included authoring a successful PA DCED Land Use Planning and Technical Assistance Program grant application, assisting with the various planning tasks, and coordinating the project steering committee meetings. Mr. Starner also assisted in the development of a comprehensive GIS-based land use mapping system for municipal use following the completion of the comprehensive planning process.

Hazard Vulnerability Assessment and Mitigation Planning – Mr. Starner has been involved in the successful completion of several hazard vulnerability assessment and mitigation planning projects for both municipal and county governments. As part of the U.S. Army Corps of Engineers' Wyoming Valley Levee Raising Project, Mr. Starner participated in the completion of 11 Flood Hazard Mitigation Plans for 12 municipalities located in Snyder, Northumberland, Montour, and Columbia Counties. Most recently, Mr. Starner served as the primary author and project planner for the completion of a multi-hazard vulnerability assessment and mitigation plan for Dauphin County, PA. This hazard mitigation plan evaluates the County's vulnerability to a wide variety of natural hazards and makes recommendations for ways to minimize and/or mitigate the damaging effects of those hazards. The hazard vulnerability assessment and mitigation plan is intended to be a multi-jurisdictional document and is to be individually adopted by all forty of Dauphin County's constituent municipalities.

KEVIN J. STARNER Environmental Specialist Page 2 of 2

Watershed Stormwater Management Planning – Mr. Starner served as the field crew leader and project planner for the Upper Yellow Breeches Watershed Act 167 Stormwater Management Plan. This watershed stormwater management plan encompassed six Cumberland County municipalities within the headwaters and upper limits of the Yellow Breeches Creek. Field efforts conducted under Mr. Starner's direction were aimed at inventorying and collecting hydraulic measurements of the numerous bridge crossings and other obstruction points within the watershed. As project planner, Mr. Starner was responsible for attending all project meetings, drafting various sections of the plan document, and incorporating watershed specific requirements into the model stormwater management ordinance.

Community Improvement Planning – Mr. Starner was a key contributor to the successful completion of the Western Berks Council of Governments Route 422 Corridor Communities Improvement Plan. Developed under the Pennsylvania State Association of Boroughs, the Plan was awarded the 1999 Sustainable Communities Partnership Award as an outstanding intermunicipal cooperation program. Mr. Starner's primary contributions to this planning effort involved the identification of various community issues, mutually agreeable solutions, and potential funding sources.

#### PROFESSIONAL AFFILIATIONS:

Pennsylvania Association of Environmental Professionals Pennsylvania Planning Association Pennsylvania Geographical Society

#### **RELEVANT TRAINING:**

PennDOT Regional Bicycle/Pedestrian Training (August, 1998) CEC/PA and PennDOT Bureau of Environmental Quality Section 4(f) Evaluations Training (July, 1998) Zweig White and Associates Project Management Training (May, 1998)

#### **PUBLICATIONS:**

Soil Variability Across a Topographic Gradient In Colluvial Soil of Southcentral Pennsylvania, <u>Pennsylvania</u> <u>Geographer</u>, Fall, 1998.

### **RICHARD S. JOHNSTON**

Geologic Technician/Global Positioning Systems



### **EDUCATION:**

Enrolled in Geology Program of HACC

#### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:

Trimble Certified GPS Operations Instructor

Mr. Johnston has been with Skelly and Loy for over 13 years and currently serves as the GPS Coordinator for Skelly and Loy, Inc. His duties include supervising and conducting GPS survey and producing mapping. This includes topographic mapping, engineering design, base map production, GIS data collection, and establishment of aerial control points. In addition to his duties as GPS Coordinator, Mr. Johnston has experience with wetland mitigation design including site selection, site evaluation, conceptual design, and construction monitoring.

	PRC	FESSIONAL E	XPERIE	NCE_					
ute	220	Improvement	Project,	Blair	and	Centre	Counties,	PA ·	- Mr.

Survey Coordinator, U.S. Route 220 Improvement Project, Blair and Centre Counties, PA - Mr. Johnston coordinated the survey work required for the completion of environmental studies. This included stakeout of 30 miles of study corridor, the mapping of more than 1,200 wetland systems, and the mapping of different forest habitats.

Construction Inspector, Whitetail Ski Resort, Franklin County, PA - Mr. Johnston served as the construction inspector for eight acres of replacement wetlands.

Replacement Wetland Designer, U.S. Route 15, Section D51, Tioga County, PA - Mr. Johnston was responsible for the design of 15 acres of replacement wetlands. His duties included performing preliminary site assessment on potential replacement sites, performing detailed soils and hydrology testing on selected sites, and the compilation of the conceptual plan.

**Survey Coordinator, Intercon Systems, Dauphin County, PA** - Mr. Johnston served as survey coordinator for the preparation of topsoil and property mapping of an 18-acre parcel of land. Duties included the conduction and oversight of topographic and property mapping to be used for the compilation of land development plans

Survey Coordinator and Data Manager, U.S. Route 15, Tioga County, PA and Steuben County, NY - Mr. Johnston's duties included the conduction and oversight of all survey work related to the environmental study. This included stakeout of 27 miles of study corridor centerline and the survey of more than 600 individual wetland systems. In addition, Mr. Johnston was responsible for the oversight of the flow of data: processing of survey data, inclusion of the data into project CADD mapping, and transfer of data from CADD to GIS for use in calculating impacts.

### APPENDIX C -ROUTINE ON-SITE WETLAND DETERMINATION DATA FORMS

Wetland 1 12-Apressist on the site? turbed (Atypical Situblem area? CLASSIFICATION:			EVALUATOR: WEATHER: S	PJE sunny, clear, 50 degrees	o, BTB, KJS, ERB	
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blem area?	-4:>0	Yes				
	ation)?	No				
CLASSIFICATION:		No				
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		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
WET	LAND			UPLAN	D	
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/perinus	Н	FACW+	ML	usci sp.	н	NS
atifolia	н	OBL	Comptonia peregrina H			
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10111414						
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stosol		,		Concretions		
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	Colors		<del></del>	Other (Explain in Basis of	Delineation)	
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resent?	Yes		Hydric Soil Presen	nt? Yes		
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saturation, indu	ndation and water stai	ned leaves in a topog se following low chrom	rapnically defined b a and mottled soils	owi and depression ad s. Wetland is isolated.	Jaceni to Succer 16	au. Demieath
	effusus x sp.  ecies that FAC SOIL UNIT: WETLAND C MATRIX 7.5YR3/3 2.5Y6/2  WETLAND F MATRIX 10YR4/6 10YR4/4  istosol istic Epipedon utificitic Codor quic Moisture Regime Reducing Conditions Sleyed or Low Chroma Present? EATION:	effusus H x sp. H  ecies that  FAC  SOILS  SOIL UNIT: Morris extremely story sit to SOIL UNIT: Nowich  WETLAND CORE SOIL SCORE  MATRIX MOTTLE 7.5YR3/3 2.5Y6/2 2.5Y4/4  WETLAND FRINGE SOIL SCORE  MATRIX MOTTLE  10YR4/6 10YR4/6 10YR4/4  istosol istic Epipedon  utilidic Odor  quic Moisture Regime Reducing Conditions Sileyed or Low Chroma Colors  Present? Yes  EATION:	editusus H FACW+  A s.p. H 85% FAC-OBL  ecies that  FAC 100%  SOIL.S  SOIL UNIT: Morris extremely story silt loam (MoB)  SOIL UNIT: Norwich  WETLAND CORE SOIL SCORE  MATRIX MOTILE TEXTURE  7.5YR3/3 silt loam  2.5Y6/2 2.5Y4/4 silt loam  WETLAND FRINGE SOIL SCORE  MATRIX MOTILE TEXTURE  10YR4/6 silt loam  10YR4/4 silt loam  Hydric Soil  istic Epipedon  ullidic Odor  quic Moisture Regime Reducing Conditions Sileyed or Low Chroma Colors  Wetland De  Present? Yes  EATION:	ediusus H FACW+ 85% FAC-OBL Ace  secies that  AC 100%  SOILS  SOIL UNIT: Morris extremely story silt floam (MoB)  SOIL UNIT: Norwich DEPTH OF SURF  WETLAND CORE SOIL SCORE  MATRIX MOTTLE IEXTURE  7.5YR3/3 silt loam  2.5Y6/2 2.5Y4/4 silt loam  WETLAND FRINGE SOIL SCORE  MATRIX MOTTLE IEXTURE  X  WETLAND FRINGE SOIL SCORE  MATRIX MOTTLE IEXTURE  X  UPLAND SOIL SCORE  MATRIX MOTTLE IEXTURE  10YR4/6 silt loam  X  Hydric Soil Indicators  sistosol  sistic Epipedon  uilfulic Coor  quic Moisture Regime  X  Wetland Determination  Present? Yes Wetland?  EATION:  S saturation, indundation and water stained leaves in a topographically defined by the same and topographically defined by the	edusus H FACW+ 85% FAC-OBL  Acer rubrum  Acc 100%  SOILS  SOIL UNIT: Morris extremely story silt loam (MoB)  WETLAND CORE SOIL SCORE MATRIX MOTTLE IEXTURE 10YR46 10YR47 10YR46 10YR47 10YR46 10YR47 10YR46 10YR47 10YR47 10YR47 10YR47 10YR47 10YR47 10YR47 10YR47 10YR47 10YR48 10YR47 10YR48 10YR47 1	editiosis H FACW+ As p. H 85% FAC-OBL Acer rubrum T  Acc 100%  SOILS HYDROLOGY  SOIL UNIT: Morris extremely story all kalm (Mv8) Solution (Mv8) Soluti

WETLAND ID:	Wetland 2			EVALUATOR:		PJD,	BTB, KJS, ERB	
DATE:	12-Apr-0	)5		WEATHER:	sunny, clea	r, 50 degrees		
normal circumstances			Yes					
ne site significantly di	sturbed (Atypical Situa	ition)?	No					
ne area a potential pr	oblem area?		No					
DROGEOMORPHIC	CLASSIFICATION:			SIZI	E:	0.0439 Ac	0.0178 Ha	
GETATION			CLASSIFICATION:	100% PEM	0%	PSS	0 % PFO	0% POW
	WET	LAND				UPLAND	)	
SPE	CIES	STRATUM	INDICATOR	İ	SPECIES		STRATUM	INDICATOR
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Sphag	num sp.	н	NS		aria petiolata		Н	FACU-
Comus	amomum	SS	FACW	Poaceae	or Graminea	e sp.	Н	NS
				s	iolidago sp.		H	NS
					Allium sp.		Н	NS
ercent of Dominant S								
re OBL, FACW, and			100%			HYDROLO	OGY	
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		Norris extremely stony sitt loa Norwich	am (MOD)				Seasonal gr	oundwater seep.
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8-16"	10YR6/2	10YR6/8	silt loam					
- ··*	,5,,,6,			1		INDICATORS		
	WETLAND FF	RINGE SOIL SCORE		×	Inundatio	n		
DEPTH	MATRIX	MOTTLE	TEXTURE	×		1 in Upper 12 In	ches	
				Water Marks				
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	UPLANI	SOIL SCORE		х	Drainage	Patterns		
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2-18"	7.5YR4/8		silt loam		Water St	ained Leaves		
					FAC-Ner	utral Test		
	_							~~·
			Hydric Soi	Indicators				
	Histosol				Concretion			
	Histic Epipedon						lace Layers in Sandy	Soils
×	Sulfidic Odor					treaking in Sandy		
	Aquic Moisture Regime			X		Local Hydric Soils		
×	Reducing Conditions					National Hydric Sc		
×	Gleyed or Low Chroma C	colors		<del>*************************************</del>	Other (E:	oplain in Basis of D	eiineation)	
			Maria J P	etermination	.,			
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Hydrophytic Vegetation Wetland Hydrology Pro		res Yes		Wetland?				
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		7.7	ETLAND DA			D DED 1/10 FOR	
WETLAND ID:	Wetland 3			EVALUATOR:		D, BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: su	inny, clear, 50 degree	S	
normal circumstanc	es exist on the site?		Yes				
e site significantly	disturbed (Atypical Situati	,-	No				
e area a potential p			No	0175	0.0618 A	c 0.0250 Ha	
	C CLASSIFICATION:			SIZE:	0 % PSS	0 % PFO	0% POW
GETATION	· · · · · · · · · · · · · · · · · · ·		CLASSIFICATION:	100% F2W	UPLA		
	WETL		HIDICATOR	Spe	CIES	STRATUM	INDICATOR
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	rex sp.	н	OBL	1	petiolata	н	FACU-
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ercent of Dominant	·		100%				
re OBL, FACW, an		ILS	100%		HYDRO	OLOGY	
MADDI		rris extremely stony silt loa	um (MoB)	<u> </u>			
		Norwich	in (nos)	SOURCE OF HYDR	O OCV	Surface water collection is ditch and	n low area. Surface/sto pipe contribution.
HYDRIC SOIL UNIT: Norwich  WETLAND CORE SOIL SCORE			DEPTH OF SURFA			0-2"	
DEPTH	MATRIX	MOTTLE	TEXTURE	1	WATER IN SOIL PIT:		
0-8"	7.5YR3/3	· · · · · · · · · · · · · · · · · · ·	silt loam	DEPTH TO SATUR	ATED SOIL:		
8-16" 2.5Y6/2		7.5YR6/8	siit loam	į	FIELD INDICATOR	as	
				}	PRIMARY INDICATO	RS	
	WETLAND FRI	NGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Saturated in Upper 12 Inches			
					Drift Lines		
					_Sediment Deposits		
	UPLAND	SOIL SCORE			_Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	1	ECONDARY INDICA	TORS	
0-14"	7.5YR3/3		sit toam		_Oxidized Root Chan	nels in Upper 12 inch	ies
					_Water Stained Leave	es	
					_FAC-Neutral Test		
			Hydric Soi	I Indicators	O		
	Histosol —				Concretions	Surface Layers in Sand	Soils
	Histic Epipedon —				-		,
	Sufficio Odor				Organic Streaking in Sa — Listed on Local Hydric S		
	Aquic Moisture Regime			X	Listed on Local Hydric s  Listed on National Hydr		
×	Reducing Conditions	•			Other (Explain in Basis		
×	Gleyed or Low Chroma Co	Hors					
<b></b>			Wetland D	etermination			***************************************
Hydrophytic Vegetat	tion Present?	Yes	yetiana D	Hydric Soil Present	? Yes		
Wetland Hydrology		Yes		Wetland?	Yes		
BASIS OF DE							
JACIS OF DEI	enterion.						

WETLAND ID:	Wetland 4		EVALUATOR:	PJD, B1	TB, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees		
Do normal circumstances	3 exist on the site?	Yes				
Is the site significantly dis	sturbed (Atypical Situation)?	No				
Is the area a potential pr	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0876 Ac	0.0354 Ha	

DAUGEUNIOHPH	C CLASSII ICATION.						
GETATION			CLASSIFICATION:	30% PEM	0 % PSS	0 % PFO	70% POW
	WE	TLAND			UPLAND	)	
SI	PECIES	STRATUM	INDICATOR	SPEC	CIES	STRATUM	INDICATOR
Ca	arex sp.	н	85% FAC-OBL	Poaceae or G	ramineae sp.	н	NS
Lemr	naceae sp.	н	OBL	Schizachyrium scopa	rium ssp. scoparium	н	FACU
Juno	us effusus	н	FACW+	Pinus s	trobus	Т	FAC-*
Тур	ha latifolia	н	OBL	1			
ercent of Dominant	Species that			ł			
e OBL, FACW, ar	nd FAC		100%				·
		SOILS			HYDROL	OGY	
MAPP	ED SOIL UNIT:	Morris extremely stony silt I	ioam (MoB)				
HYDR	IC SOIL UNIT:	Norwich		SOURCE OF HYDRO	DLOGY:	Groundwater	spring (via pipe).
	WETLAND (	CORE SOIL SCORE		DEPTH OF SURFAC	E WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W.	ATER IN SOIL PIT:		
0-14"	5YR3/3	7.5YR6/8	silt loam	DEPTH TO SATURA	TED SOIL:		
14-18"	5YR4/3		sandy loam	7	FIELD INDICATORS		
				P	RIMARY INDICATORS		
	WETLAND F	RINGE SOIL SCORE		x	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 In	ches	
				\\	Water Marks		
					Orift Lines		
					Sediment Deposits		
	UPLAN	D SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATOR	RS	
0-14"	10.5YR4/4		silt loam		Oxidized Root Channels	in Upper 12 inche	es
				x	Water Stained Leaves		
					FAC-Neutral Test		
***************************************							
			Hydric Soil		0		
	Histosol				Concretions	face I summ in Comb.	Cnile
	Histic Epipedon				High Organic Content in Surf		ÇVIIS
	Sulfidic Odor				Organic Streaking in Sandy		
	Aquic Moisture Regime			<del> </del>	Listed on Local Hydric Soils		
X	Reducing Conditions			<del></del>	Listed on National Hydric So		
	Gleyed or Low Chroma	Colors			Other (Explain in Basis of D	rem realion)	
			Wetland De	termination			
Hydrophytic Vegetat	ion Present?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology I	Oronaut0	Yes		Wetland?	Yes		

#### BASIS OF DELINEATION:

Delineation follows extent of man-made pond and adjacent fringe and groundwater seep drainage pattern to pond. Area is saturated and inundated (>18\*) and does contain low chroma, mottled soils with duck weed, soft rush, sedge, and cattail community.

		V	ETLAND DA				
WETLAND ID:	Wetland 5			EVALUATOR:		), BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: s	unny, clear, 50 degrees		
normal circumstance			Yes				
• •	disturbed (Atypical Situation)	?	No				
the area a potential			No	6175.	0.0387 Ac	0.0157 Ha	
	C CLASSIFICATION:		O ACCITION TION	SIZE:	0.0387 AC	100 % PFO	0% POW
GETATION			CLASSIFICATION:	U% PEM	UPLA		0,01011
	WETLANI	*****	INDICATOR	SP	ECIES	STRATUM	INDICATOR
	<u>PECIES</u> r rubrum 1	STRATUM	INDICATOR FAC	Į	a latifolia	SS	FACU
		1	85% FAC-OBL		anadensis	т	FACU
		1	NS	1	sus rubra	т	FACU-
Орла	grum sp.	•		1	angustifolia	SS	FAC
ercent of Dominant are OBL, FACW, an	•		100%	1			
ODE, 1 NOW, di	SOILS		.00 %	<del>                                     </del>	HYDRO	LOGY	
MAPPE		nna extremely stony	loam (LbB)	1			
	IC SOIL UNIT:	0		SOURCE OF HYDI	ROLOGY:	Surface water	runoff collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFA			1-3*
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE V	WATER IN SOIL PIT:		
0-6*	organic		organic	DEPTH TO SATURATED SOIL:			
6-14"	10YR4/2		silt clay loam		FIELD INDICATORS	3	
>14"			rock	_]	PRIMARY INDICATOR	s	
	WETLAND FRING	SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12	Inches	
					Water Marks		
					_Drift Lines		
	LIDI AND CO	u ecopr		_	Sediment Deposits		
DEPTH	<u>UPLAND SO</u> <u>MATRIX</u>	MOTTLE	TEXTURE		_Drainage Patterns ECONDARY INDICATO	ORS	
0-16"	7.5YR6/3	MOTILE	sity clay loam	]	Oxidized Root Channe		·s
5.10	Lornus		only only could	×	Oxidized Hoot Channe Water Stained Leaves		မ
					_ water Stained Leaves FAC-Neutral Test		
					_FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol		•		Concretions		
	- Histic Epipedon				 High Organic Content in S	urlace Layers in Sandy S	Soils
х	Sulfidic Odor				Organic Streaking in Sand	y Soils	
	Aquic Moisture Regime				Listed on Local Hydric Soi	ls List	
×	Reducing Conditions				Listed on National Hydric	Soils List	
	Gleyed or Low Chroma Colors				Other (Explain in Basis of	Delineation)	
	······································						
			Wetland De	termination			
Hydrophytic Vegetation		Yes		Hydric Soil Present			
Wetland Hydrology P		Yes		Wetland?	Yes		
BASIS OF DEL	INEATION:						
Delineation folio mottled soils.	ows extent of topographic	depression with	saturated and inunda	ted community of sp	ohagnum moss, red m	aple, and sedge v	vith low chroma

		W	ETLAND DA	TA FORM					
WETLAND ID:	Wetland 6			EVALUATOR:		PJD,	BTB, KJS, ERB		
DATE:	12-Apr-	05		WEATHER:	sunny, clear	, 50 degrees			
normal circumstance	s exist on the site?	`	res						
ne site significantly d	isturbed (Atypical Situ	ation)?	No						
ne area a potential p	roblem area?	!	No						
DROGEOMORPHIC	CLASSIFICATION:			SIZE		0.0653 Ac	0.0264 Ha	201 5014	
GETATION			CLASSIFICATION:	100% PEM	0%	PSS	0 % PFO	0% POW	
	WET	LAND				UPLANE		NUCATOR	
SPE	ECIES	STRATUM	INDICATOR	i	SPECIES		STRATUM	INDICATOR FACU	
Juncus	s effusus	н	FACW+	1	Pinus rigida		Т	NS NS	
Car	ex sp.	н	85% FAC-OBL	ł	or Gramineae	e sp.	н	NS NS	
Lysimachia	a nummularia	Н	FACW-	S	solidago sp.		Н	1110	
Nasturtiu	ım officinale	Н	OBL	1					
Scirpus	cyperinus	н	FACW+						
Satix	discolor	н	FACW						
ercent of Dominant S			100%						
	SOILS					HYDROL	OGY		
MAPPE	D SOIL UNIT:	Wyoming gravelly sandy loar	n (WyC)						
HYDRI	C SOIL UNIT:	Wet spots		SOURCE OF H	YDROLOGY:		Groundwater and surf	ace water runoff collect	
	WETLAND C	ORE SOIL SCORE		DEPTH OF SUI					
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FR					
0-3*	7.5YR3/2		disturbed	DEPTH TO SA					
3-14"	5YR5/3		disturbed			NDICATORS			
				4	PRIMARY	INDICATORS	<b>;</b>		
	WETLAND F	RINGE SOIL SCORE		×	Inundatio	n			
DEPIH	MATRIX	MOTTLE	TEXTURE						
					Water Ma				
					Drift Line				
		ID COLL COORE		×		t Deposits			
DEDTU		ID SOIL SCORE MOTTLE	TEXTURE			Patterns	RS		
<u>DEPTH</u> 0-16"	MATRIX 10YR3/3	MOTILE	silt loam	1			s in Upper 12 inch	es.	
0-16	10113/3		3 <b>2</b>			tained Leaves	s in Opper 12 mon	~	
					<del></del>	utral Test			
						ulia resi			
			Hydric Soi	Indicators					
	Histosol				Concretio	ns			
	 Histic Epipedon				High Orga	anic Content in Su	rtace Layers in Sandy	Soils	
	Suffidic Odor				Organic S	itreaking in Sandy	Soils		
	- Aquic Moisture Regime			х	Listed on	Local Hydric Soils	List		
х	Reducing Conditions					National Hydric S			
-11-144	Gleyed or Low Chroma	Colors			Other ( E	xplain in Basis of I	Delineation)		
			Wetland D	etermination				<u> </u>	
Hydrophytic Vegetati	on Present?	Yes		Hydric Soil Pre					
Wetland Hydrology P		Yes		Wetland	? Yes				
BASIS OF DEL	INEATION:								
Delineation folk	ows extent of sedge	and soft rush commu	nity following a topog	raphic low draina	age pattern w	ith low chrom	a, red soils in a	disturbed settir	

VETLAND ID:	Wetland 7			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny	, clear, 50 degrees		
	ices exist on the site?		Yes				
			No				
=	disturbed (Atypical Situatio	#1) f					
e area a potential			No	0175.	0.0686 Ac	0.0278 Ha	
ROGEOMORPH	IIC CLASSIFICATION:			SIZE:		50 % PFO	0% POW
ETATION			CLASSIFICATION:	50% PEM	0 % PSS		0,61 0,1
	WETLA	ND			UPLAND		
S	PECIES	STRATUM	INDICATOR	SPECI	ES	STRATUM	INDICATO
С	arex sp.	н	85% FAC-OBL	Hamamelis vi	rginiana	SS	FACU+
Sph	agnum sp.	н	NS	Acer rub	rum	Т	FAC
	er rubrum	т	FAC	Quercus	alba	τ	FACU
				Poaceae or Gra	mineae sp.	H	NS
				Tsuga cana	densis	Т	FACU
cent of Dominan	·		4000				
e OBL, FACW, a	nd FAC SOII		100%	<del>                                       </del>	HYDROL	OGY	
3400		is extremely stony silt k	am (MoB)				
	22 33.2 3	Norwich		SOURCE OF HYDROL	OGV:	Seasonal flooding and	seasona) groundwat
HYDI	RIC SOIL UNIT:			DEPTH OF SURFACE			1-3*
	WETLAND COR		TO THE	DEPTH TO FREE WAT			o-
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SATURATI			
0-10"	10YR3/2		sit loam	1	ELD INDICATORS		
10-16"	10YR4/2	10YR4/4	siłt loam	1			
				<b></b>	IMARY INDICATORS		
	WETLAND FRIN	GE SOIL SCORE			Indation		
DEPTH	MATRIX	MOTTLE	TEXTURE	TURE X Saturated in Upper 12 Inches			
				W	ater Marks		
				Dr	ift Lines		
				Se	ediment Deposits		
	UPLAND S	OIL SCORE		Dr	ainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	ONDARY INDICATO	RS	
0-6*	10YR2/2		loam	0:	xidized Root Channels	s in Upper 12 inches	5
6-14"	7.5YR5/4	7.5YR5/6	loam		ater Stained Leaves		
0.11	7,011.0				AC-Neutral Test		
				,,	NO-NEGILLI TOS		
			Hydric Soi	I Indicators			
	Histosol				oncretions	for a bound in County C	- De
	Histic Epipedon				igh Organic Content in Su		ONS
х	Sulfidic Odor				rganic Streaking in Sandy		
	Aquic Moisture Regime			x	sted on Local Hydric Soils	List	
х	Reducing Conditions			U	isted on National Hydric S	oils List	
×	Gleyed or Low Chroma Colo	rs		c	ther (Explain in Basis of E	Delineation)	
			Wetland D	etermination			
Hydrophytic Vegeta	ation Present?	Yes		Hydric Soil Present? Y			
Wetland Hydrology	Present?	Yes		Wetland? Y	es .		
BASIS OF DE	LINEATION:						

WETLAND ID: DATE:	Wetland 8			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:							
	12-Apr-05			WEATHER: sunr	y, clear, 50 degrees		
ormal circumstance	s exist on the site?		Yes				
e site significantly di	isturbed (Atypical Situatio	n)?	No				
e area a potential pr	roblem area?		No				
POGEOMORPHIC	CLASSIFICATION:			SIZE:	0.1579 Ac	0.0639 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WETLA	ND			UPLANI		
SPE	CIES	STRATUM	INDICATOR	SPEC		STRATUM	INDICATO
Acer	rubrum	Т	FAC	Quercus		Т	FACU-
Tsuga ca	anadensis	Т	FACU	Acer rut		T 	FAC
				Kalmia la		SS	FACU
				Tsuga can		T	FACU
				Pinus sti	robus	Т	FAC-*
rcent of Dominant S	-		50%				
e OBL, FACW, and	SOI	ıs	30 /0	<b> </b>	HYDROL	OGY	
MAPDEI		wanna extremely stony	loam (LbB)				
	SOIL UNIT:	caramay stony	······	SOURCE OF HYDRO	LOGY:	Groundwate	r seep via pipe.
TIDAK	WETLAND COR	E SOIL SCORE		SOURCE OF HYDRO  DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-4"	10YR2/1	1115-1-1-1-	silt loam	DEPTH TO SATURAT			
4-10°	10YR4/3		sit loam	ı	ELD INDICATORS		
10-16*	10YR4/6		silt loam	1	IMARY INDICATORS		
-	WETLAND FRIN	IGE SOIL SCORE		-	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE		aturated in Upper 12 In	ches	
					ater Marks		
					rift Lines		
					ediment Deposits		
***************************************	UPLAND S	SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	SEC	ONDARY INDICATOR	RS	
0-5*	10YR2/1		silt loam		xidized Root Channels	in Upper 12 inche	s
5-16°	10YR4/4		silt loam		/ater Stained Leaves		
				F	AC-Neutral Test		
			Hydric Soi	I Indicators			
	Histosol				Concretions	loon I muom in Cond. 6	i nik
	Histic Epipedon				ligh Organic Content in Sur		, conto
	Sulfidic Odor				Organic Streaking in Sandy		
	Aquic Moisture Regime				isted on Local Hydric Soils		
	Reducing Conditions				isted on National Hydric So		
- Х	Gleyed or Low Chroma Cold	ors			Other (Explain in Basis of C	emeandi)	
			Wetland De	etermination			
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Present?	/es		
Wetland Hydrology Pre	esent?	Yes		Wetland?	Yes		
BASIS OF DELI	NEATION:						
Delineation follow	ws extent of red maple	e community with s	sulfidic odor in soils ar	nd ample saturation and	I inundation following	low chroma soils	s.

WETLAND ID:	Wetland 9		EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sun	ny, clear, 50 degrees		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly o	disturbed (Atypical Situation)?	No				
Is the area a potential p	problem area?	No				
HYDROGEOMORPHI	C CLASSIFICATION:		SIZE:	0.0271 Ac	0.0110 Ha	
				ON DCC	100 % PFO	0% POW

Drogeomorphic C	LASSIFICATION:			SIZE:	0.0271 AC	0.0110114	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WET	LAND			UPLAN	D	
SPEC	IES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Tsuga can		т	FACU	Tsuga ca	inadensis	T	FACU
Acer ru		т	FAC	Aceri	ubrum	т	FAC
Sphagni	um sp.	н	NS	Quero	us alba	т	FACU
Vaccinium co	•	SS	FACW-	Querc	us rubra	Т	FACU-
	,			Kalmia a	ngustifolia	SS	FAC
ercent of Dominant Sp	ecies that						
re OBL, FACW, and F			67%				
	s	OILS			HYDROL	.OGY	
MAPPED	SOIL UNIT: L	ackawanna extremely storry	loam (LbB)				
HYDRIC :	SOIL UNIT:			SOURCE OF HYDR	OLOGY:	Surface we	ster collection.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFA	CE WATER:		1-3"
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE V	VATER IN SOIL PIT:		
0-2*	organic		organic	DEPTH TO SATUR	ATED SOIL:		
2-16*	10YR6/3	10YR6/8	clay loam	l	FIELD INDICATORS	i	
				1	PRIMARY INDICATORS	S	
	WETLAND F	RINGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	х	Saturated in Upper 12 I	nches	
					Water Marks		
					Drift Lines		
				-	Sediment Deposits		
	UPLAN	D SOIL SCORE		х	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICATO	RS	
0-16"	7.5YR6/3		silty clay loam	ì	Oxidized Root Channel	s in Upper 12 inche	s
				×	Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soil	Indicators			
н	iistosol				Concretions 		
F	listic Epipedon				High Organic Content in Su	rface Layers in Sandy	Soils
× s	sultidic Odor				Organic Streaking in Sandy	Soils	
,	Aquic Moisture Regime				Listed on Local Hydric Soil	s List	
X	Reducing Conditions				Listed on National Hydric S	Soits List	
	Gleyed or Low Chroma	Colors			Other (Explain in Basis of	Delineation)	
			Wetland De	etermination			
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology Pres	sent?	Yes		Wetland?	Yes		

#### BASIS OF DELINEATION:

Delineation follows extent of topographic low area with drainage patterns and red maple dominated community in area of water stained leaves, saturation, and inundation. Area of delineation also does have low chroma and mottled soils along with sulfidic odor.

WETLAND ID:	Wetland 10		EVALUATOR:	PJD, BT	B, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly d	fisturbed (Atypical Situation)?	No				
ls the area a potential p	problem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0353 Ac	0.0143 Ha	

	C CLASSIFICATION:			SIZE:	0.0353 Ac	0.0143 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WETLA	ND			UPLAND	)	
SE	PECIES	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
	r rubrum	Т	FAC	Acer rut	orum	T	FAC
Spha	ignum sp.	н	NS	Tsuga can	adensis	T	FACU
				Kalmia la	atifolia	SS	FACU
rcent of Dominant							
e OBL, FACW, an		1.0	100%	4	HYDROLO	OGY	
MADDI	SOI LINET LOOK	awanna extremely storry k	ram (LhB)		- TIDROL		
	ED SOIL UNIT: Lack IC SOIL UNIT:	awairia externely story k	am (CDC)	COURCE OF LIVERO	LOCY:	Surface water	runoff collection.
		RE SOIL SCORE		SOURCE OF HYDRO DEPTH OF SURFACE			1-8*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-10"	10YR3/2		siłt toam	DEPTH TO SATURAT	ED SOIL:		
10-18"	2.5Y5/1	2.5Y4/4	silt loam	FI	ELD INDICATORS		
				PF	RIMARY INDICATORS		
	WETLAND FRIN	IGE SOIL SCORE		XIn	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×s	aturated in Upper 12 In	ches	
				w	later Marks		
				D	rift Lines		
				s	ediment Deposits		
		SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICATOR		
0-6"	7.5YR3/2		silt loam		xidized Root Channels	in Upper 12 inche	es .
6-10"	7.5YR4/2		silt loam silt loam		Vater Stained Leaves		
10-16"	10YR4/3		SHI KAITI	F	AC-Neutral Test		
			Hydric Soi	Indicators			
	Histosol				Concretions	I in Condu	Callo
	Histic Epipedon				tigh Organic Content in Sur		SOIS
X	Sulfidic Odor				Organic Streaking in Sandy : isted on Local Hydric Soils		
×	Aquic Moisture Regime  Reducing Conditions				isted on National Hydric So		
	Gleyed or Low Chroma Cok	ors.			Other (Explain in Basis of D		
×	- Charles of Low Charles Cox	,,,		*** **********************************	( )		
			Wetland De	etermination			
Hydrophytic Vegetati		Yes		Hydric Soil Present?			
Wetland Hydrology F	Present?	Yes		Wetland?	Yes		

Delineation follows extent of topographic low area with red maple and sphagnum moss community, following water stained leaves with saturation and inundated conditions. Low chroma and mottled soils are also present.

WETLAND ID:	Wetland 11		EVALUATOR:	PJD, BTB, KJ	IS, ERB
DATE:	12-Apr-05		WEATHER: sunny, o	clear, 50 degrees	
Do normal circumstance	es exist on the site?	Yes			
Is the site significantly o	disturbed (Atypical Situation)?	No			
is the area a potential p	problem area?	No			
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.1292 Ac C	).0523 Ha

GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WE	TLAND			UPLA		
SF	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Ace	r rubrum	т	FAC	Hamamelis	s virginiana	SS	FACU+
Osm	unda sp.	н	FAC - OBL	Acer	ubrum	Т	FAC
Ca	irex sp.	н	85% FAC-OBL	Querc	us alba	Т	FACU
Betula a	lleghaniensis	Т	FAC	Poaceae or 0	Gramineae sp.	н	NS
Vaccinium	n corymbosum	SS	FACW-	Tsuga ca	anadensis	т	FACU
ercent of Dominant							
re OBL, FACW, an			100%	<u> </u>		N 00Y	
		SOILS			HYDRO	DLOGY	
	ED SOIL UNIT:	Morris extremely story sit loa	am (MoB)			Seasonal groundwate	r and surface water runof
HYDRI	IC SOIL UNIT:	Norwich		SOURCE OF HYDR		col	lection.
	WETLAND (	CORE SOIL SCORE		DEPTH OF SURFAC			'
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-8"	7.5 <b>Y3</b> /2	7.5Y4/4	sandy loam	DEPTH TO SATURA			
8-16"	7.5Y5/2	7.5Y4/4	sandy loam	1	FIELD INDICATOR		
					PRIMARY INDICATO	RS	
	WETLAND F	RINGE SOIL SCORE			Inundation		
DEPIH	MATRIX	MOTTLE	TEXTURE	x	Saturated in Upper 12	2 Inches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLA	ND SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	S	ECONDARY INDICAT	rors	
0-6*	10YR2/2		loam		Oxidized Root Chann	nels in Upper 12 inche	es
6-14*	7.5YR5/4	7.5YR5/6	loam		Water Stained Leave	es .	
					FAC-Neutral Test		
			Hydric Soil	Indicators	Concretions		
	Histosol –					Surface Lavers in Sando	Soils
	Histic Epipedon				Organic Streaking in Sar		
X	Sulfidic Odor			x	- Listed on Local Hydric S		
	Aquic Moisture Regime				Listed on Local Hydric 3  Listed on National Hydric		
X	Reducing Conditions				Listed on National Hydrid Other ( Explain in Basis :		
	Gleyed or Low Chroma —	colors			Other (Explain in basis)	or Delineation)	
			Wetland De	termination			
Hydrophytic Vegetation	on Present?	Yes		Hydric Soil Present?	Yes		
	resent?	Yes		Wetland?	Yes		

Delineation follows extent of drainage patterns in topographic low bowl with osmunda fem, red maple community and saturated, low chroma and mottled soils with sulfidic odor.

WETLAND ID:	Wetland 12		VETLAND DAT	EVALUATOR:		PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER:	sunny, clear, 5	60 degrees		
normal circumstan	ces exist on the site?		Yes					
he site significantly	disturbed (Atypical Situation	)?	No					
he area a potential	problem area?		No					
DROGEOMORPH	IC CLASSIFICATION:		_	SIZE	Ē:	0.0966 Ac	0.0391 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % P:	ss	0 % PFO	100% POW
	WETLAN	D				UPLAND	)	
SI	PECIES	STRATUM	INDICATOR	:	SPECIES		STRATUM	INDICATO
				Solid	tago altissima		Н	FACU-
				Popul	lus tremuloides		T T	NI FAC
ercent of Dominant			#DIV/0!					
	SOIL		1			HYDROLO	OGY	
		extremely stony silt k	oam (MoB)				Semipermanently inur	dated from surface w
HYDR	RIC SOIL UNIT:	Norwich		SOURCE OF H			coll	ection. 2'
DEDTU	WETLAND CORE		TEVTUDE	DEPTH OF SUF				2
DEPTH Inundated	MATRIX	MOTTLE	TEXTURE	DEPTH TO SAT		JIE FIT:		
monoaceo				DEI III IO OMI	FIELD IND	ICATORS		
					PRIMARY IN			
VII. , par	WETLAND FRING	E SOIL SCORE		1 ×	inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE	×		Upper 12 inc	ches	
					Water Mark			
					Drift Lines			
					Sediment D	eposits		
	UPLAND SC	IL SCORE			Drainage Pa			
DEPTH	MATRIX	MOTTLE	TEXTURE	ł	SECONDARY	INDICATOR	RS	
0-14"	10YR4/3		distruibed w/ gravel	<u> </u>	Oxidized Ro	oot Channels	in Upper 12 inche	s
					Water Stain			
				<u> </u>	FAC-Neutra	al Test		
			Hydric Soil I	ndicators				
	Histosol		.,,		Concretions			
	Histic Epipedon				<del></del>	Content in Surf	ace Layers in Sandy S	Soils
	Sulfidic Odor				···-	ıking in Sandy S		
	Aquic Moisture Regime			X	Listed on Loc	al Hydric Soils I	List	
	Reducing Conditions				Listed on Nat	ional Hydric Soi	iis List	
	Gleyed or Low Chroma Colors				Other ( Expla	in in Basis of D	elineation)	
Libration in the Control of	in December		Wetland Det					
Hydrophytic Vegetati Wetland Hydrology F		Yes		Hydric Soil Pres Wetland?	sent? Yes Yes			
		Yes		**ettel1U?	160			
	TINEATION:							
BASIS OF DEL								

DATE:  normal circumstances exist he site significantly disturbed he area a potential problem DROGEOMORPHIC CLAS:  EGETATION  SPECIES  Solidago gigant Salix nigra	d (Atypical Situation area?	n)?	Yes No No	EVALUATOR: WEATHER: SUI	PJD, B'	.TB, ajl, kjs, erb	
normal circumstances exist the site significantly disturbed the area a potential problem DROGEOMORPHIC CLASS EGETATION  SPECIES Solidago gigani	on the site? I (Atypical Situation area?	n)?	No	WEATHER: su	nny, clear, cool		
he site significantly disturbed he area a potential problem DROGEOMORPHIC CLAS: EGETATION  SPECIES Solidago gigani	d (Atypical Situation area?	n)?	No				
he area a potential problem DROGEOMORPHIC CLAS: EGETATION  SPECIES Solidago gigani	area?	7					
DROGEOMORPHIC CLASS GETATION  SPECIES Solidago gigani			No				
GETATION  SPECIES Solidago gigani	SIFICATION:					0.010E Ho	
<u>SPECIES</u> Solidago gigan				SIZE:	0.0308 Ac	0.0125 Ha	0% POW
Solidago gigani			CLASSIFICATION:	50% PEM	50 % PSS	0 % PFO	0% FOV
Solidago gigani	WETLAN	ID			UPLANI		INDICATOR
		STRATUM	INDICATOR	1	CIES	STRATUM	NS
Salix niora	ea	н	FACW	1	Gramineae sp.	н	FACU-
		Т	FACW+	Polygonum	cuspidatum	Н	PACO-
Galium sp.		н	NS	]			
Carex sp.		н	85% FAC-OBL				
Phalaris arundin	acea	Н	FACW				
ercent of Dominant Species	that		100%				
re OBL, FACW, and FAC	SOIL	<u> </u>	10070		HYDROL	OGY	
MAPPED SOIL		Philo silt loam (Ph)		1			
HYDRIC SOIL		Holly		SOURCE OF HYDR	O! OGV:	Surface water collection	n and seasonal floodi
11701110 0012	WETLAND CORE			DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-6"	10YR3/2		sandy loam	DEPTH TO SATURA	ATED SOIL:		
6-14"	10YR2/2	10YR4/6	alluvium	1	FIELD INDICATORS	;	
>14"	rock		rock	,	PRIMARY INDICATORS	S	
	WETLAND FRING	SE SOIL SCORE		7	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 le	nches	
	140-11112		-		Water Marks		
					Drift Lines		
					Sediment Deposits		
·· ·	UPLAND SO	OIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	S	ECONDARY INDICATO	RS	
0-14*	10YR3/2		sandy loam	1	Oxidized Root Channel	ls in Upper 12 inche	s
					Water Stained Leaves		
					FAC-Neutral Test		
		······································	Hydric Soil	Indicators			
Histoso	I				Concretions		
Histic E	pipedon				High Organic Content in Su	utace Layers in Sandy 5	Soils .
Suttidio	Odor				Organic Streaking in Sandy	y Soils	
Aquic I	Noisture Regime			×	Listed on Local Hydric Soik	s List	
X Reduc	ing Conditions				Listed on National Hydric S	ioils List	
	i or Low Chroma Color	ž.			Other (Explain in Basis of	Delineation)	
				***************************************			
			Wetland De	etermination			
Hydrophytic Vegetation Prese	nt?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology Present?		Yes		Wetland?	Yes		

					0 44 550	ON DOM
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0215 Ac	0.0087 Ha	
s the area a potential pr	oblem area?	No				
Is the site significantly dis	sturbed (Atypical Situation)?	No				
Do normal circumstance:	s exist on the site?	Yes				
DATE:	14-Apr-05		WEATHER: sunn	ıy, clear, cool		
WETLAND ID:	Wetland 14		EVALUATOR:	PJD, BT	B, AJL, KJS, ERB	

DROGEOMORPHI	0 02 10011 107111011.			SIZE:	0.0215 AC	0.0087 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WE1	LAND			UPLANI	)	
SE	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Solidaç	go gigantea	н	FACW	Poaceae or G	ramineae sp.	н	NS
Poaceae or	Gramineae sp.	н	NS	Dactylis g	lomerata	н	FACU
Ca	erex sp.	н	85% FAC-OBL	Taraxacun	officinale	н	FACU-
ercent of Dominant	Species that						
re OBL, FACW, an	d FAC		100%				
	S	OILS			HYDROL	OGY	****
MAPPE	D SOIL UNIT:	Philo silt loam (Ph)					
HYDRI	C SOIL UNIT:	Holly		SOURCE OF HYDRO	DLOGY:	Stream flooding and	seasonal saturation.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFAC	E WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W.	ATER IN SOIL PIT:		
0-8*	10YR3/2		alluvial sand	DEPTH TO SATURA	TED SOIL:		
8-12"	10YR5/2		alluvial sand		FIELD INDICATORS		
12-18"	10YR5/2	10YR4/6	sit loam	P	RIMARY INDICATORS		
	WETLAND F	RINGE SOIL SCORE		1	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 In	ches	
				\	Vater Marks		
				× t	Orift Lines		
		1200-110			Sediment Deposits		
	UPLAN	D SOIL SCORE			Orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATOR	as	
0-16*	10YR5/3		sitt loam		Oxidized Root Channels	in Upper 12 inches	i
				,	Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soll				
	Histosol -				Concretions		
	Histic Epipedon				High Organic Content in Surf		DIIS
X	Sulfidic Odor				Organic Streaking in Sandy \$		
	Aquic Moisture Regime				Listed on Local Hydric Soils		
×	Reducing Conditions				Listed on National Hydric So		
X	Gleyed or Low Chroma ( –	Colors			Other (Explain in Basis of D	elineation)	
	**************************************		Wetland De	termination			
Hydrophytic Vegetation		Yes		Hydric Soil Present?	Yes		
Wetland Hydrology P	resent?	Yes		Wetland?	Yes .		

Delineation follows the extent of the sedge/grass floodplain bench with debris line following low chroma, mottled, and saturated soils with sulfidic odor.

WETLAND ID: Wetland		WETLAND DA	EVALUATOR:	PJD. BT	B, AJL, KJS, ERB	
				ny, clear, cool		
DATE:	14-Apr-05	Yes	WEATHER, Suit	,, 5,00., 550.		
normal circumstances exist on the						
ne site significantly disturbed (Atyp	ical Situation)?	No				
ne area a potential problem area?		No	SIZE:	0.0629 Ac	0.0254 Ha	
DROGEOMORPHIC CLASSIFICA	TION:	CL ACCIFICATION.	100% PEM	0 % PSS	0 % PFO	0% POW
GETATION		CLASSIFICATION:	100%1 EIN	UPLAND	)	
	WETLAND	INDICATOR	SPEC		STRATUM	INDICATOR
SPECIES	STRATU		Poaceae or Gr		Н	NS
Juncus effusus	Н	FACW+			H	FACU-
Poaceae or Gramineae sp		NS	Taraxacum		т	NS
Sphagnum sp.	н	NS	Malus	sp.	·	
ercent of Dominant Species that re OBL, FACW, and FAC		100%				
	SOILS			HYDROLO	OGY	
MAPPED SOIL UNIT:	Philo sitt loan	n (Ph)				
HYDRIC SOIL UNIT:	Holly		SOURCE OF HYDRO	DLOGY:	Groundwater seep a	nd seasonal saturatio
WET	AND CORE SOIL SCOR		DEPTH OF SURFAC	E WATER:		
DEPTH MAT	RIX MOTTI	E TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-6" 10YF		sandy loam	DEPTH TO SATURA	TED SOIL:		6⁺
6-18° 10YI		/6 sandy loarn	Į F	FIELD INDICATORS		
			P	RIMARY INDICATORS		
WETL	AND FRINGE SOIL SCO	RE		nundation		
<del></del>	TRIX MOTT			Saturated in Upper 12 In	ches	
	<u> </u>			Vater Marks		
				Orift Lines		
				Sediment Deposits		
	UPLAND SOIL SCORE			Orainage Patterns		
DEPTH MA	TRIX MOT	TE TEXTURE		CONDARY INDICATO	RS	
	YR3/4	silt loam	) × ,	Oxidized Root Channels	s in Unner 12 inche	s
0-10 10	1104	G. 122	<del></del>	Water Stained Leaves	an Oppor 12 mone	•
i						
				FAC-Neutral Test		
		Hudric Sc	il Indicators			<u> </u>
Histosol		nyune se		Concretions		
				High Organic Content in Sur	tace Lavers in Sandy 5	Soils
Histic Epipedor	n			Organic Streaking in Sandy		
Sulflidic Odor				Listed on Local Hydric Soils		
Aquic Moisture				Listed on National Hydric So		
<del></del>				•		
X Reducing Con	Chroma Colors			Other (Explain in Basis of C	remindation)	
<del></del>	Chronia Coolo					
X Reducing Con	Ontonia Socio		D-4iv -+1			
X Reducing Con Gleyed or Low		Wetland I	Determination	Yos		
X Reducing Con	Yes Yes	Wetland I	Determination  Hydric Soil Present?  Wetland?	Yes Yes		

		TIE LEAND DAIM	•			A STREET, SQUARE, SQUA
WETLAND ID:	Wetland 16	EVA	LUATOR:		PJD, BTB, AJI	L, KJS, ERB
DATE:	14-Apr-05	WE	ATHER:	sunny, clear, cool		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly d	isturbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	0.06	687 Ac	0.0278 Ha

HOGEOMORPHIC	CLASSIFICATION.				0 87 DCC	100 % PFO	0% POW
GETATION			CLASSIFICATION:	0% PEM	0 % P\$S		
	WE	TLAND			UPLA	······································	INDICATOR
SPE	CIES	STRATUM	INDICATOR	SPE		STRATUM	NS
Care	ex sp.	н	85% FAC-OBL	l .	ax sp.	Н	NS
Rhodode	endron sp.	SS	NS	Rhodode	ndron sp.	<b>S</b> S	
Impatien	s capensis	н	FACW	Acer r	rubrum	Т	FAC
Poaceae or	Gramineae sp.	н	NS	Poaceae or 0	Gramineae sp.	н	NS
Betula alle	eghaniensis	Т	FAC	Solida	igo sp.	н	NS
				Alliaria	petiolata	н	FACU-
rcent of Dominant S				Ì			
e OBL, FACW, and			100%	<u> </u>	HVDDC	N OCY	
		SOILS		<u> </u>	HYDRO	LOGY	
MAPPEI	D SOIL UNIT:	Morris extremely stony silt loa	m (MoB)			Surface water runoff fi	om adjacent wetlands and
HYDRK	SOIL UNIT:	Norwich		SOURCE OF HYDR		season	al flooding.
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFAC			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-7"	10YR3/2		sandy loam	DEPTH TO SATURA		_	
7-10°	10YR4/4		sandy loam	1	FIELD INDICATOR		
10-18"	7.5YR4/2	7.5YR4/4	sandy loam	_  '	PRIMARY INDICATO	RS	
	WETLAND	FRINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X	Saturated in Upper 12	Inches	
					Water Marks		
				X	Drift Lines		
					Sediment Deposits		
	UPLA	ND SOIL SCORE		Х	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	Si	ECONDARY INDICAT	ORS	
0-8"	10YR3/2		silt loam		Oxidized Root Chann	els in Upper 12 inche	es
8-16°	10YR3/3		silt loam	×	Water Stained Leave	\$	
					FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions	0 do	Poile
	Histic Epipedon				High Organic Content in		COUNT
	Sulfidic Odor				Organic Streaking in San		
	Aquic Moisture Regime	Đ		X	Listed on Local Hydric Se		
X	Reducing Conditions				Listed on National Hydric -		
×	Gleyed or Low Chrom	a Colors			Other (Explain in Basis o	of Delineation)	
			Wetland De	etermination			
Hydrophytic Vegetatio		Yes		Hydric Soil Present?			
	resent?	Yes		Wetland?	Yes		

#### ASIS OF DELINEATION:

Delineation follows extent of topographic low drainage pattern adjacent to braided channel of Channel 4. This area has sandy low chroma and mottled soils that are heavily mottled. Upper portion of Wetland 16 is cutoff where area becomes well-drained even though drainage pattern is apparent. Upper portion of wetland also loses vegetative community.

WETLAND ID:	Wetland 17			EVALUATOR:	PJD, B1	B, AJL, KJS, ERE	}
DATE:	14-Apr-0	95		WEATHER: sunny	, clear, cool		
normal circumstance	es exist on the site?		Yes				
ne site significantly o	disturbed (Atypical Situa	tion)?	No				
he area a potential p	problem area?		No				
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0108 Ac	0.0044 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETL	AND			UPLAND	)	
SP	ECIES	STRATUM	INDICATOR	SPECIE	S	STRATUM	INDICATOR
Sphag	gnum sp.	н	NS	Smilax s	p.	н	NS
Poaceae or	Gramineae sp.	н	NS	Rhododendre	on sp.	SS	NS
Car	rex sp.	н	85% FAC-OBL	Acer rubn	um	Т	FAC
Tussila	ago farfara	н	FACU	Poaceae or Gran	nineae sp.	н	NS
				Solidago	sp.	н	NS
				Alliaria peti	olata	н	FACU-
ercent of Dominant stree OBL, FACW, and	•		50%				
ie Obi, i ACW, and		DILS	3076		HYDROLO	OGY	
MADDE	<del></del>	orris extremely stony sitt loa	ım (MoB)	<del>                                     </del>			
	DSOILUNIT: M CSOILUNIT:	oms extremely story sin lua Norwich	(AND)	acupar az in masa:	201	Ground	vater seep.
HYDHII		ORE SOIL SCORE		SOURCE OF HYDROLO DEPTH OF SURFACE V			1*
DEBTU			TEVTUDE	DEPTH TO FREE WATE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SATURATE			
0-2* 2-6*	10YR2/2	7 51/4/5	muck muck		LD INDICATORS		
	7.5Y4/2	7.5 <b>Y4/</b> 6			MARY INDICATORS		
>6*	rock	NOT OOK COOPE	rock	-  ,			
0000		INGE SOIL SCORE	TEVTIME		idation		
DEPTH	MATRIX	MOTTLE	TEXTURE		urated in Upper 12 Inc	ches	
					ter Marks		
					t Lines		
					liment Deposits		
		SOIL SCORE			inage Patterns	NO.	
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	NDARY INDICATOR	ıs	
0-8"	10YR3/2		silt loam		dized Root Channels	in Upper 12 inche	s
8-16"	10YR3/3		silt loam	×Wa	ter Stained Leaves		
				FAC	C-Neutral Test		
	<del></del>		Hydric Soil	Indicators			
	Histosol			Con	ncretions		
	Histic Epipedon			High	h Organic Content in Surf	ace Layers in Sandy S	ioils
	Sulfidic Odor			Org	anic Streaking in Sandy S	Soils	
	Aquic Moisture Regime			X List	ed on Local Hydric Soils (	ist	
х	Reducing Conditions			List	ed on National Hydric Soi	ils List	
×	Gleyed or Low Chroma Co	blors		Oth	er (Explain in Basis of De	elineation)	
			Wetland De	termination			
Hydrophytic Vegetatio	n Present?	Yes	TTOTAL BEG	Hydric Soil Present? Yes	s		
Wetland Hydrology Pr	resent?	Yes		Wetland? Yes	\$	· · · · · · · · · · · · · · · · · · ·	
BASIS OF DELI	NEATION:						
1							

WETLAND ID:	Wetland 18			EVALUATOR:	P.	JD, BTB, AJL, KJS, ER	В
DATE:	14-Apr-0	05		WEATHER: SO	inny, clear, cool		
	es exist on the site?		Yes				
	disturbed (Atypical Situa	ition)?	No				
e area a potential (			No				
	C CLASSIFICATION:			SIZE:	5.307	5 Ac 2.1474 Ha	3
GETATION	O CEASSIFICATION.		CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
SEVATION	WET	AND			UF	PLAND	
QE.		STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	ECIES dendron sp.	SS	NS		anadensis	T	FACU
	,		FAC	-	endron sp.	SS	NS
	lleghaniensis	Т	FAC		us rubra	Т	FACU-
	r rubrum nunda sp.	т н	FAC - OBL		a ovata	Ŧ	FACU-
rcent of Dominant			100%				
e OBL, FACW, an		OILS	100%		HYE	ROLOGY	
λΛΔDDI		Nyoming gravelly sandy loa	ım (WyB)			***************************************	
	IC SOIL UNIT:	Wet spots		SOURCE OF HYDI	SOLOGY:	Groundwater seepage si	and seasonal semipern aturation.
111011		ORE SOIL SCORE		DEPTH OF SURFA			
<u>DEPTH</u>		MOTTLE	TEXTURE	DEPTH TO FREE \		T:	4*
0-12"	<u>MATRIX</u> 2.5Y3/1	WOTTEL	sit loam	DEPTH TO SATUR			0*
12-18*		2.5Y4/4	sandy loam		FIELD INDICAT	ORS	
12-10	5Y5/1	2.514/4	Sandy Roam		PRIMARY INDICA		
	WETLAND FF	RINGE SOIL SCORE		х	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Uppe	r 12 Inches	
0-8"	10YR3/1		sit loam w/ sapric organic	s X	Water Marks		
8-16"	10YR5/1	10YFI4/6	sitty clay loam	···	Drift Lines		
					Sediment Deposit	s	
	UPLANI	O SOIL SCORE		х	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		ECONDARY INDI		
0-6"	10YR3/2	MO I Jak	loam/sandy loam	1	Ovidized Boot Ch	annels in Upper 12 inch	nes
6-14"	7.5YR3/2		loam/sandy loam		Water Stained Le		
>14"			rock		FAC-Neutral Test		
>14	rock		1001		_FAC-Neutral Tes	·	
			Hydric Soil I	ndicators			
	History		,,,a,,,,		Concretions		
	Histosol				_	nt in Surface Layers in Sand	y Soils
	Histic Epipedon				Organic Streaking in		
Х	Sulfidic Odor			x	Listed on Local Hyd		
	Aquic Moisture Regime			^	Listed on National H		
X	Reducing Conditions	2-1			Other ( Explain in Ba		
×	Gleyed or Low Chroma (	Colors			- Other ( Explain in Dr	250 Of Delinoutory	
			Wetland Det	ermination			
Hydrophytic Vegetat	ion Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology f		Yes		Wetland?	Yes		
BASIS OF DEI							

WETLAND ID: Wetland 19		EVALUATOR:	PJD, BTB, A	AJL, KJS, ERB	
DATE: 14-Apr	-05	WEATHER: sunny, cle	ear, cool		
Do normal circumstances exist on the site?	Yes				
Is the site significantly disturbed (Atypical Situ	uation)? No				
Is the area a potential problem area?	No				
HYDROGEOMORPHIC CLASSIFICATION:		SIZE:	0.4252 Ac	0.1720 Ha	_

DROGEOMORPHI	C CLASSIFICATION:			SIZE:	0.4252 Ac	0.1720 Ha		
GETATION		· · · · · · · · · · · · · · · · · · ·	CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW	
	WE	TLAND		UPLAND				
SF	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR	
	r rubrum	τ	FAC	Berberis sp.		н	NS	
	um sagittatum	н	OBL.	Pseudotsu	ga menziesii	т	NI	
	usci sp.	н	NS	Poaceae or 0	Gramineae sp.	н	NS	
	r Gramineae sp.	н	NS	Acer	rubrum	т	FAC	
	entha sp.	н	NS	Rhodode	endron sp.	SS	NS	
	pennsylvanica	т	FACW	1				
	arex sp.	н	85% FAC-OBL					
	cus effusus	н	FACW+					
ercent of Dominant	Species that							
re OBL, FACW, an	nd FAC		100%					
	SOILS				HYDRO	LOGY		
MAPPI	ED SOIL UNIT:	Morris extremely stony sit to	am (MoB)					
HYDR	IC SOIL UNIT:	Norwich		SOURCE OF HYDR	OLOGY:	Ground	water seeps.	
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFAC	CE WATER:			
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	DEPTH TO FREE W	ATER IN SOIL PIT:			
0-4*	10YR3/1		silt loam	DEPTH TO SATURA	ATED SOIL:		٣	
4-16"	10YR5/1		sit loam	1	FIELD INDICATOR	s		
				_] '	PRIMARY INDICATOR	RS		
	WETLAND	FRINGE SOIL SCORE			Inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE	х	Saturated in Upper 12	Inches		
					Water Marks			
					Drift Lines			
					Sediment Deposits			
	<u>UPLA</u>	ND SOIL SCORE			Drainage Patterns			
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	s	ECONDARY INDICAT	ORS		
0-16*	10YR3/3		sit loam	×	Oxidized Root Chann	els in Upper 12 inch	es	
				×	Water Stained Leave	s		
					FAC-Neutral Test			
			Hydric Soil	indicators	Concretions			
	Histosol —				High Organic Content in	Surface Layers in Sandv	Soils	
	Histic Epipedon			•	Organic Streaking in San			
Х	Sulfidic Odor  Applic Mailton Decima			x	Listed on Local Hydric So			
	Aquic Moisture Regime	2		^	Listed on National Hydric			
×	Reducing Conditions  — Gloved or Levy Chroms	a Colors			Other (Explain in Basis of			
×	Gleyed or Low Chroma	a C01015				,		
			Wetland De	etermination				
Hydrophytic Vegetat	ion Present?	Yes	Tenana De	Hydric Soit Present?	Yes			
In the Andrews	I COOK	. 65		.,				

#### BASIS OF DELINEATION:

Delineation follows groundwater seep drainage pattern perched in upland topographic low following red maple, arrow-leaved tearthumb community following saturated, low chroma soil with mottles and sulfidic odor. Wetland seeps are found at base of slope and provide hydrology. Wetland fingers discharge over steep edge to Channel 4 floodplain. Upslope discharge point forms start of Channel 11.

WETLAND ID:	Wetland 20			EVALUATOR:	PJD. B	TB, AJL, KJS, ERB	
DATE:	wenano 20	าร			ny, clear, cool	•	
normal circumstance	,	55	Yes	WEATHER. OUT	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		ation\2	No				
ne area a potential pr	sturbed (Atypical Situa	tuori) ?	No				
DROGEOMORPHIC			140	SIZE:	0.6340 Ac	0.2565 Ha	
GETATION	CLASSIFICATION:	····	CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
GETATION		LAND	CLASSII ICATION.	1	UPLANI	···	
enr		STRATUM	INDICATOR	SPEC		STRATUM	INDICATOR
	<u>CHES</u> rubrum	T	FAC	Poaceae or Gr		н	NS
		' T	FACW	Acer ru		Т	FAC
	ennsylvanica		85% FAC-OBL	Tsuga car		T	FACU
	ex sp. atrovirens	H H	OBL	Berber		SS	NS
ercent of Dominant S			100%				
	S	OILS			HYDROL	OGY	
MAPPE	SOIL UNIT: W	elisboro extremely storry id	am (WpC)				
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDRO	LOGY:	Groundwater seep hydrole	ogy and seasonal satur
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFACE	E WATER:		
DEPTH	MATRIX	MOTTLE	<u>IEXTURE</u>	DEPTH TO FREE WA	ATER IN SOIL PIT:		
0-14"	10YR4/1	10YR3/6	sit loam	DEPTH TO SATURA	TED SOIL:		
14-18"	10YR6/3	10YR5/8	silt loam	F	IELD INDICATORS		
	····			PI	RIMARY INDICATORS	:	
	WETLAND FF	RINGE SOIL SCORE		Ir	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		aturated in Upper 12 Ir	iches	
				v	Vater Marks		
				E	Prift Lines		
					Sediment Deposits		
		SOIL SCORE			Prainage Patterns	nc	
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	SE	CONDARY INDICATO	RS	
0-8"	10YR4/3		silt loam	°	Oxidized Root Channels	s in Upper 12 inche	S
8-16"	7.5YR5/3	10YF14/6	silt loam	\\	Water Stained Leaves		
				·	FAC-Neutral Test		
		Marie Ma	Hydric Soil	Indicators			
	Histosol		riyano con		Concretions		
	Histic Epipedon				High Organic Content in Sur	tace Layers in Sandy 5	Soils
	Sulfidic Odor				Organic Streaking in Sandy		
	Aquic Moisture Regime				Listed on Local Hydric Soils		
×	Reducing Conditions				Listed on National Hydric So		
×	Gleyed or Low Chroma C	Colors			Other (Explain in Basis of D		
			Wetland De	etermination			•
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology Pro	esent?	Yes		Wetland?	Yes		
BASIS OF DELI	NEATION:						
1							
l							

WETLAND ID:	Wetland 21		EVALUATOR:	PJD, BTB, A	WL, ERB, KJS	
DATE:	14-Apr-05		WEATHER: Co	ol, clear, sunny, 50 degrees		
Do normal circumstance	es exist on the site?	Yes				
is the site significantly d	listurbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	1.5549 Ac	0.6291 Ha	

DROGEOMORPH	TO OB TOOK TOTTION						
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	w	ETLAND			UP	LAND	
s	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	er rubrum	T	FAC	Quercu	s rubra	Т	FACU-
С	arex sp.	н	85% FAC-OBL	Kalmia	latifolia	SS	FACU
	or Gramineae sp.	н	NS	Rhodode	ndron sp.	SS	NS
	pennsylvanica	т	FACW	Carya	ovata	т	FACU-
	nagnum sp.	н	NS	1			
ercent of Dominan	t Species that						
re OBL, FACW, a	nd FAC		100%				
		SOILS			HYD	ROLOGY	
MAPF	PED SOIL UNIT:	Wellsboro extremely stony loa	m (WpC)				
HYDF	RIC SOIL UNIT:	Norwich		SOURCE OF HYDR	OLOGY:	Groundwater and hillside s	seep with seasonal satural
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFAC	CE WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT	Γ:	
0-8*	10YR3/2	10YR4/6	silt toam	DEPTH TO SATURA	ATED SOIL:		
8-16"	10YR5/1	10YR4/6	silt loam		FIELD INDICAT	ORS	
				_} ,	PRIMARY INDICAT	TORS	
	WETLAND	FRINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper	r 12 Inches	
0-8*	10YR3/2	10YR4/4	sitt loam	×	Water Marks		
8-16"	7.5YF4/2	7.5YR4/4	silt loam		Drift Lines		
					Sediment Deposits	3	
	UPL	AND SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	Si	ECONDARY INDIC	CATORS	
0-6*	10YR3/2		silt loam		Oxidized Root Cha	annels in Upper 12 inche	es
6-14°	10YR4/4		sifty clay loam	×	Water Stained Lea	aves	
>14"	rock		rock		FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions	in Curinga I grown in Conde	Soils
	Histic Epipedon				-	t in Surface Layers in Sandy	- COID
	Sulfidic Odor				Organic Streaking in		
	Aquic Moisture Regin	ne		Х	Listed on Local Hydri		
X	Reducing Conditions				Listed on National Hy		
*	Gleyed or Low Chror	na Colors			Other (Explain in Ba.	sis of Delineation)	
		· · · · · · · · · · · · · · · · · · ·	Wetland De	termination			
Hydrophytic Vegeta	tion Present?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology	Present?	Yes		Wetland?	Yes		

Delineation follows extent of red maple, ash, sedge community with low chroma, matrix soils in upper surface horizon with mottles and saturation with drainage patterns, water marks, and water stained leaves.

VETLAND ID:		VV	ETLAND DA	IATONW			
	Wetland 22			EVALUATOR:		TB, AJL, ERB, KJS	i
DATE:	14-Apr-05			WEATHER: C	ool, clear, sunny, 50 deg	rees	
ormal circumstance	es exist on the site?	Y	es				
site significantly of	disturbed (Atypical Situation	)? N	lo				
area a potential p	problem area?	N	lo			0.0445.180	
ROGEOMORPHIC	C CLASSIFICATION:			SIZE:	0.0285 Ac	0.0115 Ha	0% POW
ETATION		(	CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0%1011
	WETLAN	D			UPLAN	STRATUM	INDICATO
SP	PECIES	STRATUM	INDICATOR	1	ECIES	T	FACU-
Ca	rex sp.	Н	85% FAC-OBL	i	a ovata	, T	FAC
Osm		H	FAC - OBL		rubrum	SS	FACU
Spha	ignum sp.	Н	NS	1	a latifolia canadensis	T T	FACU
rcent of Dominant e OBL, FACW, an	•		100%				
	SOIL	s			HYDROL	.OGY	
MAPPE	ED SOIL UNIT:	Alluvial land (As)					
HYDR	IC SOIL UNIT:	Holly, Wayland		SOURCE OF HYD	ROLOGY:	Groundwater seeps	and seasonal saturati
	WETLAND CORE	SOIL SCORE		DEPTH OF SURF			
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE		WATER IN SOIL PIT:		
0-6"	10YR3/2		silt loam	DEPTH TO SATU			
6-10*	10YR3/1	10YR3/4	sandy loam	ŀ	FIELD INDICATORS		
10-18	2.5Y3/1	2.5Y3/4	sandy loam	_	PRIMARY INDICATOR	5	
	WETLAND FRING			X	Inundation		
DEPIH	MATRIX	MOTTLE	TEXTURE	×	_Saturated in Upper 12 I	nches	
					Water Marks		
				x	_ Drift Lines		
	UDI AND CO	OIL SCORE		<del>-  </del>	_ Sediment Deposits		
DEDTU		OIL SCORE MOTTLE	TEXTURE		Drainage Patterns SECONDARY INDICATO	RS	
DEPTH 0-6"	MATRIX 10YR2/1	MOTICE	silt loam		_Oxidized Root Channe		es
6-12*	7.5YR4/2	0	sandy loam		Water Stained Leaves	io in oppor to men	
12-18"	7.5YR3/3	-	sandy loam		FAC-Neutral Test		
12.10	1.571 610						
			Hydric Sol	I Indicators			
	Histosol		•		Concretions		
	— Histic Epipedon				High Organic Content in Si	urtace Layers in Sandy	Soils
x	Sulfidic Odor				Organic Streaking in Sand	y Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric Soi	ls List	
x	Reducing Conditions				Listed on National Hydric S	Soils List	
X	Gleyed or Low Chroma Color	rs			Other (Explain in Basis of	Delineation)	
			Wetland D	etermination			
		Yes		Hydric Soîl Prese	nt? Yes		
Hydrophytic Vegetat	tion Present?			Wetland?			

WETLAND ID:	Wetland 23		EVALUATOR:		PJD, BTB, AJ	L, ERB, KJS
DATE:	14-Apr-05		WEATHER:	Cool, clear, sunny	, 50 degrees	
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly o	disturbed (Atypical Situation)?	No				
is the area a potential p	problem area?	No				
HYDROGEOMORPHIC	CCLASSIFICATION:		SIZE	E: 0.0	038 Ac	0.0015 Ha

JAUGEUMUHPHI	S CLASSIFICATION						
GETATION	· · · · · · · · · · · · · · · · · · ·		CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	w	ETLAND			UPL	AND	
SP	ECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	rubrum	T	FAC	Tsuga ca	anadensis	т	FACU
	pennsylvanica	Т	FACW	Rhodode	endron sp.	<b>S</b> S	NS
	,			Querc	us rubra	Ŧ	FACU-
				Carya	a ovata	τ	FACU-
ercent of Dominant	Species that						
re OBL, FACW, and	d FAC		100%				
		SOILS			HYDF	ROLOGY	
MAPPE	D SOIL UNIT:	Wyoming gravelly sandy I	oam (WyB)				
HYDRI	C SOIL UNIT:	Wet spots		SOURCE OF HYDE	OLOGY:	Ground	water seeps.
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFA	CE WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE V	VATER IN SOIL PIT:		
0-12*	2.5Y3/1		silt loam	DEPTH TO SATUR	ATED SOIL:		
12-18*	5Y5/1	2.5Y4/4	sandy loam		FIELD INDICATO	RS	
					PRIMARY INDICAT	ORS	
	WETLAND	FRINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	х	Saturated in Upper	12 Inches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPL	AND SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICA	ATORS	
0-16*	7.5YR5/3, 7.5Y	'R4/4	silt loam		Oxidized Root Cha	nnels in Upper 12 inche	es
					_Water Stained Leav	ves	
					_FAC-Neutral Test		
	·		Hydric Soil	Indicators			
	Histosol				Concretions		
	Histic Epipedon				High Organic Content	in Surface Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in S —	andy Soils	
	Aquic Moisture Regir	ne		X	Listed on Local Hydric 	Soils List	
×	Reducing Conditions				Listed on National Hyd	fric Soils List	
х	Gleyed or Low Chron	ma Colors			Other (Explain in Basi —	is of Delineation)	
			Wetland De	etermination			
Hydrophytic Vegetati	on Present?	Yes		Hydric Soil Present	? Yes		

#### BASIS OF DELINEATION:

Delineation follows the extent of hillside seep where the lower slope boundary follows the extent of the red maple and green ash community with low chroma, mottled, and saturated soils. Soils of 7.5YR5/3 and 7.5YR4/4 were considered part of the uplands.

Chippewa and Nor	STRATUM  (Mob), Wyoming gravel	ASSIFICATION:  INDICATOR  NS  FAC  FAC	EVALUATOR:  WEATHER: Cool, cl  SIZE:  % PEM  SPECIES  Quercus rut  Quercus alt  Quercus mon Tsuga canada	7.8222 Ac 0 % PSS  UPLAN  tra  pa tana	3,1649 Ha 100 % PFO	0% POW  INDICATOR  FACU  FACU  UPL  FACU
the site? Atypical Situation)? ea? FICATION:  WETLAND  SS T  sis T  SOILS  Irremely story sill loam Chippewa and Nor MoB = Norwich, WyB =	No No CL STRATUM	ASSIFICATION:  INDICATOR  NS  FAC  FAC	SIZE:  0% PEM  SPECIES  Quercus rut  Quercus alt  Quercus mon	7.8222 Ac 0 % PSS  UPLAN  ora  oa  tanna	3,1649 Ha 100 % PFO  D  STRATUM  T  T  T	INDICATOR FACU- FACU UPL
Atypical Situation)?  Ba?  BICATION:  WETLAND  SS  T  Sis T  SOILS  STEPMEN STORY SIN DAM  Chippewa and Nor  MoB = Norwich, WyB =	No No CL STRATUM	ASSIFICATION:  INDICATOR  NS  FAC  FAC	0% PEM  SPECIES  Quercus rub  Quercus alt  Quercus mon	0% PSS  UPLAN  ora  ba tana	100 % PFO  D  STRATUM  T  T	INDICATOR FACU- FACU UPL
WETLAND  WETLAND  SS  T  Sis T  SOILS  stremely story sill loam Chippewa and Nor  MoB = Norwich, WyB =	CL STRATUM	ASSIFICATION:  INDICATOR  NS  FAC  FAC  100%	0% PEM  SPECIES  Quercus rub  Quercus alt  Quercus mon	0% PSS  UPLAN  ora  ba tana	100 % PFO  D  STRATUM  T  T	INDICATOR FACU- FACU UPL
WETLAND  SS T sis T  SOILS tremely story sill loam Chippewa and Nor MoB = Norwich, WyB =	STRATUM  (Mob), Wyoming gravel	ASSIFICATION:  INDICATOR  NS  FAC  FAC	0% PEM  SPECIES  Quercus rub  Quercus alt  Quercus mon	0% PSS  UPLAN  ora  ba tana	100 % PFO  D  STRATUM  T  T	INDICATOR FACU- FACU UPL
WETLAND  SS T  sis T  SOILS  tremely story sill loam Chippewa and Nor MoB = Norwich, WyB =	STRATUM  (Mob), Wyoming gravel	INDICATOR  NS  FAC  FAC	0% PEM  SPECIES  Quercus rub  Quercus alt  Quercus mon	0% PSS  UPLAN  ora  ba tana	100 % PFO  D  STRATUM  T  T	INDICATOR FACU- FACU UPL
SSS T sis T  at  SOILS tremely story silt loam Chippewa and Nor MoB = Norwich, WyB =	STRATUM  (Mob), Wyoming gravel	INDICATOR  NS  FAC  FAC	SPECIES Quercus rut Quercus alt Quercus mon	UPLAN ora oa tana	STRATUM T T T	INDICATOR FACU- FACU UPL
SSS T sis T  at  SOILS tremely story silt loam Chippewa and Nor MoB = Norwich, WyB =	(MoB), Wyoming gravel	NS FAC FAC	Quercus rub Quercus all Quercus mon	ora Da tana	STRATUM T T T	FACU- FACU UPL
at  SOILS  tremely stony silt loam Chippewa and Nor MoB = Norwich, WyB =	(MoB), Wyoming gravel	NS FAC FAC	Quercus rub Quercus all Quercus mon	rra oa tana	т т т	FACU- FACU UPL
at  SOILS  tremely stony silt loam Chippewa and Nor MoB = Norwich, WyB =	(MoB), Wyoming gravel	FAC FAC	Quercus alt	oa tana	T T	FACU UPL
at  SOILS  Irremely story sill loam Chippewa and Nor MoB = Norwich, WyB =	(MoB), Wyoming gravel	FAC 100%	Quercus mon	tana	т	UPL
SOILS tremely story sit loam Chippewa and Nor MoB = Norwich, WyB •	(MoB). Wyoming gravel	100%				
SOILS tremely story silt loam Chippewa and Nor MoB = Norwich, WyB :	(MoB). Wyoming gravely		Tsuga canadé	nsis	Т	FACU
SOILS tremely story silt loam Chippewa and Nor MoB = Norwich, WyB :	(MoB), Wyoming gravell					
tremely storry silt loam Chippewa and Nor MoB = Norwich, WyB =	(MoB), Wyoming gravell					
Chippewa and Nor MoB = Norwich, WyB :	(MoB), Wyoming gravel			HYDROL	.OGY	
MoB ≖ Norwich, WyB :		ly sandy loam (WyB), ils (CnB)				
ETLAND CORES	Wet Spots, CnB ≈ Chi		SOURCE OF HYDROLO	GY:	Groundwater and	d seasonal flooding.
	OIL SCORE		DEPTH OF SURFACE W	ATER:		
MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATE			
10YR3/2		organic/mineral mix	DEPTH TO SATURATED			
10YR5/2	10YR5/3 and 10YR4/6	sandy loam	ł	D INDICATORS		
rock		rock	PRIM	ARY INDICATORS	5	
ETLAND FRINGE	SOIL SCORE		inunc	lation		
MATRIX	MOTTLE	TEXTURE	- Satur	ated in Upper 12 I	nches	
			X Wate	er Marks		
			Drift	Lines		
				ment Deposits		
				-	ND6	
	MOTTLE		1			
		-			ls in Upper 12 inche	s
10YR4/6		sit ioam				
			FAC	-Neutral Test		
	and the second s					
		Hydric Soil I		rations		
					rrface Lavers in Sandu S	Soils
				-		
				-		
-						
				•		
Low Chroma Colors			Olik	I CAPICILI III DOSS OI	o calebratory	
		Watland Dat	ermination			
	Yes	rretiand Det				
			•			
· · · · · · · · · · · · · · · · · · ·	169		***CLORO: 160			
	PETLAND FRINGE MATRIX  UPLAND SOIL MATRIX  10YR3/2  10YR4/6  eedon dor sture Regime Conditions Low Chroma Colors	PETLAND FRINGE SOIL SCORE MATRIX MOTTLE  UPLAND SOIL SCORE MATRIX MOTTLE  10YR3/2  10YR4/6  edon  dor sture Regime Conditions Low Chroma Colors  Yes Yes	TOCK  TOCK  ETLAND FRINGE SOIL SCORE  MATRIX MOTTLE TEXTURE   UPLAND SOIL SCORE  MATRIX MOTTLE TEXTURE  10YR3/2 organic/mineral mix silt loam  Hydric Soil I  edon  dor sture Regime  Conditions  Low Chroma Colors  Wetland Det  Yes  Yes	FILAND FRINGE SOIL SCORE  MATRIX  MOTTLE  TEXTURE  X  Wate  Drift  Sedin  UPLAND SOIL SCORE  MATRIX  MOTTLE  TEXTURE  TEXTURE  TEXTURE  Organic/mineral mix  Oxid  FAC  Hydric Soil Indicators  Conc  High  for  Sture Regime  Conditions  Liste   PRIMARY INDICATORS  ETLAND FRINGE SOIL SCORE  MATRIX MOTTLE IEXTURE  X Saturated in Upper 12 I  X Water Marks  Drift Lines  Sediment Deposits  VPLAND SOIL SCORE  MATRIX MOTTLE IEXTURE  10YR3/2 organic/mineral mix 10YR4/6  Saturated in Upper 12 I  X Water Marks  Drift Lines  Sediment Deposits  V Drainage Patterns  SECONDARY INDICATOR  Water Stained Leaves  FAC-Neutral Test  Hydric Soil Indicators  Concretions  High Organic Content in St.  Organic Streaking in Sandy  sture Regime  X Listed on Local Hydric Soil  Conditions  Listed on National Hydric Soil  Wetland Determination  Yes  Yes  Yes  Wetland? Yes  Wetland? Yes  Wetland? Yes	PRIMARY INDICATORS  Inundation  MATRIX MOTILE IEXTURE   X Saturated in Upper 12 Inches  X Water Marks  Drift Lines  Sediment Deposits  Sediment Deposits  Variange Patterns  SECONDARY INDICATORS  Oxidized Root Channels in Upper 12 inche  Water Stained Leaves  FAC-Neutral Test  Hydric Soil Indicators  Concretions  High Organic Content in Surface Layers in Sandy 5 of Sture Regime  Conditions  Listed on National Hydric Soils List  Other (Explain in Basis of Delineation)  Wetland Determination  Yes  Yes  Wetland? Yes  Wetland? Yes  Wetland? Yes	

		WE	TLAND DAT	A FORM			
WETLAND ID:	Wetland 25			EVALUATOR:		D, ERB, GOO	
DATE:	20-Apr-0	05		WEATHER: Partly	cloudy and warm		
normal circumstanc	es exist on the site?	Yes	5				
he site significantly o	disturbed (Atypical Situa	tion)? No					
he area a potential p	problem area?	No					
DROGEOMORPHIC	C CLASSIFICATION:			SIZE:	0.0209 Ac	0.0085 Ha	
GETATION		CL	ASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETI	LAND		VIII.	UPLANI		IN DIO ATOE
SP	PECIES	STRATUM	INDICATOR	SPECIE:		STRATUM	INDICATOR
Ca	rex sp.	н	85% FAC-OBL	Quercus ru		T _	FACU-
Cary	ya ovata	T	FACU-	Quercus a	lba	Τ	FACU
Nyssa	a sylvatica	Ŧ	FAC	Quercus mor	ntana	т т	UPL FACU
				Tsuga canad	ensis	·	
Percent of Dominant are OBL, FACW, and	•		67%				
	S	OILS			HYDROL	OGY	
MAPPE	ED SOIL UNIT: V	Vyoming gravelly sandy loam (\	NyC)			Commission comp 618	rtace water collection, a
HYDRI	IC SOIL UNIT:	Wet spots		SOURCE OF HYDROLO		seasona	saturation.
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFACE V			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATE			
0-7*	10YR3/2		organic/mineral mix	DEPTH TO SATURATE			
7-14"	10YR5/2	10YR5/3 and 10YR4/6	sandy loam		LD INDICATORS		
>14"	rock		rock	PRI	MARY INDICATORS	5	
	WETLAND FF	INGE SOIL SCORE			dation		
DEPTH	MATRIX	MOTTLE	TEXTURE		urated in Upper 12 In	nches	
					er Marks		
					Lines		
	NIDI ANI	S COUL S CORE			liment Deposits		
DEDTH		SOIL SCORE MOTTLE	TEXTURE		inage Patterns NDARY INDICATO	RS	
<u>DEPTH</u> 0-4"	MATRIX 10YR3/2	MOTILE	organic/mineral mix	1	dized Root Channel		es.
4-16"	10YR4/6		silt loam		ter Stained Leaves	a in opper 12 mone	
4-10	101140				C-Neutral Test		
			Hydric Soil I				
	Histosol				ncretions h Organic Content in Su	dace Lavors in Sondy	Soils
ļ	Histic Epipedon				h Organic Content in Su		
	Sulfidic Odor —				anic Streaking in Sandy		
	Aquic Moisture Regime				ed on Local Hydric Soils red on National Hydric S		
×	Reducing Conditions				ed on National Hydric S ner (Explain in Basis of I		
*	Gleyed or Low Chroma C	Colors			iei (Explain in Cess of C	Semicationy	
	**************************************		Wetland Det	ermination			
Hydrophytic Vegetation	on Present?	Yes		Hydric Soil Present? Ye	s		
Wetland Hydrology P	resent?	Yes		Wetland? Ye	s		
BASIS OF DEL	INEATION:						
Delinostion fo"	ours the entert of the	ographic flat with law sh	roma mottled soils	and limited vecetation of	over with water st	ained leaves and	saturation.
Delineation folk	ows the extent of top	ographic flat with low ch	roma, mottled soils	and limited vegetation o	cover with water st	ained leaves and	saturati

WETLAND ID:	Wetland 26			EVALUATOR:	PJ	D, ERB, GOO	
DATE:	20-Apr-05			WEATHER:	Partly cloudy and warm		
ormal circumstances		Ye	s				
	sturbed (Atypical Situation						
e area a potential pr		No.					
	CLASSIFICATION:			SIZE:	0.4501 Ac	0.1821 Ha	
SETATION	OBAGGII IOATION:	C	LASSIFICATION:	50% PEM	0 % PSS	0 % PFO	50% POW
	WETLA	ND	1		UPLANI	)	
SPE	CIES	STRATUM	INDICATOR	ŞF	PECIES	STRATUM	INDICATO
	latifolia	Н	OBL	Berl	peris sp.	н	NS
	ex sp.	н	85% FAC-OBL	Car	ya ovata	т	FACU-
	s effusus	н	FACW+	Poaceae o	r Gramineae sp.	н	NS
rcent of Dominant S e OBL, FACW, and		ıc	100%		HYDROL	OGY	
MADDE		sboro extremely stony loam	(WpB)				
	C SOIL UNIT:	Norwich		SOURCE OF HYD	BOLOGY:	Spring discharge, ground inundated	water, and semiperma and saturated.
11,011	WETLAND COF			DEPTH OF SURF			
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE	WATER IN SOIL PIT:		
0-6"	10YR3/2	10YR4/4	sandy loarn and organic	DEPTH TO SATU	RATED SOIL:		
6-14"	10YR5/2	5YR4/4 and 10YR4/4	heavy sitt loam	Ì	FIELD INDICATORS		
				1	PRIMARY INDICATORS	\$	
	WETLAND FRIN	IGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 Ir	nches	
					Water Marks		
					Drift Lines		
					_Sediment Deposits		
	UPLAND S	SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY INDICATO	RS	
0-3*	10YR3/3		sit loam		Oxidized Root Channel	s in Upper 12 inch	es
3-12*	10YR4/6		sit loam	×	Water Stained Leaves		
>12*	rock		rock		FAC-Neutral Test		
		<u></u>		<u> </u>			
			Hydric Soil	Indicators	Concretions		
	Histosol				High Organic Content in Su	rtace Lavers in Sandy	Soils
	Histic Epipedon				Organic Streaking in Sandy		
	Sulfidic Odor			x	Listed on Local Hydric Soils		
X	Aquic Moisture Regime				Listed on National Hydric S		
^	Reducing Conditions  Gleyed or Low Chroma Col	ors			Other (Explain in Basis of I		
<u> </u>	- Grayed or Low Chronia Col	yis .					
			Wetland De	termination			
Hydrophytic Vegetatio	on Present?	Yes		Hydric Soil Prese	nt? Yes		
Wetland Hydrology P	resent?	Yes		Wetland?	Yes		
	INEATION:						

		<b>▼</b>	VETLAND DA	EVALUATOR:		P.I	D, ERB, GOO	
WETLAND ID:	Wetland 27	_		WEATHER:	Partly close	dy and warm	_,, + + +	
DATE:	20-Apr-0	5		WEATHER:	Partiy Clou	uy anu wann		
normal circumstances			Yes					
e site significantly dis	turbed (Atypical Situa	tion)?	No					
ne area a potential pro	oblem area?		No				0.1354 Ha	
DROGEOMORPHIC	CLASSIFICATION:			SIZ		0.3346 Ac		100% POW
GETATION			CLASSIFICATION:	0% PEM	0.	% PSS	0 % PFO	100% FON
	WETL	AND				UPLAN		
SPEC	CIES	STRATUM	INDICATOR	1	SPECIES		STRATUM	INDICATO
Acer n	ubrum	Т	FAC	Qı	uercus rubra		Т	FACU-
Carya	ovata	Т	FACU-	Į :	Berberis sp.		н	NS
				Ali	iaria petiolata		н	FACU-
ercent of Dominant Sp			50%					
re OBL, FACW, and I		~	50%	<del>                                     </del>		HYDROL	OGY	
		OILS	(N=C)		····			
		elisboro extremely stony k	xam (wpc)				Groundwater ar	d surface water runoff. enently inundated.
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF H			Энтиропи	a solidy more con-
		ORE SOIL SCORE	TEVELIDE	DEPTH TO FR				
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO SA				
inundated	inundated		inundated	DEPIH IO SA		INDICATORS		
				1				
				4	PHIMAR	Y INDICATORS	•	
	WETLAND FR	INGE SOIL SCORE		×	Inundation	on		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturate	d in Upper 12 l	nches	
				×	Water M	larks		
					Drift Line	es		
					Sedime	nt Deposits		
	UPLAND	SOIL SCORE				e Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	1	SECOND	ARY INDICATO	RS	
disturbed fill material			disturbed fill		Oxidize	d Root Channel	ls in Upper 12 inch	ies
					Water 9	Stained Leaves		
					FAC-Ne	eutral Test		
			Hydric Soil	Indicators				
+	Histosol				Concreti	ons		
	Histic Epipedon				High Org	panic Content in Su	ırtace Layers in Sand	/ Soils
	Sulfidic Odor				Organic	Streaking in Sandy	Soils	
	Aquic Moisture Regime			×	Listed or	Local Hydric Soil	s List	
<del></del>	Reducing Conditions				Listed or	n National Hydric S	Soils List	
	Gleyed or Low Chroma C	olors			Other ( i	Explain in Basis of	Delineation)	
	,	-						
<del> </del>			Wetland De	termination	***			
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Pre	esent? Yes			
Wetland Hydrology Pre		Yes		Wetland	? Yes			
	LATION:							
BASIS OF DELIN								
BASIS OF DELIF								
BASIS OF DELIN								

		W	ETLAND DA	IAFORM			
WETLAND ID:	Wetland 28			EVALUATOR:	P	JD, ERB, GOO	
DATE:	20-Apr-05			WEATHER:	Partly cloudy and warm		
ormal circumstance	es exist on the site?		Yes				
e site significantly o	disturbed (Atypical Situation	n)?	No				
e area a potential p	problem area?		No				
ROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0285 Ac	0.0115 H	
GETATION			CLASSIFICATION:	50% PEM	0 % PSS	50 % PFO	0% POW
	WETLA	ND			UPLA		
SP	ECIES	STRATUM	INDICATOR	<u>s</u>	PECIES	STRATUM	INDICATOR
Impatien	ns capensis	н	FACW	Que	rcus rubra	Т	FACU-
Microsteg	ium vimineum	н	FAC	Acer po	ensylvanicum	SS	FACU
Acer	rubrum	Т	FAC				
rcent of Dominant :			100%				
	SOII	LS			HYDRO	LOGY	
MAPPE	D SOIL UNIT: Oquaga-La	ckawanna extremely sto	ony loams (OxC)				
HYDRI	C SOIL UNIT:			SOURCE OF HY	DROLOGY:	Groundwater seep disc	harge and seasonal sati
	WETLAND COR	E SOIL SCORE		DEPTH OF SURI	ACE WATER:		
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE	WATER IN SOIL PIT:		
0-6"	10YR3/1		saturated	DEPTH TO SATU	JRATED SOIL:		
6-12"	10YR3/2	10YR4/6	sitt loam		FIELD INDICATOR	s	
>12*	rock		rock	_	PRIMARY INDICATOR	as	
	WETLAND FRIN	GE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12	Inches	
				×	Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAND S	OIL SCORE			Drainage Patterns	one	
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	l	SECONDARY INDICAT		
0-4*	5YR3/3		silt loam		Oxidized Root Channe		nes
4-8"	5YR4/4		silt loam	×	Water Stained Leaves	5	
>8*	rock		rock		FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol		Trydric 3011		Concretions		
	-			^	High Organic Content in S	Surface Layers in Sand	y Soils
	Histic Epipedon  - Sulfidic Odor				Organic Streaking in Sand		
	Aquic Moisture Regime				Listed on Local Hydric So		
x	Aquic Moisture Hegime  Reducing Conditions				Listed on National Hydric		
	Gleyed or Low Chroma Colo	MS			Other ( Explain in Basis or		
	— Greyed of Low Childria Coo	15					
<b>x</b>			Wetland De	etermination			
<b>X</b>				Hydric Soil Prese	ent? Yes		
Hydrophytic Vegetation	on Present?	Yes					
Hydrophytic Vegetatic Wetland Hydrology P		Yes Yes		Wetland?	Yes		

			ETLAND DA	EVALUATOR:	P.1	D, ERB, GOO	
WETLAND ID:	Wetland 29					, 2.12, 300	
DATE:	20-Apr-05			WEATHER: Partly	cloudy and warm		
normal circumstances	exist on the site?		Yes				
e site significantly dis	sturbed (Atypical Situation	on)?	No				
e area a potential pro	oblem area?		No			0.0494 Ha	
ROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.1221 Ac		0% POW
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% FOW
	WETLA	ND			UPLAN		INDICATOR
SPEC	CIES	STRATUM	INDICATOR	SPECIE		STRATUM	FACU
Acer n	ubrum	Т	FAC	Rosa multi		\$S	FAC-
Poaceae or G	Framineae sp.	н	NS	Pinus stro	bus	Т _	
Polygonum	cuspidatum	н	FACU-	Carya ov	ata	Т	FACU-
Fraxinus pe	ennsylvanica	Т	FACW	Polygonum cu:	spidatum	н	FACU-
Juncus	effusus	н	FACW+				
Impatiens	s capensis	н	FACW				
ercent of Dominant Sp			75%				
re OBL, FACW, and	FAC SOI	II S	75%		HYDROL	.OGY	
MAPPED	SOIL UNIT: Oquaga-L		ony loams (OxC)				
	SOIL UNIT:		•	SOURCE OF HYDROL	OGY:	Surface water runoff colle	ection and seasonal fi
11101110		RE SOIL SCORE		DEPTH OF SURFACE			
<u>DEPTH</u>	MATRIX	MOTTLE	<u> TEXTURE</u>	DEPTH TO FREE WAT			
0-12*	5YR3/2	5YR4/4	silt loam	DEPTH TO SATURATE			0-
>12"	rock	311111	rock		ELD INDICATORS	<b>;</b>	
212	IOCK			l.	MARY INDICATORS		
	WET AND ER	NGE SOIL SCORE			ndation		
DEPTH	MATRIX	MOTTLE	TEXTURE		turated in Upper 12 I	nches	
<u> </u>	MATHA	MOLIEE	3.		ater Marks		
					ift Lines		
					diment Deposits		
	UDLAND	SOIL SCORE			ainage Patterns		
DEDTU		MOTTLE	TEXTURE	Di	amage Patterns ONDARY INDICATO	ORS	
DEPTH O.4"	MATRIX	WOILE	sit loam	l l	kidized Root Channe		es
0-4" 4-8*	5YR3/3 5YR4/4		sit loam		ater Stained Leaves		
4-6 >8*	rock		rock		AC-Neutral Test		
			Hydric Soi	I Indicators			
	Histosol				oncretions igh Organic Content in Si	urface Lavers in Sandu	Soils
	Histic Epipedon			O	rganic Streaking in Sand		
	Sulfidic Odor				ated on Local Livinia Call	le liet	
	Sulfidic Odor Aquic Moisture Regime				sted on Local Hydric Soil		
	Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions			Li	sted on National Hydric S	Soils List	
	Sulfidic Odor Aquic Moisture Regime	lors		Li		Soils List	
	Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions	Nors	Wetland D	Li	sted on National Hydric S	Soils List	
	Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Co	ves	Wetland D	u	sted on National Hydric S	Soils List	

Delineation follows the extent of red maple, green ash, and grass community with saturated, low chroma, mottled soils with drainage patterns and sediment staining.

WETLAND ID:  DATE:  normal circumstances are site significantly dist area a potential proton DROGEOMORPHIC CORTANTON				EVALUATOR: WEATHER:	Partly cloudy a		o, erb, goo	
normal circumstances ne site significantly dist ne area a potential prof DROGEOMORPHIC C	exist on the site?			WEATHER:	Partly cloudy a			
ne site significantly dist ne area a potential prof DROGEOMORPHIC C					, and closely t	ano warm		
ne area a potential prol DROGEOMORPHIC C		Ye	S					
DROGEOMORPHIC C	urbed (Atypical Situation	on)? No						
	blem area?	No						
GETATION	CLASSIFICATION:			SIZE:		0.4920 Ac	0.1991 Ha	0% POW
			ASSIFICATION:	0% PEM	0 % P		100 % PFO	0% FOW
	WETLA					UPLAND		INDICATO
SPEC		STRATUM	INDICATOR		PECIES		STRATUM	NS
Acer rui		Т .	FAC	1	rberis sp.		H T	FACU-
Fraxinus pen		Т	FACW	1	ercus rubra ercus alba		т	FACU
Berberi	ь эр.	н	NS					
ercent of Dominant Spore re OBL, FACW, and F			100%					
	SOI	LS		<b>†</b>		HYDROLO	OGY	
MAPPED :	SOIL UNIT: Oquaga-Li	ackawanna extremely storry I	oams (OxC)					
HYDRIC S	SOIL UNIT:			SOURCE OF HY	DROLOGY:		Groundwater an	d seasonal flooding.
	WETLAND COR	RE SOIL SCORE		DEPTH OF SURF	ACE WATER:			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE	WATER IN S	OIL PIT:		
0-6"	10YR3/1	10YR4/4	sit loam	DEPTH TO SATU	JRATED SOIL:			
6-14"	10YR5/4	10YR5/6 and 10YR4/6	sit loam	1	FIELD INC	ICATORS		
					PRIMARY I	IDICATORS		
	WETLAND FRIN	IGE SOIL SCORE			Inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in	Upper 12 In	ches	
0-2"	10YR3/2		sitt loam		Water Mark	s		
2-7*	5YR3/3		sit loam	ļ	Drift Lines			
7-12"	10YR3/1		silt loam		Sediment D	eposits		
		SOIL SCORE		X	Drainage P		•	
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY			
0-4*	10YR3/2		silt loam	<del></del>			in Upper 12 inche	es
4-15"	5YR3/3		silt loam	×	Water Stair			
					FAC-Neutra	al Test		
			Hudric Soi	I Indicators				
Hi	istosol		11,4110 001	, marouro	Concretions			
	istic Epipedon				 High Organic	Content in Surf	ace Layers in Sandy	Soils
	ulfidic Odor				_	aking in Sandy S		
	quic Moisture Regime					al Hydric Soils I		
<del></del>	educing Conditions					tional Hydric So		
<b>⋇</b> G	leyed or Low Chroma Cok	ors			Other (Expla	in in Basis of D	elineation)	
			Wetland D	etermination				
Hydrophytic Vegetation F	Present?	Yes		Hydric Soil Prese	ent? Yes			
Wetland Hydrology Presi	ent?	Yes		Wetland?	Yes		and the same of th	
BASIS OF DELIN	EATION:							

WETLAND ID:	Wetland 31		EVALUATOR:	PJD	, ERB, GOO	
DATE:	20-Apr-05		WEATHER: Par	tly cloudy and warm		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly o	disturbed (Atypical Situation)?	No				
Is the area a potential p	problem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.1714 Ac	0.0693 Ha	
						ON DOW

DROGEOMORPH	C CLASSIFICATION:			SIZE:	0.1714 AC		
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WE	TLAND			UPLAN	D	
SI	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Junc	us effusus	н	FACW+	Rosa r	nultiflora	SS	FACU
	arex sp.	н	85% FAC-OBL	Poaceae or	Gramineae sp.	н	NS
	er rubrum	т	FAC	Pinus	strobus	T	FAC-*
	ndron radicans	н	FAC	Betula (	populifolia	Т	FAC
				Prunus	serotina	т	FACU
ercent of Dominant							
re OBL, FACW, ar			100%	<u> </u>	HYDROL	OGY	
		SOILS		<del> </del>	HYDAOL	.001	
MAPP	ED SOIL UNIT:	Wellsboro extremely story to	am (WpB)			Surface water runoff and se	asonal high groundwater
HYDF	IC SOIL UNIT:	Norwich	.,,	SOURCE OF HYDE		seasonal	saturation.
	WETLAND C	CORE SOIL SCORE		DEPTH OF SURFA			
DEPTH	MATRIX	MOTTLE	TEXTURE	1	VATER IN SOIL PIT:		
0-8*	10YR4/2	10YR4/6	silt loam	DEPTH TO SATUR			
8-14"	10YR5/2	10YR5/6	silt loam		FIELD INDICATORS		
>14"	rock		rock	4	PRIMARY INDICATORS	5	
	WETLAND F	RINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 I	nches	
					Water Marks		
					Drift Lines		
				×	Sediment Deposits		
	UPLAI	ND SOIL SCORE		×	Drainage Patterns		
DEPTH	<u>MATRIX</u>	MOTTLE	TEXTURE	\$	ECONDARY INDICATO	ORS	
0-16*	10YR3/3		disturbed		_Oxidized Root Channe	ls in Upper 12 inche	s
				×	_Water Stained Leaves		
					_FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions	de colonia Cando S	i nile
	Histic Epipedon				High Organic Content in St		OID
	Sulfidic Odor				Organic Streaking in Sand		
	Aquic Moisture Regime	•		x	Listed on Local Hydric Soil		
X	Reducing Conditions				Listed on National Hydric S		
	Gleyed or Low Chroma —	a Colors			Other (Explain in Basis of	Delineation)	
			Wetland De	etermination			
Hydrophytic Vegeta	ion Present?	Yes		Hydric Soil Present	? Yes		
•	Present?	Yes		Wetland?	Yes		

Delineation follows the extent of sedge, soft rush, and red mpale community along topographic low with low chroma mottled soil and evidence of saturation, drainage patterns, and sediment deposits.

AITTI AND ID				EVALUATOR:	P.1	D, ERB, GOO	
WETLAND ID:	Wetland 32				oudy and warm	D, 2, 15, 555	
DATE:	20-Apr-0	J5	Yes	WEATTER. Turky of	oody and nam		
ormal circumstances		naise of the contract of the c	No				
e site significantly dis		attori) :	No				
e area a potential pro PROGEOMORPHIC (			140	SIZE:	1.3928 Ac	0.5635 Ha	
GETATION	CLASSIFICATION.		CLASSIFICATION:	0% PEM	0 % P\$S	50 % PFO	50% POW
BLIATION	WET	LAND	08.00.10.110.11		UPLANI	)	
SPEC		STRATUM	INDICATOR	SPECIES		STRATUM	INDICATO
Acer ru	<del></del>	т	FAC	Acer rubrun	n	Т	FAC
Toxicodendr		н	FAC	Pinus strobu	ıs	т	FAC-*
Impatiens		H	FACW	Hemerocallis f	ulva	н	UPL
Care		н	85% FAC-OBL	Carya ovat	a	т	FACU-
Juncus		н	FACW+				
Poaceae or G	Gramineae sp.	Н	NS				
rcent of Dominant Sp			100%				
e OBL, FACW, and I		OILS	100 /6		HYDROL	OGY	
MADDED		Velisboro extremely stony k	nam (WnR)	<del>-}</del>			
	SOIL UNIT:	Norwich	Ziii (VVPD)	SOURCE OF HYDROLOG	2V.	Stream flooding	and groundwater.
- THERE		ORE SOIL SCORE		DEPTH OF SURFACE W			>2*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATER			
inundated	TEN TELMO		inundated	DEPTH TO SATURATED	SOIL:		
				FIEL	D INDICATORS		
				PRIM	ARY INDICATORS	3	
	WETLAND FI	RINGE SOIL SCORE	*	X Inund	ation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Satur	ated in Upper 12 Ir	nches	
	<del>-</del>			Wate	r Marks		
				Drift 1	Lines		
				Sedir	nent Deposits		
1	UPLAN	D SOIL SCORE			age Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	IDARY INDICATO	RS	
0-4"	10YR3/3		silt loam	Oxid	ized Root Channel	s in Upper 12 inche	s
4-16*	10YR4/4		siit loam	X Wate	er Stained Leaves		
				FAC	-Neutral Test		
			Hydric Soi	I Indicators	retions		
	listosol					rlace Layers in Sandy S	Soils
	Histic Epipedon				nic Streaking in Sandy		
	Sulfidic Odor				d on Local Hydric Soils		
	Aquic Moisture Regime				d on National Hydric S		
	Reducing Conditions Gleyed or Low Chroma	Colors			r (Explain in Basis of I		
		aka ang manahan ng kalang ang manahan ng kalang ang manahan ng kalang ang manahan ng kalang ang manahan ng kal	Wetland D	etermination			
	Present?	Yes		Hydric Soil Present? Yes			
Hydrophytic Vegetation	sent?	Yes		Wetland? Yes			
Hydrophytic Vegetation Wetland Hydrology Pre							

WETLAND ID:		77	ETLAND DA			D EDD COO K	2
	Wetland 33			EVALUATOR:		B, ERB, GOO, KJS	>
DATE:	21-Apr-0	05		WEATHER: Clea	r and cool		
normal circumstance	es exist on the site?	Y	es				
ne site significantly d	listurbed (Atypical Situa	tion)?	lo				
ne area a potential p	roblem area?	1	lo			o roor Us	
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	1.4497 Ac	0.5865 Ha	0% POW
GETATION		(	CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0,81011
	WETL	AND			UPLANI		INDICATOR
SPI	ECIES	STRATUM	INDICATOR	SPEC		STRATUM	NS
Acer	rubrum	Т	FAC	Berberi		H T	FAC
Rhodod	lendron sp.	SS	NS	Acer ru		T	FACU
Betula all	leghaniensis	Т	FAC	Tsuga can		' Н	FAC-
Impatien	ns capensis	H	FACW	Maianthemum	canadense	п	170-
Osmi	unda sp.	н	FAC - OBL				
Microsteg	jium vimineum	Н	FAC	1			
Scirpus	s cyperinus	н	FACW+	ł			
ercent of Dominant S	Species that						
re OBL, FACW, and			100%		HYDROL	OCY	
		DILS			HYDHOL	OG I	
		elisboro extremely stony loar	n (WpB)			Groundwater discharge	e and seasonal saturati
HYDRK	C SOIL UNIT:	Norwich	,	SOURCE OF HYDRO		Groundwale: Global May	
		ORE SOIL SCORE		DEPTH OF SURFACE			
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-6"	10YR3/2	10YR4/6	sit loam	1	IELD INDICATORS		
6-14"	10YR5/1	10YR4/6	siit loam	1	RIMARY INDICATORS	•	
				⊢		,	
		NINGE SOIL SCORE	TEVTUDE	"	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE organic/mineral		aturated in Upper 12 Ir	ncnes	
0-6"	10YR2/2	10YR5/3 and 10YR4	-	*	/ater Marks		
6-12*	10YR5/2	107H5/3 BIJU 107H4	rock		rift Lines		
>12*	rock	A COLL COORE	1001		ediment Deposits		
DEDTU		SOIL SCORE MOTTLE	TEXTURE		rainage Patterns CONDARY INDICATO	RS	
DEPTH 0-4"	MATRIX 10YR3/3	WOTTE	sit loam		oxidized Root Channel		oe.
4-16°	7.5YR3/4		silt loam		Vater Stained Leaves	5 #1 Opper 12 mone	~
4-16	7,5113/4		OIN ISOM	·	AC-Neutral Test		
				'	AC-Neullai Test		
			Hydric Soil	Indicators			
	Histosol		1., 4		Concretions		
	Histic Epipedon				tigh Organic Content in Su	rface Layers in Sandy	Soils
X	- Suffidic Odor				Organic Streaking in Sandy		
<del> </del>	- Aquic Moisture Regime				isted on Local Hydric Soils		
<del> </del>	- Reducing Conditions				Listed on National Hydric S		
<del>                                     </del>	Gleyed or Low Chroma C	Colors			Other (Explain in Basis of D	Delineation)	
X	-						
<b></b>			Wetland De	etermination			
	on Present?	Yes			Yes		
Hydrophytic Vegetatio				Wetland?	Yes		
Hydrophytic Vegetatic Wetland Hydrology Pi	resent?	Yes					

WETLAND ID:	Wetland 34		EVALUATOR:	PJI	), BTB, ERB, GOO, KJS	
DATE:	21-Apr-05		WEATHER: C	Clear and cool		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly of	listurbed (Atypical Situation)?	No				
is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.2400	Ac 0.0971 Ha	

						400 N DEO	0% POW
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	UM POW
	WE	rland 				LAND	INDICATOR
<u>s</u>	PECIES	STRATUM	INDICATOR	SPEC		STRATUM	INDICATOR
Betula a	alleghaniensis	τ	FAC	Tsuga car		Т -	FACU
Poaceae o	or Gramineae sp.	Н	NS	Liriodendro		T	FACU
Aci	er rubrum	Т	FAC	Rosa m	ultiflora	SS	FACU
ercent of Dominan			100%				
		SOILS			HYDF	ROLOGY	
MAPP	ED SOIL UNIT:	Philo silt loam (Ph)	, , , , , , , , , , , , , , , , , , ,				
HYDF	RIC SOIL UNIT:	Holly		SOURCE OF HYDRO	OLOGY:	Groundwater seep a	nd seasonal saturation.
	WETLAND C	ORE SOIL SCORE	., ., ., ., ., ., ., ., ., ., ., ., ., .	DEPTH OF SURFAC			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-8"	5Y3/1	2.5Y4/4	sit loam	DEPTH TO SATURA	TED SOIL:		0-
8-16"	N5/10		sitt loam	F	TELD INDICATO	RS	
				P	RIMARY INDICAT	ORS	
	WETLAND F	RINGE SOIL SCORE		lrtr	nundation		
DEPTH	MATRIX	MOTTLE	<b>TEXTURE</b>	×	Saturated in Upper	12 Inches	
				×v	Vater Marks		
					Orift Lines		
					Sediment Deposits		
	UPLAN	D SOIL SCORE			Orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICA	ATORS	
0-4"	10YR3/3		silt loam		Oxidized Root Char	nnels in Upper 12 inche	s
4-8"	10YR5/6		silt loam	,	Water Stained Leav	ves	
8-16*	10YR5/6		silt loam		FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol		ily and don		Concretions		
	— Histic Epipedon				High Organic Content i	in Surface Layers in Sandy S	Soils
×	Sulfidic Odor				Organic Streaking in S		
	Aquic Moisture Regime			×	Listed on Local Hydric	Soils List	
x	Reducing Conditions				Listed on National Hyd	Inic Soils List	
*	Gleyed or Low Chroma	Colors			Other (Explain in Basi	s of Delineation)	
			Wotler d De	termination			
Hydrophytic Vegetat	tion Present?	Yes	wenano De	Hydric Soil Present?	Yes		
Wetland Hydrology	Present?	Yes		Wetland?	Yes		

Delineation follows the extent of topographic low with low chroma, mottled soils with water staining and saturation following yellow birch, grass, and red maple community.

WETLAND ID.   Westland 35					ETLAND DA				
Percent of Dominant Species that are OBL, FACW, and FAC   100%	, KJS	B, ERB, GOO, KJS	PJD, BTE	EVALUATOR:			Vetland 35	: Wetland	WETLAND ID:
No   No   No   No   No   No   No   No			d cool	WEATHER: Clear and			21-Apr-05	:	DATE:
The area a potential problem area?  The area a potential problem area?  THE AREA OF LASSIFICATION:  SECTATION  WETLAND  SPECIES STRATUM SURCATOR  SHACE  Safe trigglis T FAC  Poscesse or Gramineage sp. H NS Acer urbrum T FAC  Filhododendron sp. SS NS  SS NS  Problem Souls  THOUGH SOULS  MAPPED SOIL UNIT: Hoby SPECIES STRATUM Thuja occidentalis T  WETLAND CORE SOILS  MAPPED SOIL UNIT: Hoby SOURCE OF HYDROLOGY: Sintern handing are in the specific speci					/es	Y	st on the site?	stances exist on th	normal circumsta
SIZE					No	)? •	ed (Atypical Situation)?	intly disturbed (Aty	he site significant
SECETATION  WETLAND  WETLAND  SPECIES  STRATUM  NDICATOR  Selects  Saltx tragilis  T FAC+  Proaceae or Gramineae sp. H NS  Acer rubrum  T FAC  Rhoododendron sp. SS  NS  Proceed of Dominant Species that  WE OBL, FACW, and FAC  SOILS  MAPPED SOIL UNIT:  HYDRIC SOIL UNIT:  HYDRIC SOIL UNIT:  HYDRIC SOIL UNIT:  WETLAND CORE SOIL SCORE  DEPTH MATRIX  MOTTLE  WETLAND FRINGE SOIL SCORE  MATRIX  MOTTLE  MOTTLE  WETLAND FRINGE SOIL SCORE  DEPTH MATRIX  MOTTLE  TEXTURE  X Saturated in Upper 12 Inches  Water Marks  Dranage Patterns  SECONDARY INDICATORS  FAC.  Water Marks  Dranage Patterns  Secondary Indicators  FAC.  Hydric Soil Indicators  FAC.  Hydric Soil Indicators  Concretions  Histosol  Histosol  Histosol  Agus Missood Coder  Agus Missood C					No	1	n area?	ntial problem area?	the area a potenti
SPECIES STRATUM INDICATORS SPECIES STRATUM INDICATORS Salix trapilize T FAC4 Taraxaccum officinale H Poaceae or Gramineae sp. H NS Potentilla sp. H Acer rubrum T FAC Thuja occidentalis T Fihododendron sp. SS NS  Percent of Dominant Species that are OBL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Prito all beam (Pt) HYDRIC SOIL UNIT: Prito all beam (Pt) HYDRIC SOIL UNIT: Prito all beam (Pt) Source OF HYDROLOGY  MAPPED SOIL UNIT: Prito all beam (Pt) HYDRIC SOIL UNIT: Prito all beam (Pt) Source OF HYDROLOGY: Streen Nooring and in beam DEPTH MATRIX MOTILE IEXTURE O-10* 1078/32 0 all beam DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY MIDICATORS PRIMARY MOTILE IEXTURE ACTION OF 1078/36 IS beam (Pt) DEPTH MATRIX MOTILE IEXTURE DEPTH MATRIX MOTILE IEXTURE DEPTH MATRIX MOTILE IEXTURE Sediment Deposits DEPTH MATRIX MOTILE IEXTURE DEPT	Ha 50% POW						SSIFICATION:	RPHIC CLASSIFIC	/DROGEOMORP
SPECIES STRATUM INDICATOR  Selix fragills T FAC+ Poaceae or Graminaes sp. H NS Potentills sp. H  Acer rubrum T FAC  Thrododendron sp. SS NS  Percent of Dominant Species that  FERCILL THROUGE SOILS SS NS  Present of Dominant Species that  FERCILL THROUGH STRATUM SSS NS  Present of Dominant Species that  FERCILL THROUGH SSS NS  FERCILL THROUGH SSS NS  PRODUCTION SSS NS  PRODUCTION SSS NS  PRODUCTION SSS NS  FERCILL THROUGH SSS NS  PRODUCTION STRATUM STRATE SOIL COST STRATUM MATRIX MOTTLE ISLUED DEPTH OF SURFACE WATER:  DEPTH MATRIX MOTTLE TEXTURE  DEPTH TO FARSE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICAT	50% POW			0% PEM (	CLASSIFICATION:	(			EGETATION
Site Trailing T FACY Taraxacum officinale H Poaceae or Gramineae sp. H NS Potentilla sp. H Acer rubrum T FAC Thuja occidentalis T Fhododendron sp. SS NS  ercent of Dominant Species that the OBL, FACW, and FAC SOLS  MAPPED SOIL UNIT: Phab all basin (Pto) HYDRIC SOIL UNIT: Holay  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTILE TEXTURE 0-10" 107832 0 all basin Pool between 107833 0 all	INDICATO		UPLAND			ID	WETLAND		
Poaceae or Gramineae sp. H NS Potentilla sp. H Acer rubrum T FAC Thuja occidentalis T Rhododendron sp. SS NS  Percent of Dominant Species that are OBL, FACW, and FAC 100%  SOILS HYDROLOGY  MAPPED SOIL UNIT: Philo sit barn (Ph) HYDRIC Soil Indicators  High Organic Cortent in Surface Layers is Sandy Organic Stressing in Sandy Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List	FACU-							SPECIES	:
ercent of Dominant Species that  Finododendron sp. SS NS  ercent of Dominant Species that  Finododendron sp. SS NS   ### Approx Soll S    MAPPED SOIL UNIT:	NS					Т	is T	Salix fragilis	S
ercent of Dominant Species that the OBL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Phace all boarn (Ph) HYDRIC SOIL UNIT: Phace all boarn (Ph) HORIZ 0 all boarn (PP) HORIZ 107832 0 all boarn (PP) HORIZ 107832 0 all boarn (PP) HORIZ 107832 0 all boarn (PP) HORIZ 107834 INDICATORS HIDDRICATORS HIDDRICATORS HIDDRICATORS DEPTH MATRIX MOTILE IEXTURE (PP) HORIZ 107836 all boarn (PP) HORIZ 107836 all boarn (PP) HORIZ 107836 all boarn (PP) Horiz SOIL Indicators  Listed on National Hydric Soils List	FACW							ae or Gramineae s	Poaceae
ercent of Dominant Species that  ter OBL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Phab sill boarn (Ph) HYDRIC SOIL UNIT: Phab sill boarn (Ph) SOURCE OF HYDROLOGY: Steem Rooding and it DEPTH OF SURFACE WATER: DEPTH OF SURFACE WATER. DEPTH OF SURFACE WAT	PACW	'	alis	Thuja occidenta		Т	ım T	Acer rubrum	A
SOILS  MAPPED SOIL UNIT: Philo silt loam (Pft) HYDRIC SOIL SCORE (Pft) PROCLOGY: Streem flooding and to the source of the					NO	SS	on sp. S	nododendron sp.	Hho
SOILS  MAPPED SOIL UNIT: Philo sit loam (Ph) HYDRIC SOIL UNIT: Philo sit loam (Ph) HYDRIC SOIL UNIT: Holly  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTILE TEXTURE 10 10 10 10 700 1 10 70					100%			•	
MAPPED SOIL UNIT: Philo sith loam (Pit) HYDRIC SOIL UNIT: Holly  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTILE TEXTURE 0-10' 10YR3/2 0 sit boarn 10YR3/2 0 sit boarn 10YR3/2 NOTILE TEXTURE DEPTH TO SATURATED SOIL.  WETLAND FRINGE SOIL SCORE DEPTH TO SATURATED SOIL.  WETLAND FRINGE SOIL SCORE  WETLAND FRINGE SOIL SCORE  DEPTH MATRIX MOTILE TEXTURE  WETLAND FRINGE SOIL SCORE  DEPTH MATRIX MOTILE TEXTURE  Water Marks Drift Lines Sediment Deposits Depth MATRIX MOTILE TEXTURE  WHAT MATRIX MOTILE TEXTURE  DEPTH MATRIX MOTILE TEXTURE  Water Marks Drift Lines Sediment Deposits Drainage Patterns  SECONDARY INDICATORS  AND VAILED SOIL SCORE DEPTH MATRIX MOTILE TEXTURE  Water Marks Drift Lines Sediment Deposits Drainage Patterns  SECONDARY INDICATORS  AND VAILED SOIL SCORE DEPTH MATRIX MOTILE TEXTURE SECONDARY INDICATORS FAC-Neutral Test  Histosol Histosol Histosol All Codor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List Listed on National Hydric Soils List		OGY	HYDROLC		100%	s	<del></del>	v, and FAC	IIE OBL, FACW,
HYDRIC SOIL UNIT: Holly  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTTLE IEXTURE 0-10" 10YR3/2 0 sit loam 10" rock rock rock PHIMATE SOIL SCORE DEPTH TO FREE WATER IN SOIL PIT: D-10" rock rock FIELD INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS  WETLAND FRINGE SOIL SCORE DEFTH MATRIX MOTTLE TEXTURE X Saturated in Upper 12 Inches  Water Marks Drift Lines Sediment Deposits Depth MATRIX MOTTLE TEXTURE SECONDARY INDICATORS PRIMARY INDICATORS  Water Marks Drainage Patterns SECONDARY INDICATORS  HISTORY 10YR3/3 sit loam AWATER SECONDARY INDICATORS  HISTORY 10YR3/4 sit loam AWATER SECONDARY INDICATORS  HISTORY 10YR3/4 sit loam AWATER SECONDARY INDICATORS  Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  History Granic Content in Surface Layers in Sandy A Sulfick Odor Aquic Moisture Regime A Listed on National Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List								APPED SOIL LINE	MAP
DEPTH   MATRIX   MOTTLE   IEXTURE   DEPTH TO FRUE WATER:   DEPTH TO FRUE WATER IN SOIL PIT:   DEPTH TO SATURATED SOIL:   DEPTH TO SATURATED SOIL:   DEPTH TO SATURATED SOIL:   DEPTH TO SATURATED SOIL:   FIELD INDICATORS   PRIMARY INDICATOR	and semipermanently inunde	Stream flooding and sen	iY:	SOURCE OF HYDROLOG					
DEPTH MATRIX MOTILE IEXTURE 0-10" 10YR3/2 0 silt loam 0-10" rock rock rock FIELD INDICATORS PRIMARY INDICATORS  DEPTH MATRIX MOTILE TEXTURE X Saturated in Upper 12 inches Sediment Deposits Drainage Patterns Patterns DEPTH MATRIX MOTILE TEXTURE SECONDARY INDICATORS 0-6" 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inches 10YR3/6 silt loam X Water Stained Leaves FAC-Neutral Test  Histosol FAC-Neutral Test  Histosol Histo Cotor  Histo Cotor Congressions A Sulficio Cotor  A Sulficio Cotor  A Sulficio Cotor  A Sulficio Cotor  A Sulficio Conditions  Listed on Local Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List				<b>-1</b>		SOIL SCORE	····		
O-10" 10YR3/2 0 silt loam rock rock rock rock FIELD INDICATORS PRIMARY INDICATORS  PRIMARY INDICATORS  PRIMARY INDICATORS  PRIMARY INDICATORS  PRIMARY INDICATORS  PRIMARY INDICATORS  A saturated in Upper 12 Inches  X Inundation  X Water Marks  Difft Lines  Sediment Deposits  Depth MATRIX MOTILE TEXTURE SECONDARY INDICATORS  O-6" 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inch  6-12" 10YR3/6 silt loam X Water Stained Leaves  FAC-Neutral Test  Histosol  Histic Epipedon  X Sulfidic Odor  Aquic Moisture Regime  X Listed on National Hydric Soils List  Listed on National Hydric Soils List  Listed on National Hydric Soils List			R IN SOIL PIT:	DEPTH TO FREE WATER	TEXTURE				DEPTH
PRIMARY INDICATORS  WETLAND_FRINGE SOIL SCORE  MATRIX MOTTLE IEXTURE  X Saturated in Upper 12 Inches  Water Marks  Drift Lines  Sediment Deposits  DEPTH MATRIX MOTTLE IEXTURE  DEPTH MATRIX MOTTLE IEXTURE  O-6° 10YR3/3 silt loam  Oxidized Root Channels in Upper 12 inch  6-12° 10YR3/6 silt loam  X Water Stained Leaves  FAC-Neutral Test  Histosol  Histo Epipedon  X Sulficic Odor  Aquic Moisture Regime  X Listed on National Hydric Soils List  Listed on National Hydric Soils List	o-		SOIL:	DEPTH TO SATURATED S	silt loam				0-10"
MATRIX   MOTTLE   TEXTURE   X   Saturated in Upper 12 Inches   X   Water Marks   Drift Lines   Sediment Deposits   Drainage Patterns   SeCONDARY INDICATORS			DINDICATORS	FIELD	rock		rock	r	>10"
DEPTH MATRIX MOTTLE TEXTURE  X Saturated in Upper 12 Inches  X Water Marks Drift Lines Sediment Deposits DEPTH MATRIX MOTTLE TEXTURE DEPTH MATRIX MOTTLE TEXTURE DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS O-6* 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inch Silt loam X Water Stained Leaves FAC-Neutral Test  Histosol Histosol Histo Epipedon Histo Cdor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on National Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List			RY INDICATORS	PRIMA					
Water Marks Drift Lines Sediment Deposits DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS  0-6° 10YR3/3 silt loarn Oxidized Root Channels in Upper 12 inch 6-12" 10YR3/6 silt loarn Water Stained Leaves FAC-Neutral Test  Histosol Histic Epipedon Histic Epipedon X Sulfidic Odor Aquic Moisture Regime X Reducing Conditions  Water Marks Drift Lines X Water Marks Drift Lines  Sediment Opper 12 inch Sediment Deposits Drainage Patterns SECONDARY INDICATORS Oxidized Root Channels in Upper 12 inch Water Stained Leaves FAC-Neutral Test  Concretions High Organic Content in Surface Layers in Sandy X Sulfidic Odor Organic Streaking in Sandy Soils Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List			ation	X Inunda		SE SOIL SCORE	WETLAND FRINGE	WE	***************************************
DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS  0-6° 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inch 6-12° 10YR3/6 silt loam X Water Stained Leaves FAC-Neutral Test  Histosol Histic Epipedon Histic Epipedon X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Reducing Conditions  Drift Lines Sediment Deposits Drainage Patterns SECONDARY INDICATORS Oxidized Root Channels in Upper 12 inch Water Stained Leaves FAC-Neutral Test  Concretions High Organic Content in Surface Layers in Sandy X Listed on Local Hydric Soils List Listed on National Hydric Soils List		ches	ated in Upper 12 Inc	X Satura	TEXTURE	MOTTLE	MATRIX	M	DEPIH
Sediment Deposits  UPLAND SOIL SCORE Drainage Patterns  SECONDARY INDICATORS  0-6° 10YR3/3 sit loam Oxidized Root Channels in Upper 12 inch 6-12° 10YR3/6 sit loam X Water Stained Leaves FAC-Neutral Test  Histosol Histic Epipedon Histic Epipedon X Sulfidic Odor Aquic Moisture Regime X Reducing Conditions  Section Drainage Patterns Drainage Patterns  SECONDARY INDICATORS  Oxidized Root Channels in Upper 12 inch X Water Stained Leaves FAC-Neutral Test  Concretions High Organic Content in Surface Layers in Sandy X Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List			Marks	× Water					
UPLAND SOIL SCORE DEPTH MATRIX MOTTLE TEXTURE O-6* 10YR3/3 Silt loam Oxidized Root Channels in Upper 12 inch Silt loam Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Histosol Histic Epipedon Histic Epipedon X Sulfidic Odor Aquic Moisture Regime X Reducing Conditions  Drainage Patterns Drainage Pattern			ines	Drift Li					
DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS  0-6° 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inch 6-12" 10YR3/6 silt loam X Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Histosol Concretions Histic Epipedon High Organic Content in Surface Layers in Sandy X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List X Reducing Conditions  Listed on National Hydric Soils List			nent Deposits	Sedim					
O-6° 10YR3/3 silt loam Oxidized Root Channels in Upper 12 inch 6-12° 10YR3/6 silt loam X Water Stained Leaves FAC-Neutral Test  Histosol Concretions Histic Epipedon High Organic Content in Surface Layers in Sandy X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List			-			DIL SCORE	UPLAND SOI		
6-12" 10YR3/6 silt loam X Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Histosol Concretions Histic Epipedon High Organic Content in Surface Layers in Sandy X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List		₹S	DARY INDICATOR	SECONI	TEXTURE	MOTTLE	MATRIX	M	DEPTH
Histosol  Aquic Moisture Regime  X Reducing Conditions  Water Outer to Surface Lowers in Sandy  History Concretions  Concretions  High Organic Content in Surface Layers in Sandy  Organic Streaking in Sandy Soils  X Listed on Local Hydric Soils List  X Reducing Conditions  Listed on National Hydric Soils List	nches	in Upper 12 inches	zed Root Channels	Oxidiz	silt loam		10YR3/3	1	0-6*
Hydric Soil Indicators  Histosol Concretions  Histic Epipedon High Organic Content in Surface Layers in Sandy  X Sulfidic Odor Organic Streaking in Sandy Soils  Aquic Moisture Regime X Listed on Local Hydric Soils List  X Reducing Conditions Listed on National Hydric Soils List			r Stained Leaves	X Water	silt loam		10YR3/6	1	6-12"
Histosol Concretions High Organic Content in Surface Layers in Sandy X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List			Neutral Test	FAC-1					
Histic Epipedon High Organic Content in Surface Layers in Sandy  X Sulfidic Odor Organic Streaking in Sandy Soils  Aquic Moisture Regime X Listed on Local Hydric Soils List  X Reducing Conditions Listed on National Hydric Soils List		· · · · · · · · · · · · · · · · · · ·	otions		Hydric Soil	· · · · · · · · · · · · · · · · · · ·			
X Sulfidic Odor Organic Streaking in Sandy Soils Aquic Moisture Regime X Listed on Local Hydric Soils List X Reducing Conditions Listed on National Hydric Soils List	andy Soils	race Layers in Sandy S						<del></del>	
Aquic Moisture Regime X Listed on Local Hydric Soils List  X Reducing Conditions Listed on National Hydric Soils List	•								<b>-</b>
X Reducing Conditions Listed on National Hydric Soils List			-					<del></del>	<del>                                     </del>
						s	-		<del>                                     </del>
						•	St. Ollonia cools		
Wetland Determination				termination	Wetland De				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes				Hydric Soil Present? Yes		Yes	sent?	getation Present?	Hydrophytic Vege
Wetland Hydrology Present? Yes Wetland? Yes				Wetland? Yes		Yes	?	logy Present?	Wetland Hydrolog
BASIS OF DELINEATION:							TION:	DELINEATION	BASIS OF D

			ETLAND DA		וצם חום	B, ERB, GOO, KJS	3
WETLAND ID:	Wetland 36			EVALUATOR:		o, end, goo, rot	•
DATE:	21-Apr-			WEATHER: Clear a	and cool		
normal circumstances	s exist on the site?		Yes				
e site significantly dis	sturbed (Atypical Situa	ation)?	No				
ie area a potential pro	oblem area?		No			0.0021 Ha	
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0051 Ac	0.0021 Fla	0% POW
GETATION			CLASSIFICATION:	100% PEM	0 % PSS		0% FOW
	WET	LAND			UPLAND		INDICATOR
SPE	CIES	STRATUM	INDICATOR	SPECIE		STRATUM	<u>INDICATOR</u> NS
Impatiens	capensis	н	FACW	Quercus s	,	Т	FAC
Care	ex sp.	н	85% FAC-OBL	Acer rubro		Т	
Poaceae or G	Gramineae sp.	Н	NS	Poaceae or Gran	nineae sp.	H	NS
				Alliaria peti	olata	н	FACU-
				Berberis :	sp.	Н	NS
ercent of Dominant S	pecies that						
re OBL, FACW, and	FAC		100%	1			
	s	OILS			HYDROL	DGY	
MAPPED	SOIL UNIT:	Philo sitt loam (Ph)					
HYDRIC	SOIL UNIT:	Holly	<u> </u>	SOURCE OF HYDROLO		Seeps, seasonal groun	
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFACE \			2*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WAT			
0-14"	10YR2/2		sandy loam	DEPTH TO SATURATE			0*
14-18"	2.5Y3/2	2.5Y4/4	sandy loam	1	LD INDICATORS		
				PRII	MARY INDICATORS		
	WETLAND F	RINGE SOIL SCORE			ndation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Sat	urated in Upper 12 In	ches	
				Wa	ter Marks		
				Drif	t Lines		
				X Sec	diment Deposits		
	<u>UPLAN</u>	D SOIL SCORE			inage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	NDARY INDICATO	RS	
0-5*	10YR3/3		silt loam	Ox	idized Root Channels	in Upper 12 inche	es
5-15°	10YR4/4		silt loam	X Wa	iter Stained Leaves		
				FAFA	C-Neutral Test		
			Hydric Soi	I Indicators			
	Histosol				ncretions		0.1.
	Histic Epipedon				h Organic Content in Su		SOIS
×	Sulfidic Odor				ganic Streaking in Sandy		
	Aquic Moisture Regime				ted on Local Hydric Soils		
×	Reducing Conditions				ted on National Hydric S		
x	Gleyed or Low Chroma	Colors		Ot	her (Explain in Basis of D	Delineation)	
1							
			Wetland D	etermination			
		Yes		Hydric Soil Present? Ye			
Hydrophytic Vegetation Wetland Hydrology Pro		Yes		Wetland? Ye	95		

ad 37 21-Apr-05 the site? typical Situation)? a? CATION:  WETLAND  STRATI	Yes No No CLASSIFICATION:  UM INDICATOR FACW FACW+	EVALUATOR: WEATHER: Clear ar SIZE: 100% PEM  SPECIES Taraxacum offic Potentilla sp	0.0189 Ac 0% PSS UPLAND	0.0076 Ha 0 % PFO	0% POW
the site? typical Situation)? a? CATION:  WETLAND  STRATI	No  CLASSIFICATION:  UM INDICATOR FACW	SIZE: 100% PEM  SPECIES Taraxacum offic Potentilla sp	0.0189 Ac 0 % PSS UPLAND	0 % PFO	
typical Situation)? a? CATION: WETLAND STRATI	No  CLASSIFICATION:  UM INDICATOR FACW	100% PEM  SPECIES  Taraxacum office  Potentilla sp	0 % PSS UPLAND	0 % PFO	
a? CATION:  WETLAND  STRATI	NO  CLASSIFICATION:  UM INDICATOR  FACW	100% PEM  SPECIES  Taraxacum office  Potentilla sp	0 % PSS UPLAND	0 % PFO	
CATION:  WETLAND  STRATI	CLASSIFICATION:  UM INDICATOR  FACW	100% PEM  SPECIES  Taraxacum office  Potentilla sp	0 % PSS UPLAND	0 % PFO	
CATION:  WETLAND  STRATI	UM INDICATOR FACW	100% PEM  SPECIES  Taraxacum office  Potentilla sp	0 % PSS UPLAND	0 % PFO	
WETLAND STRATE	UM INDICATOR FACW	SPECIES Taraxacum offic Potentilla sp	UPLAND		
STRATI	UM INDICATOR FACW	Taraxacum offic Potentilla sp			
STRATI	FACW	Taraxacum offic Potentilla sp	sinale	STRATUM	
з Н	FACW	Taraxacum offic Potentilla sp	inale		INDICATO
-		Potentilla sp		Н	FACU-
н	FACW	1	า	н	NS
		muja occiden		Т	FACW
ıt	100%				
SOILS			HYDROLO	)GY	
IIT: Philo silt lo	am (Ph)				
IT: Hol	ty	SOURCE OF HYDROLOG	3Y:	Seasonal flooding ar	nd groundwater see
ETLAND CORE SOIL SCO	RE.	DEPTH OF SURFACE W	ATER:		
ATRIX MOT	TLE TEXTURE	DEPTH TO FREE WATER	R IN SOIL PIT:		
		DEPTH TO SATURATED	SOIL:		
rock	rock	FIEL	D INDICATORS		
		PRIM	ARY INDICATORS		
TLAND FRINGE SOIL SC	ORE	Inund	ation		
				ches	
	<del></del>				
LIPLAND SOIL SCORE					
	TTLE TEXTLIBE	Dian	-	RS .	
		1			•<
				in opper 12 mone	•
1UYH3/6	зи юат				
		FAC	-Neutral Test		
	Hydric Sc	oil Indicators		<del></del>	
			retions		
edon		High	Organic Content in Surf	ace Layers in Sandy 9	Soils
		Orga	nic Streaking in Sandy S	30ils	
COW CHICHIG COOKS					
	Wetland	Determination			
Yes		Hydric Soil Present? Yes			
		Wetland? Yes			
	NIT: Philo silt to SIT	NIT: Philo silt loam (Ph)  HIT: Holly  ETLAND CORE SOIL SCORE  IATRIX MOTTLE TEXTURE  OYR3/2 10YR4/6 silt loam  rock rock  ETLAND FRINGE SOIL SCORE  MATRIX MOTTLE TEXTURE  UPLAND SOIL SCORE  MATRIX MOTTLE TEXTURE  10YR3/3 silt loam  Hydric So  edon  for  sture Regime  Conditions  Low Chroma Colors  Wetland  Yes  Yes	NIT: Philo silt loam (Ph)  NIT: Holly  ETLAND CORE SOIL SCORE  NATRIX MOTTLE TEXTURE  OYR3/2 10YR4/6 silt loam  rock rock rock  FIEL  PRIMA  ETLAND FRINGE SOIL SCORE  MATRIX MOTTLE TEXTURE  TEXTURE  MATRIX MOTTLE  TEXTURE   Wate  Drift I  Sedin  10YR3/3 silt loam  Oyrd  10YR3/3 silt loam  Oyrd  10YR3/6 silt loam  Oyrd  FAC  Hydric Soil Indicators  edon  High  Conditions  Liste  Conditions  Low Chroma Colors  Wetland Determination  Yes  Yes  Yes  Hydric Soil Present? Yes  Yes  Wetland? Yes	ATT: Philo silt loam (Ph) IT: Holly SOURCE OF HYDROLOGY: DEPTH OF SURFACE WATER: DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS DITITURE  MATRIX MOTILE  TEXTURE  SECONDARY INDICATOR  Oxidized Root Channels Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Concretions High Organic Content in Surf. Torganic Streaking in Sandy Status Regime  X Listed on Local Hydric Soil Other (Explain in Basis of Do.  Wetland Determination  Yes Yes Wetland? Yes Wetland? Yes	ITT: Prisk osit loam (Ph)  ITT: Holly  SOURCE OF HYDROLOGY: Seasonal flooding in ETLAND CORE SOIL SCORE  IATRIX MOTTLE TEXTURE  MATRIX MOTTLE TEXTURE  MATRIX MOTTLE TEXTURE  MATRIX MOTTLE  IEXTURE  SECONDARY INDICATORS  Drainage Patterns  SECONDARY INDICATORS  Water Stained Leaves  FAC-Neutral Test  Hydric Soil Indicators  Concretions  High Organic Content in Surface Layers in Sandy Soils  Listed on National Hydric Soils List  Conditions  Listed on National Hydric Soils List  Wetland Determination  Yes  Yes  Wetland?  Yes  Wetland?  Yes  Wetland?  Yes

WETLAND ID:	Wetland 38	· · · · · · · · · · · · · · · · · · ·		EVALUATOR:	PJD, B1	B, ERB, GOO, KJ	S
DATE:	21-Apr	-05			lear and cool		
	·	-05	Yes				
normal circumstances		tian10	No				
ne site significantly dis		uation)?					
ne area a potential pro			No	SIZE:	0.0482 Ac	0.0195 Ha	
DROGEOMORPHIC	CLASSIFICATION:		0.1001001701		0 % PSS	0 % PFO	0% POW
GETATION			CLASSIFICATION:	100% PEM	UPLAN		
	WE	TLAND		0.00		STRATUM	INDICATOR
SPE	CIES	STRATUM	INDICATOR	1	CIES		NS
Care	x sp.	н	85% FAC-OBL	1	Gramineae sp.	H	NS NS
Scirpus o	yperinus	н	FACW+	Quer	cus sp.	Т	NS
Juncus	effusus	н	FACW+				
ercent of Dominant Spire OBL, FACW, and			100%				
ic obe, i nov, and	<del> </del>	SOILS		1	HYDROL	.OGY	
MAPPED	SOIL UNIT:	Wyoming gravelly sandy k	oam (WyC)	<del>                                     </del>	****		
	SOIL UNIT:	Wet spots	. , .	SOURCE OF HYDE	SOLOGY:	Groundwater see	ps from spring house.
1110110		CORE SOIL SCORE		DEPTH OF SURFA			
DEPTH	MATRIX	MOTTLE	TEXTURE	l	WATER IN SOIL PIT:		
0-14"	10YR3/2	10YF4/4	silt loam	DEPTH TO SATUR			
0-14	iornaiz	1071144	Sik Adm		FIELD INDICATORS	<b>;</b>	
					PRIMARY INDICATOR		
***	WET AND	RINGE SOIL SCORE		<b>⊣</b> ×			
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Inundation Saturated in Upper 12 I	nches	
DECID	AITIAM	MOTIE	75/2/2/16		-	nones	
					Water Marks		
					_Drift Lines		
				×	_Sediment Deposits		
		ND SOIL SCORE			_Drainage Patterns SECONDARY INDICATO	NDC	
DEPTH	<u>MATRIX</u>	MOTTLE	TEXTURE	1			
0-4*	10YR3/3		silt loam		_Oxidized Root Channe	ls in Upper 12 inch	ės
4-16*	10YR3/5		sit loam		_Water Stained Leaves		
					_ FAC-Neutral Test		
<u> </u>			Hudric Soi	I Indicators			
	Histosol		Hydric 30ii		Concretions		
	Histic Epipedon				<ul> <li>High Organic Content in St</li> </ul>	urtace Layers in Sandy	Soils
	Sulfidic Odor				 Organic Streaking in Sand	y Soils	
	Aquic Moisture Regime			×	<ul> <li>Listed on Local Hydric Soil</li> </ul>	ls List	
<del> </del>	Reducing Conditions				Listed on National Hydric S	Soils List	
	Gleyed or Low Chroma	Colors			Other ( Explain in Basis of	Delineation)	
į X					_		
×							
×			Wetland De	etermination Hydric Soil Present			

Delineation follows the extent of grass, sedge, and soft rush community in drainage pattern and inundated area downslope of spring box.

		••	ETLAND DA				
WETLAND ID:	Wetland 39	A to a supply and a supply and a supply		EVALUATOR:	PJD, B1	B, ERB, GOO, KJ	\$
DATE:	21-Apr-	05		WEATHER: Clear as	nd cool		
ormal circumstance	s exist on the site?		Yes				
e site significantly di	sturbed (Atypical Situ	ation)?	No				
e area a potential pr			No				
ROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.2935 Ac	0.1188 Ha	
SETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WE1	LAND			UPLAN	D	
SPE	CIES	STRATUM	INDICATOR	SPECIES		STRATUM	INDICATO
	eghaniensis	т	FAC	Tsuga canade	ensis	т	FACU
	ex sp.	н	85% FAC-OBL	Acer rubrus	m	т	FAC
	rubrum	Т	FAC	Rhododendro	n sp.	SS	NS
	endron sp.	SS	NS	Quercus s	p.	т	NS
	anadensis	T	FACU	Musci sp.		н	NS
-	Gramineae sp.	н	NS				
rcent of Dominant S			75%				
e OBL, FACW, and		SOILS	7070		HYDROL	.OGY	
A.A.D.D.C.		Wyoming gravelly sandy loa	m (WvC)				
		Wet spots	( <b>,</b>	COLUDATION OF LINADIOLO	CV.	Ground	water seeps.
HYDHK	C SOIL UNIT:			SOURCE OF HYDROLO DEPTH OF SURFACE W			1-3*
DEDTU		ORE SOIL SCORE	TEXTURE	DEPTH TO FREE WATE			
DEPTH	MATRIX	MOTILE	silt loam	DEPTH TO SATURATED			0"
0-14*	10YR2/2		sandy loam		_D INDICATORS	3	
14-18"	10YR4/1		Sandy Room	1	IARY INDICATOR		
	WET AND E	RINGE SOIL SCORE		X Inun	dation		
DEPIH	MATRIX	MOTTLE	TEXTURE	, ildin	rated in Upper 12 I	nches	
DELILI	MATTINA				er Marks		
					Lines		
					iment Deposits		
	I IDI AN	ID SOIL SCORE			nage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		NDARY INDICATO	OR\$	
0-4"	10YR2/1	WOJ IEE	loam	Ovid	dized Boot Channe	ls in Upper 12 inch	es
4-16°	10YF4/6		silt loam		ter Stained Leaves		
4-10	1011740				C-Neutral Test		
				170	J-14600001 1001		
			Hydric Soil	Indicators			
	Histosol		,		cretions		
	- Histic Epipedon			High	Organic Content in S	urtace Layers in Sandy	Soils
×	- Sulfidic Odor				anic Streaking in Sand		
	Aquic Moisture Regime			X Liste	ed on Local Hydric Soi	ts List	
×	- Reducing Conditions			List	ed on National Hydric (	Soils List	
	Gleyed or Low Chroma	Colors		Oth	er (Explain in Basis of	Delineation)	
X	,						
			Wetland De	etermination			
Hydrophytic Vegetation	on Present?	Yes		Hydric Soil Present? Yes	s		
Wetland Hydrology P		Yes		Wetland? Yes	s		
BASIS OF DEL							
1							
1							

		44 [ ] [ ] [ ] [ ]					
WETLAND ID:	Wetland 40		EVALUATOR:		PJD, BTB, E	RB, GOO, KJS	
DATE:	21-Apr-05		WEATHER:	Clear and cool			
Do normal circumstances	exist on the site?	Yes					
Is the site significantly dis	sturbed (Atypical Situation)?	No					
Is the area a potential pro	oblem area?	No					
HYDROGEOMORPHIC	CLASSIFICATION:		SIZI	E: 0	.7056 Ac	0.2855 Ha	

ROGEOMORPHI	C CLASSIFICATION:			SIZE:	0.7056 Ac	0.2855 Ha	
ETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETI	LAND			UPLAN	ID .	
SF	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	arundinacea	н	FACW	Tsuga ca	nadensis	T	FACU
Ca	rex sp.	H	85% FAC-OBL	Acer n	ubrum	т	FAC
	us effusus	Н	FACW+	Rhodode	ndron sp.	SS	NS
	ns capensis	н	FACW	Quero	us sp.	т	NS
	,			Muso	si sp.	н	NS
rcent of Dominant	Species that						
OBL, FACW, an	d FAC		100%				
	S	OILS			HYDRO	LOGY	
MAPPI	ED SOIL UNIT:	Wyoming gravelly sandy loa	ım (WyC)	1		Streem fronting a	nd groundwater seeps.
HYDR	IC SOIL UNIT:	Wet spots		SOURCE OF HYDR		Steam Rooming 4	70 g100/10/12/14/14/14/14/14
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFAC			
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-10"	7.5YR2.5/2		sit toam	DEPTH TO SATURA		_	
10-18"	10YFI3/1		sit loam	1	FIELD INDICATORS		
				4	PRIMARY INDICATOR	is	
	WETLAND FF	RINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTILE	TEXTURE	×	Saturated in Upper 12	Inches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	<u>UPLANI</u>	D SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SI	ECONDARY INDICAT		
0-4*	10YR2/1		loam		Oxidized Root Channe	els in Upper 12 inch	ies
4-16"	10YR4/6		silt loam	×	Water Stained Leaves	s	
					FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions		
	Histic Epipedon				High Organic Content in 5	Surface Layers in Sand	y Soils
Х	Sulfidic Odor				Organic Streaking in San	dy Soils	
	Aquic Moisture Regime			x	Listed on Local Hydric So		
Х	Reducing Conditions				Listed on National Hydric	Soils List	
Ж	Gleyed or Low Chroma (	Colors			Other (Explain in Basis o	of Delineation)	
			Wetland De	etermination			
Hydrophytic Vegeta	tion Present?	Yes		Hydric Soil Present?	Yes		
1	Present?	Yes		Wetland?	Yes		

#### BASIS OF DELINEATION:

Delineation follows extent of bermed former pond area with ample evidence of hydrology along with reed canary grass, sedge, soft rush community with seeps contributing hydrology from upslope toe of hill.

PJD, BTB, ERB, GOO, KJS EVALUATOR: WETLAND ID: Wetland 41 WEATHER: Clear and cool DATE: 21-Apr-05 0 Do normal circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential problem area? 0.0450 Ha 0.1111 Ac HYDROGEOMORPHIC CLASSIFICATION: SIZE: 100 % PFO 0% POW

GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WET	LAND			UPL	AND	
SP	ECIES	STRATUM	INDICATOR	\$	SPECIES	STRATUM	INDICATOR
	rubrum	Т	FAC	Tsug	a canadensis	Ŧ	FACU
	tendron sp.	SS	NS		or Gramineae sp.	н	NS
	canadensis	T	FACU				
	rex sp.	H	85% FAC-OBL				
ercent of Dominant	Species that						
ire OBL, FACW, and			67%				
THE ODE, I ACVV, and		OILS	0170		HYDR	OLOGY	
MADDE	ED SOIL UNIT:	Alluvial land (As)					
	IC SOIL UNIT:	Holly, Wayland		COURCE OF IN	(DDOLOGY:		and groundwater associat n creek.
TIDA		ORE SOIL SCORE		SOURCE OF HY DEPTH OF SUR		411	
DEPTH	MATRIX	MOTTLE	TEXTURE	Į.	E WATER IN SOIL PIT:		
0-6,	10YR4/3	MOTILE	sandy loam	DEPTH TO SAT			
6-14"	10YR3/1	10YR4/6	sandy loam		FIELD INDICATO	RS	
>14"	rock	10111410	rock		PRIMARY INDICATO		
		RINGE SOIL SCORE		1	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 1	2 Inches	
	Менто	III O I TEM		<u> </u>	Water Marks	2 Mones	
				×	Drift Lines		
					Sediment Deposits		
	LIPI ANI	D SOIL SCORE		<del> </del>	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY INDICA	TORS	
0-12"	10YR4/3	Private Control of the Control of th	silt loam w/ gravels	ļ	Ovidized Boot Chan	nels in Upper 12 inch	es
>12"	rock		rock	1.	Water Stained Leav		
	10011				FAC-Neutral Test	<b>C</b> 3	
			Hydric Soil I	ndicators			
	Histosol		•		Concretions		
	Histic Epipedon				High Organic Content in	n Surtace Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in Sa	andy Soils	
	Aquic Moisture Regime			х	Listed on Local Hydric	Soils List	
	Reducing Conditions				Listed on National Hydr	nic Soils List	
×	Gleyed or Low Chroma	Colors			Other ( Explain in Basis	s of Delineation)	
			Wetland Det		_		
Hydrophytic Vegetati	ion Present?			Hydric Soil Pres	sent?		
Wetland Hydrology F	Present?			Wetland?	·		

#### BASIS OF DELINEATION:

Delineation follows extent of the floodplain bench with debris line and saturation with low chroma mottled soils with mix of red maple, rhododendron, and eastern hemlock.

			VETLAND DAT				
WETLAND ID:	Wetland 42			EVALUATOR:	•	TB, ERB, GOO, KJS	5
DATE:	21-Ap	or-05		WEATHER: Clea	ar and cool		
normal circumstanc	es exist on the site?		Yes				
ne site significantly o	disturbed (Atypical Si	tuation)?	No				
ne area a potential p	problem area?		No				
DROGEOMORPHI	C CLASSIFICATION:			SIZE:	1.0201 Ac	0.4127 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WE	ETLAND		<del></del>	UPLAN		
SP	PECIES	STRATUM	INDICATOR	SPEC		STRATUM	INDICATO
Betula al	lleghaniensis	Т	FAC	Tsuga can	adensis	Т	FACU
Ca	rex sp.	Н	85% FAC-OBL	Poaceae or Gr	amineae sp.	Н	NS
Ace	r rubrum	T	FAC				
Tsuga	canadensis	Т	FACU				
Spha	agnum sp.	н	NS				
Impatie	ens capensis	н	FACW				
ercent of Dominant	Species that						
re OBL, FACW, and	d FAC		75%				
		SOILS			HYDROL	.OGY	
MAPPE	ED SOIL UNIT:	Wyoming gravelly sandy to	am (WyC)				
HYDRI	IC SOIL UNIT:	Wet spots		SOURCE OF HYDRO	LOGY:	Groundw	ater seeps.
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFACE			1-5*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-10°	7.5YR2.5/2		silt loam	DEPTH TO SATURAT			0-
10-18*	10YR3/1		silt loam	1	IELD INDICATORS RIMARY INDICATOR:		
	WETLAND	FRINGE SOIL SCORE		X	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	× s	aturated in Upper 12 I	nches	
				w	/ater Marks		
				D	rift Lines		
				s	ediment Deposits		
	UPLA	IND SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	CONDARY INDICATO	RS	
0-12"	10YR4/3		silt loam w/ gravels		oxidized Root Channel	s in Upper 12 inche	S
>12"	rock		rock	v	Vater Stained Leaves		
				F	FAC-Neutral Test		
			Hydric Soil I	Indicators			
	Histosol				Concretions		
	Histic Epipedon			1	High Organic Content in Su	rrtace Layers in Sandy S	Boils
х	Sulfidic Odor				Organic Streaking in Sandy	Soils	
	Aquic Moisture Regim	е		x	isted on Local Hydric Soil	s List	
Х	Reducing Conditions				isted on National Hydric S	ioils List	
×	— Gleyed or Low Chrom —	a Colors			Other (Explain in Basis of	Delineation)	
			Wetland Det	ormination			
i	ion Dans tO	Ven	wetiand Det	Hydric Soil Present?	Vec		
Mudmobadia Vacatati	On Present?	Yes			Yes		
Hydrophytic Vegetati Wetland Hydrology P		Yes					

WETLAND ID: Wetland 43			EVALUATOR:	EVALUATOR:		RB, GOO, KJS
DATE:	21-Apr-05		WEATHER:	Clear and cool		
Do normal circumstance	s exist on the site?	Yes				
Is the site significantly di	sturbed (Atypical Situation)?	No				
Is the area a potential pr	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	Ē: 0.	.3895 Ac	0.1576 Ha

BOGEOMORPHIC	CLASSIFICATION:			SIZE:	0.3895 Ac	0.1576 Ha	
SETATION	CEASON ICATION.		CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
ETATION	WET	TLAND			UPLANI	)	
Spr	ECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	ennsylvanica	Т	FACW	Rubus alle	gheniensis	н	FACU-
·	rubrum	т	FAC	Carya	ovata	T	FACU-
	Gramineae sp.	н	NS	Acer	rubrum	Ŧ	FAC
	ns capensis	Н	FACW	ļ			
	rum viride	н	FACW+				
	a benzoin	SS	FACW-	1			
•	us effusus	н	FACW+				
Janes	is onded						
rcent of Dominant S	Species that						
e OBL, FACW, and			100%				
		SOILS		HYDROLOGY			
MAPPE	D SOIL UNIT:	Rextord gravelly silt loan	(ReA)				
HYDRIC	C SOIL UNIT:	Rexford		SOURCE OF HYDR	IOLOGY:	Groundwater seep disch	arge and seasonal satur
	WETLAND C	CORE SOIL SCORE		DEPTH OF SURFA	CE WATER:		1"
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE V	VATER IN SOIL PIT:		
0-4"	10YR3/2	10YFI4/6	silt loam	DEPTH TO SATUR	ATED SOIL:		0*
>4*	rock		rock		FIELD INDICATORS		
					PRIMARY INDICATORS	5	
	WETLAND F	RINGE SOIL SCORE		х	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 li	nches	
				×	Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAN	ND SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICATO		
Rock	rock		rock		Oxidized Root Channe	ls in Upper 12 inch	es
				х	_Water Stained Leaves		
					_FAC-Neutral Test		
		, and the second		_ !			
			Hydric Sol	I Indicators	Concretions		
	Histosol -				High Organic Content in St	irtace Lavers in Sandi	Soils
	Histic Epipedon				Organic Streaking in Sand		
	Sulfidic Odor			X	Listed on Local Hydric Soil		
	Aquic Moisture Regime			^	Listed on National Hydric S		
Х	Reducing Conditions	Color			Other (Explain in Basis of		
*	Gleyed or Low Chroma	Colors			— Otter ( Experim book or		
	······································		Wetland D	etermination			
Liudronbudio Vanat-iii	on Proceed?	Yes	rictiana Di	Hydric Soil Present	? Yes		
Hydrophytic Vegetation	Un riesent?	162		Wetland?	Yes		

Delineation follows extent of the red maple, green ash, and spicebush community with strong groundwater seep discharge and evidence of saturation, drainage patterns, and water staining with limited or no soil. This area is extremely rocky.

			Mt. Airy L					
			WETLAND DA	TA FORM EVALUATOR:	was a large and the	PJD, BTE	3, ERB, GOO, KJ	ŝ
WETLAND ID:	Wetland 44			WEATHER:	Clear and cool	, , , , , , ,		
DATE:	21- <b>A</b> pr-	05		WEATHER.	Clear and door			
Do normal circumstances e	xist on the site?		Yes					
s the site significantly distu	rbed (Atypical Situa	ation)?	No					
s the area a potential probl	lem area?		No		_		0.0660 Ha	
HYDROGEOMORPHIC CL	ASSIFICATION:			SIZ		).1631 Ac		
VEGETATION			CLASSIFICATION:	0% PEM	0 % PS		100 % PFO	0% POW
	WETLAND					UPLAND		
SPECI	 E§	STRATUM	INDICATOR	SPECIES			STRATUM	INDICATOR
Fraxinus penn	nsylvanica	Т	FACW	Quercus alba			τ	FACU
Acer rub	•	т	FAC	Carya ovata			Т	FACU-
Lindera be	enzoin	SS	FACW-	к	almia latifolia		SS	FACU
Osmund		Н	FAC - OBL	1	Berberis sp.		н	NS
Berberis	•	н	NS					
Percent of Dominant Spe	ecies that							
are OBL, FACW, and FA	AC		100%					
	5	OILS				HYDROLO	OGY	
MAPPED S	SOIL UNIT: L	ackawanna extremely sto	ny loam (LbB)	Ì			Consistent dischause	je, surface water runoff, a
HYDRIC S	OIL UNIT:			SOURCE OF H	IYDROLOGY:		Season	e, surrace water runori, lei saturation.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SU	RFACE WATER:			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FR	EE WATER IN SO	OIL PIT:		

OBL, FACW, a	nd FAC	_	100%		
	so	LS			HYDROLOGY
MAPF	PED SOIL UNIT: Lack	awanna extremely storry loam	(LbB)		Groundwater discharge, surface water runoff, and
HYD	RIC SOIL UNIT:			SOURCE OF HYDRO	OLOGY: seesonal saturation.
	WETLAND COL	RE SOIL SCORE		DEPTH OF SURFAC	
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	
0-4*	10YR2/2		organic	DEPTH TO SATURA	
4-12°	2.5Y5/2	2.5Y5/3 and 10YR5/6	silt loam	i	FIELD INDICATORS PRIMARY INDICATORS
	WETLAND FRI	NGE SOIL SCORE	· · · · · · · · · · · · · · · · · · ·		Inundation
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 Inches
	<u> </u>				Water Marks
					Drift Lines
					Sediment Deposits
	UPLAND	SOIL SCORE		×	Drainage Patterns
DEPTH	MATRIX	MOTTLE	TEXTURE		ECONDARY INDICATORS
0-4"	10YR3/2	-	organic/mineral mix		Oxidized Root Channels in Upper 12 inches
4-12"	10YR4/4		sitt loam		Water Stained Leaves
>12"	rock		rock		FAC-Neutral Test
	<u> </u>		Hydric Soll I	ndicators	
	Histosol		.,,		Concretions
	Histic Epipedon				High Organic Content in Surface Layers in Sandy Soils
x	Sulfidic Odor				Organic Streaking in Sandy Soils
	Aquic Moisture Regime				Listed on Local Hydric Soils List
x	Reducing Conditions				Listed on National Hydric Soils List
*	Gleyed or Low Chroma Co	dors			Other ( Explain in Basis of Delineation)
			Wetland Det		
	ation Present?	Yes		Hydric Soil Present?	Yes

#### BASIS OF DELINEATION:

Delineation follows the extent of the red maple, green ash, and spicebush community with standing water, water marks, and drainage patterns following low chroma and mottled soils.

WETLAND ID:	Wetland 45			EVALUATOR:	PJD, BTI	3, ERB, GOO, KJS	5
DATE:	21-Apr-05			WEATHER: Cle	ear and cool		
normal circumstance		Y	es				
	sturbed (Atypical Situation)?		0				
ne area a potential pr			lo				
DROGEOMORPHIC				SIZE:	0.0382 Ac	0.0155 Ha	
	CLASSIFICATION.		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
GETATION	WET AND		, DAGGII IOATION.		UPLAND	)	
	WETLAND	CTRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATO
	CIES	STRATUM	NS	Poaceae or G		н	NS
Poaceae or G	Gramineae sp. H		NO	Taraxacun		н	FACU-
ercent of Dominant S re OBL, FACW, and			#DIV/0!				
	SOILS				HYDROLO	JGY	
MAPPEL	SOIL UNIT:	Philo silt loam (Ph)		1			
HYDRIC	SOIL UNIT:	Holly		SOURCE OF HYDR	OLOGY:	Groundwater seep a	nd seasona) saturat
	WETLAND CORES	OIL SCORE		DEPTH OF SURFAC	CE WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-12"	10YR3/1	10YR4/3	silt loam	DEPTH TO SATURA	ATED SOIL:		
>12*	rock		rock		FIELD INDICATORS		
					PRIMARY INDICATORS		
	WETLAND FRINGE	SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 In	ches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAND SOIL	SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SI	ECONDARY INDICATOR	RS	
0-8*	10YR3/3		sit loam		Oxidized Root Channels	in Upper 12 inche	s
8-16*	10YR3/4		silt loam		Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soi	I Indicators			<u></u>
	Histosol				Concretions		
	Histic Epipedon				- High Organic Content in Sur	face Layers in Sandy	Soils
	Sulfidic Odor				- Organic Streaking in Sandy	Soils	
	Aquic Moisture Regime			×	- Listed on Local Hydric Soils	List	
	Reducing Conditions			#n	<ul> <li>Listed on National Hydric So</li> </ul>	oils List	
	Gleyed or Low Chroma Colors				 Other (Explain in Basis of D	Delineation)	
	•						
			Wetland D	etermination			
				Hydric Soil Present?	Yes		
Hydrophytic Vegetation	n Present?	Yes		Wetland?	Yes		

Delineation follows the extent of seep and groundwater discharge in mowed grass area with low chroma mottled soils.

WETLAND ID:	LAND ID: Wetland 46		EVALUATOR:	PJD, BTB, AJL, RCL, ERB, GOO, KJS		
DATE:	22-Apr-05		WEATHER: 50%	50% overcast and 50 degrees		
Do normal circumstance	es exist on the site?	Yes				
is the site significantly d	isturbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0530 Ac	0.0214 Ha	

PROGEOMORPHIC (	CLASSIFICATION:			SIZE:	0.0530 Ac	0.0214 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETLA	ND			UPLAN	D	
SPE	CIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Osmun	da sp.	Н	FAC - OBL	Quercu	s rubra	Т	FACU-
Carya	ovata	Т	FACU-	Kalmia	latifolia	SS	FACU
Juncus	effusus	н	FACW+	Acer r	ubrum	Т	FAC
Poaceae or G	iramineae sp.	Н	NS	Rubi	us sp.	н	NS
rcent of Dominant Sp							
e OBL, FACW, and I			67%	<del> </del>	HYDROL	OGY	
	SOI				HIDHOL		
	SOIL UNIT: Oquaga-La	ackawanna extremely sto	ony loams (OxC)	Į.		Ground	water seeps.
HYDRIC	SOIL UNIT:			SOURCE OF HYDR			0-2*
	WETLAND COF		TEVTUBE	DEPTH TO FREE W			
DEPTH	MATRIX	MOTTLE	TEXTURE silt loam	DEPTH TO SATURA			0*
0-8*	10YR3/2	10YR6/8	silt loam		FIELD INDICATORS		
8-12"	10YR3/2	10446/8	Siit Koarii	L	PRIMARY INDICATORS		
	MITTI AND ERIN	IGE SOIL SCORE		┥	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 li	nches	
20.111	MATHIC	<u> </u>			Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAND S	SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICATO	RS	
0-4"	10YR2/1		sit loam	1	Oxidized Root Channel	ls in Upper 12 inch	es
4-16"	10YR3/3		silt loam	×	Water Stained Leaves		
					FAC-Neutral Test		
	and the state of t						
			Hydric Sol	I Indicators	Concretions		
	Histosol				High Organic Content in St	idace Lavers in Sandy	Soils
	Histic Epipedon				Organic Streaking in Sandy		•
	Sulfidic Odor				Listed on Local Hydric Soil		
	Aquic Moisture Regime				Listed on National Hydric S		
	Reducing Conditions				Other (Explain in Basis of		
<u> </u>	Gleyed or Low Chroma Col	ors				- · · · · · ·	
			Wetland D	etermination			
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology Pre	esent?	Yes		Wetland?	Yes		

Delineation follows extent of sedge and sphagnum moss community in drainage pattern and topographic low area with saturated and inundated soils that have low chroma and mottled soils.

WETLAND ID:	WETLAND ID: Wetland 47		EVALUATOR:	PJD, BTB, AJL, RCL, ERB, GOO, KJS		
DATE:	22-Apr-05		WEATHER:	50% overcast and 50 degrees		
Do normal circumstances exist on the site?		Yes				
Is the site significantly d	isturbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	: 0.0518 Ac	0.0210 Ha	

GETATION		C	LASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND	)			UPLA	ND	
SPE	CIES	STRATUM	INDICATOR	SPI	ECIES	STRATUM	INDICATOR
Juncus	s effusus H		FACW+	Comptoni	ia peregrina	н	NG(UPL)
Car	ex sp. H	ı	85% FAC-OBL	Poaceae or	Gramineae sp.	н	NS
Typha	a latifolia H	1	OBL	Rhus	typhina	SS	NG(UPL)
	bium sp. H	1	NS	Populus	tremuloides	Т	NI
•				Mu	sci sp.	н	NS
ercent of Dominant S	Species that						
re OBL, FACW, and	FAC	····	100%	ļ			
	SOILS				HYDRO	LOGY	
	D SOIL UNIT: Oquaga-Lack	awanna extremely storry	loams (OxC)	1		Direct precipitation colle	ction in topographic low a
HYDRK	SOIL UNIT:			SOURCE OF HYDE		intermitte	ent saturation.
	WETLAND CORE			DEPTH OF SURFA			
DEPTH	MATRIX	MOTTLE	TEXTURE	1	WATER IN SOIL PIT:		
0-10°	5YR4/2	10YR4/6	silt loam	DEPTH TO SATUR		_	
>10"	rock		rock		FIELD INDICATOR		
				4	PRIMARY INDICATOR	RS	
	WETLAND FRINGE			<u> </u>	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12	Inches	
					Water Marks		
				ļ	_Drift Lines		
	·····				Sediment Deposits		
	UPLAND SOI				_Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	1	SECONDARY INDICAT	ORS	
0-12"	5YR5/3	5YR6/8 and 5YR5/6		×	Oxidized Root Channe	els in Upper 12 inche	es
>12"	rock		rock		_Water Stained Leaves	5	
				×	_FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol			,	Concretions		Calle
···	Histic Epipedon				High Organic Content in S		OUIS
	Sulfidic Odor				Organic Streaking in Sand		
X	Aquic Moisture Regime				Listed on Local Hydric So		
	Reducing Conditions				Listed on National Hydric —		
×	Gleyed or Low Chroma Colors				Other (Explain in Basis o	f Delineation)	
			Wetland De	termination			
Hydrophytic Vegetatio	n Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology Pr	esent?	Yes		Wetland?	Yes		

Delineation follows the extent of soft rush and sedge community along topographic low excavated tire rut area with low chroma, mottled, and saturated soils.

WETLAND ID: V		•	ETLAND DA	1711 011111			
	Vetland 48			EVALUATOR:	PJD, BTB, A	JL, RCL, ERB, GO	O, KJS
DATE:	22-Apr-05			WEATHER: 5	60% overcast and 50 de	grees	
normal circumstances exi	st on the site?		Yes				
he site significantly disturb	ed (Atypical Situatio	n)?	No				
he area a potential proble	m area?		No				
DROGEOMORPHIC CLA	SSIFICATION:			SIZE:	0.0313 Ac	0.0127 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETLA	ND			UPLA		
SPECIES	i i	STRATUM	NDICATOR	SE	ECIES	STRATUM	INDICATO
Juncus effu	sus	н	FACW+	1	nia peregrina	н	NG(UPL)
Carex sp	<b>.</b>	н	85% FAC-OBL	1	Gramineae sp.	H	NS FAC
Typha latik	olia	н	OBL	betua	populifolia	т	,,,
ercent of Dominant Specienter OBL, FACW, and FAC			100%				
	SOII	LS			HYDRO	LOGY	
MAPPED SO	IL UNIT: Oquaga-La		ony loams (OxC)				
HYDRIC SO	L UNIT:			SOURCE OF HYD	ROLOGY:	Direct precipitation colle intermitte	ction in topographic k nt saturation.
	WETLAND COR	E SOIL SCORE		DEPTH OF SURFA	ACE WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE	WATER IN SOIL PIT:		
0-8"	5YR4/2	5YR5/6	sandy sitt loam	DEPTH TO SATU	RATED SOIL:		
8-12"	5YR4/2		silt loam		FIELD INDICATORS	S	
>12"	rock		rock	_	PRIMARY INDICATOR	RS	
	WETLAND FRIN	GE SOIL SCORE		ļ	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	х	_Saturated in Upper 12	Inches	
					_Water Marks		
					_ Drift Lines		
					_Sediment Deposits		
		OIL SCORE			_ Drainage Patterns	one	
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY INDICAT		
0-10°	5YR5/3		sandy loam	×	Oxidized Root Channe		es
>10"	rock		rock		Water Stained Leaves	3	
				×	FAC-Neutral Test		
			Hydric Soil	Indicators			······································
Histo	sol		Tyuno 301		Concretions		
	Epipedon				High Organic Content in S	Surface Layers in Sandy	Soils
	lic Odor				Organic Streaking in Sand		
	: Moisture Regime				Listed on Local Hydric So		
	icing Conditions				Listed on National Hydric		
	ed or Low Chroma Colo	rs			Other (Explain in Basis of	f Delineation)	
			Wetland De	etermination			
4	ent?	Yes		Hydric Soil Presen	t? Yes		
Hydrophytic Vegetation Pres				Wetland?	Yes		

		W	ETLAND DA	TA FORM			
WETLAND ID:	Wetland 49			EVALUATOR:	PJD, BTB, AJ	L, RCL, ERB, GOO	), KJS
DATE:	22-Apr-0	õ		WEATHER: 50% o	vercast and 50 degr	rees	
normal circumstances	exist on the site?	)	/es				
e site significantly dis	sturbed (Atypical Situat	ion)?	No				
ne area a potential pro	oblem area?	ŧ	No				
DROGEOMORPHIC (	CLASSIFICATION:			SIZE:	0.9054 Ac	0.3663 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WETL	AND			UPLANI		INDICATOR
SPEC	CIES	STRATUM	INDICATOR	SPECIE	_	STRATUM	INDICATOR NS
Care	x sp.	н	85% FAC-OBL	Amelanchie		SS T	FACU-
Acer ru	ubrum	T	FAC	Quercus ru		T	FAC
Vaccinium c	·	SS	FACW-	Acer rubru		, н	NS
Sphagn	num sp.	н	NS	Rubus sį Kalmia latif		SS	FACU
ercent of Dominant Sp			100%				
e OBL, FACW, and F		ILS	10076		HYDROL	OGY	
MAPPED		Lackawanna extremely stor	ny loams (OxB)				
	SOIL UNIT:			SOURCE OF HYDROLO	OGY:	Surface wa	ter collection.
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFACE V			1-5*
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATE	ER IN SOIL PIT:		
0-4*	10YR3/1		sill loam	DEPTH TO SATURATE	D SOIL:		or
4-10"	10YR5/1		sit loam	FIE	LD INDICATORS		
>10"	rock		rock	PRIA	MARY INDICATORS	i	
	WETLAND FRI	NGE SOIL SCORE		X Inun	dation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Satu	ırated in Upper 12 In	nches	
				Wat	er Marks		
				Drift	Lines		
		00000			iment Deposits		
DEDTU		SOIL SCORE	TEXTURE		inage Patterns  NDARY INDICATO	RS	
DEPTH 0-3"	MATRIX 10YR3/2	MOTTLE	sit loam	ł			c
3-16"	10YR4/4		sit loam		dized Root Channels ter Stained Leaves	s in Opper 12 mone	3
<b>3</b> -10	101114/4		S	***a	C-Neutral Test		
				FA	5-ivedital Test		
			Hydric Soil	Indicators			
H	listosol		•	Con	cretions		
	Histic Epipedon			High	n Organic Content in Sur	tace Layers in Sandy S	Soils
× s	Sulfidic Odor			Org	anic Streaking in Sandy	Soils	
, p	Aquic Moisture Regime			Liste	ed on Local Hydric Soils	List	
X F	Reducing Conditions			List	ed on National Hydric So	oils List	
	Gleyed or Łow Chroma Co	lors		Oth	er (Explain in Basis of D	Delineation)	
				Jan 1981 1981 1981 1981 1981 1981 1981 198			
			Wetland De	etermination			
Hydrophytic Vegetation I	Present?	Yes		Hydric Soil Present? Yes	\$		
Wetland Hydrology Pres	sent?	Yes		Wetland? Yes	s		
		d and inundated flat a	and topographic low	area with red maple, high	n bush blueberry, a	and sphagnum mo	oss community
			and topographic low	area with red maple, high	n bush blueberry, a	and sphagnum mo	oss c

WETLAND ID:	Wetland 50		EVALUATOR:	PJD, BTB, AJL, R	CL, ERB, GOO, KJS	
DATE:	22-Apr-05		WEATHER:	50% overcast and 50 degrees		
Do normal circumstance	s exist on the site?	Yes				
Is the site significantly d	sturbed (Atypical Situation)?	No				
Is the area a potential p	oblem area?	No				
HADBUCEOMOBBRIO	CLASSIEICATION:		SIZE	0.0052 Ac	0.0021 Ha	

e area a potential problem area?		No				
PROGEOMORPHIC CLASSIFICATION	ON:		SIZE:	0.0052 Ac	0.0021 Ha	
GETATION		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND			UPLA	ND	
SPECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Carex sp.	н	85% FAC-OBL	Rosa n	nultiflora	н	FACU
Solidago flexicaulis	н	FACU	Vaccinium	corymbosum	SS	FACW-
Nasturtium officinale	н	OBL.	Querc	us rubra	Т	FACU-
			Viti	s sp.	V	NS
			Acer	nubrum .	Т	FAC
			Quero	cus alba	Т	FACU
			Rub	us sp.	н	NS
			Quercu	s montana	т	UPL
rcent of Dominant Species that						
e OBL, FACW, and FAC		67%				
	SOILS			HYDRO	LOGY	
MAPPED SOIL UNIT:	Oquaga-Lackawanna extremely	storny loarns (OxB)				
HYDRIC SOIL UNIT:			SOURCE OF HYDE	OLOGY:	Groundwater seep an	id surface water collection
	ND CORE SOIL SCORE		DEPTH OF SURFA			>6*
DEPTH MATRIX		TEXTURE	DEPTH TO FREE WATER IN SOIL PIT:			
0-4" 2.5Y5/1		sity clay toam	DEPTH TO SATURATED SOIL:			O*
4-16" 2.5 <b>Y6</b> /1		silty clay loam	FIELD INDICATOR		s	
				PRIMARY INDICATOR	RS	
WETLAN	ND FRINGE SOIL SCORE		×	Inundation		
DEPTH MATRI		TEXTURE	X Saturated in Upper 13		Inches	
		Water Marks				
				Drift Lines		
				Sediment Deposits		
U	PLAND SOIL SCORE		×	Drainage Patterns		
DEPIH MATE		TEXTURE	s	ECONDARY INDICAT	ORS	
0-8" 10YR5		loam		Oxidized Root Chann	els in Upper 12 inch	es
>8" rock		rock	×	Water Stained Leave		
				FAC-Neutral Test		
		Hydric Soi	I Indicators			
Histosol				Concretions		
Histic Epipedon				 High Organic Content in t	Surface Layers in Sandy	Soils
Sulfidic Odor				 Organic Streaking in San	dy Soils	
Aquic Moisture Re	egime		· · · · · · · · · · · · · · · · · · ·	Listed on Local Hydric So	oils List	
X Reducing Condition				 Listed on National Hydric	Soils List	
Gleyed or Low Ch				 Other (Explain in Basis o	of Delineation)	
<u> </u>				_		
		Wetland D	etermination			
Hydrophytic Vegetation Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology Present?	Yes		Wetland?	Yes		

WETLAND ID:		VV	ETLAND DA		DID DTD AII	L, RCL, ERB, GOO	). KJS
	Wetland 51			EVALUATOR:			٥, ١٠
DATE:	22-Apr-05			WEATHER: 50%	overcast and 50 degre		
ormal circumstanc	es exist on the site?		es				
e site significantly	disturbed (Atypical Situation	n)? N	lo				
e area a potential (	problem area?	1	10		0.0400 4-	0.0041 Ha	
ROGEOMORPHI	C CLASSIFICATION:			SIZE:	0.0102 Ac	0.004111a	0% POW
SETATION		(	CLASSIFICATION:	100% PEM	0 % PSS		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	WETLAN	łD			UPLAND	STRATUM	INDICATO
SE	PECIES	STRATUM	INDICATOR	SPEC		H	FACU-
Onocle	ea sensibilis	н	FACW	Rubus allegi		т	FAC
Ca	arex sp.	н	85% FAC-OBL	Betula por		' Н	NG(UPL)
				Comptonia į			
rcent of Dominant e OBL, FACW, an	•		100%				
	SOIL	s			HYDROL	OGY	
MAPPI	ED SOIL UNIT: Oquaga-Lac	ckawanna extremely stor	y loams (OxC)				
HYDR	RIC SOIL UNIT:			SOURCE OF HYDRO	LOGY:	Runoff, precipitation	, and seasonel satural
And the Anti-Order Principles	WETLAND CORE	E SOIL SCORE		DEPTH OF SURFACE	WATER:		
DEPTH	MATRIX	MOTTLE	<b>TEXTURE</b>	DEPTH TO FREE WA	TER IN SOIL PIT:		
0-6*	5YR4/2	10YR4/4	sandy loam	DEPTH TO SATURAT			
6-12"	5YR4/2		gravelly loam	1	IELD INDICATORS		
>12"	rock		rock	PI	RIMARY INDICATORS	5	
	WETLAND FRING	GE SOIL SCORE			undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	xs	aturated in Upper 12 Ir	nches	
				v	Vater Marks		
					Prift Lines		
					Sediment Deposits		
	UPLAND SO	OIL SCORE			orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICATO		
disturbed			disturbed		Oxidized Root Channel	s in Upper 12 inch	es
				<u> </u>	Water Stained Leaves		
					FAC-Neutral Test		
			Hudria Sai	I Indicators			
	. N1		riyuric soi		Concretions		
	Histosol				High Organic Content in Su	ırtace Layers in Sandy	/ Soils
	Histic Epipedon				Organic Streaking in Sandy		
	Sulfidic Odor  Aquic Moisture Regime				Listed on Local Hydric Soil		
	Acture Manieture Heatime				Listed on National Hydric 5		
					Other (Explain in Basis of		
X	Reducing Conditions						
×		rs					
	Reducing Conditions	rs	Wetland D	etermination			
ĸ	Reducing Conditions  Gleyed or Low Chroma Color		Wetland D	etermination Hydric Soil Present?	Yes		
	Reducing Conditions Gleyed or Low Chroma Color tion Present?	Yes Yes	Wetland D		Yes Yes		

FOR: PJD, BTB, AJL, RCL, ERB, GOO, KJS ER: 50% overcast and 50 degrees  SIZE: 0.0762 Ac 0.0308 Ha  EM 0 % PSS 0 % PFO 100% POW  UPLAND  SPECIES STRATUM INDICATOR
SIZE: 0.0762 Ac 0.0308 Ha  M 0 % PSS 0 % PFO 100% POW  UPLAND
UPLAND UPDATED
UPLAND
UPLAND
UPLAND 10% PSS 0 % PFO 100% POW
UPLAND
WDIOATO
SPECIES SHIPTON INSPECTOR
HYDROLOGY
OF HYDROLOGY: Groundwater and upslope rundf.  OF SURFACE WATER:
TO FREE WATER IN SOIL PIT:
O SATURATED SOIL:
FIELD INDICATORS
PRIMARY INDICATORS
X Inundation
Saturated in Upper 12 Inches
Water Marks
Drift Lines
Sediment Deposits
Drainage Patterns SECONDARY INDICATORS
Oxidized Root Channels in Upper 12 inches
Water Stained Leaves
FAC-Neutral Test
5
Concretions
High Organic Content in Surface Layers in Sandy Soils
Organic Streaking in Sandy Soils  X Listed on Local Hydric Soils List
X Listed on Local Hydric Soils List Listed on National Hydric Soils List
Other ( Explain in Basis of Delineation)
on
Soil Present? Yes

**WETLAND DATA FORM** PJD, BTB, AJL, RCL, ERB, GOO, KJS EVALUATOR: WETI AND ID: Wetland 53 WEATHER: 50% overcast and 50 degrees DATE: 22-Apr-05 Yes Do normal circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? No No is the area a potential problem area? 0.0029 Ha 0.0071 Ac HYDROGEOMORPHIC CLASSIFICATION: 0% POW 50 % PSS 0 % PFO 50% PEM CLASSIFICATION: VEGETATION **UPLAND** WETLAND STRATUM INDICATOR SPECIES STRATUM INDICATOR SPECIES NG(UPL) Comptonia peregrina н FAC+ Salix fragilis Т FACU н Rosa multiflora 85% FAC-OBL н Carex sp. SS Crataegus sp. NS н Allium sp. NS н Poaceae or Gramineae sp. Percent of Dominant Species that 100% are OBL, FACW, and FAC HYDROLOGY SOILS Morris channery silt loam (MgB) MAPPED SOIL UNIT: easona: saturation, ar Wetlands 49 and 51. SOURCE OF HYDROLOGY: HYDRIC SOIL UNIT: DEPTH OF SURFACE WATER: WETLAND CORE SOIL SCORE DEPTH TO FREE WATER IN SOIL PIT: **DEPTH** MATRIX MOTTLE TEXTURE DEPTH TO SATURATED SOIL: 10YR4/6 silt loam 5YR4/2 0-10" FIELD INDICATORS PRIMARY INDICATORS WETLAND FRINGE SOIL SCORE Inundation DEPTH MOTTLE TEXTURE Saturated in Upper 12 Inches MATRIX Water Marks Drift Lines Sediment Deposits UPLAND SOIL SCORE Drainage Patterns SECONDARY INDICATORS DEPTH MOTTLE TEXTURE MATRIX Oxidized Root Channels in Upper 12 inches 5YB4/3 0-10\* Water Stained Leaves FAC-Neutral Test **Hydric Soil Indicators** Histosol High Organic Content in Surface Layers in Sandy Soils Histic Epipedon Organic Streaking in Sandy Soils Sulfidic Odor Listed on Local Hydric Soils List Aquic Moisture Regime Listed on National Hydric Soils List Reducing Conditions Other ( Explain in Basis of Delineation) Gleyed or Low Chroma Colors Wetland Determination Yes Hydric Soil Present? Yes Hydrophytic Vegetation Present? Wetland? Wetland Hydrology Present? Yes BASIS OF DELINEATION:

Delineation follows the extent of sedge and crack willow community following low chroma, mottled, and saturated soils following drainage patterns and sediment deposits.

					· · · · · · · · · · · · · · · · · · ·	
WETLAND ID:	Wetland 54		EVALUATOR:	PJD, BTB, AJL,	RCL, ERB, GOO, KJS	
DATE:	22-Apr-05		WEATHER: 50% o	vercast and 50 degree	s	
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly d	listurbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0073 Ac	0.0030 Ha	

ROGEOMORPHIC CLASSIFICATION						ON DOW
GETATION		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
w	ETLAND			UPLAN		
SPECIES	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
Carex sp.	н	85% FAC-OBL	Quercus	alba	Т	FACU
Impatiens capensis	н	FACW	Acer ru	brum	T	FAC
Microstegium vimineum	н	FAC	[			
, J						
rcent of Dominant Species that						
e OBL, FACW, and FAC		100%		HYDROL	OGY	
	SOILS		<del> </del>	HIDAOL	.001	
MAPPED SOIL UNIT: Oqu	aga-Lackawanna extremely s	ony loams (OxC)	į		Groundwater seens	and seasonal saturation.
HYDRIC SOIL UNIT:			SOURCE OF HYDRO		Gloukwale: seeps	S D CALLES AND CALLES OF THE
WETLAND	CORE SOIL SCORE		DEPTH OF SURFACE			
DEPTH MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-6" 10YR3/2			DEPTH TO SATURA			
				IELD INDICATORS		
			P	RIMARY INDICATOR	S	
WETLAND	FRINGE SOIL SCORE		lr	nundation		
DEPTH MATRIX	MOTTLE	TEXTURE	× s	aturated in Upper 12	inches	
			v	Vater Marks		
				Orift Lines		
				Sediment Deposits		
<u>UPL</u>	AND SOIL SCORE		x	Orainage Patterns		
DEPTH MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATO	ors	
0-4" 10YR4/4		sitt loam		Oxidized Root Channe	els in Upper 12 inch	nes
4-12" 10YR5/4		sitt loam	×	Water Stained Leaves		
>12" rock		rock		FAC-Neutral Test		
***************************************		Hydric Sol	Indicators			
Histosol				Concretions		
Histic Epipedon				High Organic Content in S	urface Layers in Sand	y Soils
X Sulfidic Odor				Organic Streaking in Sand	ly Soils	
Aquic Moisture Regir	ne			Listed on Local Hydric So	ils List	
Reducing Conditions				Listed on National Hydric	Soils List	
Gleyed or Low Chro				Other (Explain in Basis of	Delineation)	
		Wetland D	etermination			
Hydrophytic Vegetation Present?	Yes		Hydric Soil Present?	Yes		
1			Wetland?	Yes		

Delineation follows the extent of small seep area with low chroma, saturated soils with water stained leaves and sulfidic odor following sedge, jewelweed, and stilltgrass community.

WET AND IS	\41-41 1 - F		VETLAND DA	EVALUATOR:		PJD, BTB, AJ	L, RCL, ERB, GO	O, KJS
WETLAND ID:	Wetland 55	N.F.		WEATHER:	50% overce	st and 50 degr		
DATE:	22-Apr-0	)5	V	WEATHEN.	30% 010100	and ou asg.		
normal circumstance		e: 30	Yes					
	sturbed (Atypical Situa	ition)?	No					
e area a potential pr			No	SIZI	F.	0.0320 Ac	0.0129 Ha	
	CLASSIFICATION:		CLASSIFICATION:	100% PEM		PSS	0 % PFO	0% POW
GETATION	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	LAND	CEASSI ICATION.			UPLAN	D	
ODE		STRATUM	INDICATOR		SPECIES		STRATUM	INDICATO
	CIES	H	85% FAC-OBL	1	or Graminea	e sp.	н	NS
	ex sp. Gramineae sp.	Н	NS		rifolium sp.		н	NS
ercent of Dominant S			100%					
	S	OILS		<b></b>		HYDROL	OGY	
MAPPEL	O SOIL UNIT: Oquaga	-Lackawanna extremely st	ony loams (OxC)				<b>0</b>	lwater seep.
HYDRIC	SOIL UNIT:			SOURCE OF H		_	Ground	water seep.
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SU				•
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FRE				
0-4"	10YR5/2	10YR5/4	sitty clay loam	DEPTH TO SAT				
4-12*	10YR5/1	10YR5/4	sitty clay loam	1		NDICATORS		
				┩ 、		INDICATORS	•	
		RINGE SOIL SCORE	TEVENIE	×	Inundatio		1	
DEPTH	MATRIX	MOTTLE	TEXTURE	<u> </u>		in Upper 12 li	ncnes	
					Water M			
					Drift Line			
<del></del>	LIDIANI	O SOIL SCORE		×		t Deposits		
DEDTU			TEXTURE			Patterns	RS	
DEPTH	MATRIX	MOTTLE	silt loam	Ì			ls in Upper 12 inch	96
0-4*	10YR4/4		silt loam			tained Leaves	is in opper 12 more	<b>5</b> 0
4-12" >12"	10YR5/4		rock			utral Test		
>12	rock		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		FAC-NE	ullar rest		
			Hydric Soil	Indicators				
	Histosol			×	Concretio	ns		
	Histic Epipedon				High Org	anic Content in Su	ırface Layers in Sandy	Soils
х	Sulfidic Odor				Organic S	streaking in Sand)	/ Soils	
	Aquic Moisture Regime				Listed on	Local Hydric Soil	s List	
Reducing Conditions			Listed on National Hydric Soils List					
×	Gleyed or Low Chroma C	Colors			Other ( E	xplain in Basis of	Delineation)	
			141-41	etermination				<del>,</del>
1	n Present?	Yes	wensio De	Hydric Soil Pre	esent? Yes			
Hydrophytic Vegetation		Yes		Wetland				
Hydrophytic Vegetatio		100	And the second s					
Wetland Hydrology Pr	NE ATION:							
	NEATION:							
Wetland Hydrology Pr	NEATION:							

WETLAND ID:	Wetland 56			EVALUATOR:	PJD, BTB, AJ	., RCL, ERB, GOO	, KJS
DATE:	22-Apr-05			WEATHER:	50% overcast and 50 degr	ees	
normal circumstances ex	·		Yes				
			No				
-	bed (Atypical Situation)?		No				
ne area a potential proble			No	SIZE	0.0085 Ac	0.0034 Ha	
DROGEOMORPHIC CL	ASSIFICATION:		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
GETATION	WETLAND		OBAGON IOATROIT	1	UPLANI	)	
ODEOU		STRATUM	INDICATOR	<b>-</b>	SPECIES	STRATUM	INDICATOR
SPECIE		STINION	OBL	_	a canadensis	т	FACU
Polygonum sa			85% FAC-OBL	ľ	ifolium sp.	н	NS
Carex s			NS	1	arya ovata	т	FACU-
Poaceae or Gra			FAC	Į.	acum officinale	н	FACU-
Acer rub	rum T		,,,,,				
ercent of Dominant Spec ire OBL, FACW, and FA			100%				
	SOILS				HYDROL	OGY	
MAPPED S	OIL UNIT: Oquaga-Lacka	wanna extremely s	tony loams (OxB)				
HYDRIC S				SOURCE OF HY	/DROLOGY:	Groundwater seep, surface satu	e water runoff, and sea: ration.
	WETLAND CORES	SOIL SCORE		DEPTH OF SUF			
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FRE	E WATER IN SOIL PIT:		
0-8"	10YR3/1		silt loam	DEPTH TO SAT	URATED SOIL:		
>8"	rock		rock		FIELD INDICATORS		
					PRIMARY INDICATORS	;	
	WETLAND FRINGE	SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 In	iches	
0-8*	10YR3/2	_	sitt loam		Water Marks		
>8*	rock		rock		Drift Lines		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				Sediment Deposits		
	UPLAND SOI	SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY INDICATO	RS	
0-4"	10YB4/4		sit loam	l l	Oxidized Root Channel	s in Upper 12 inche	s
4-12"	10YR5/4		sit loam	×	Water Stained Leaves	FF	
>12"			rock		FAC-Neutral Test		
>12	rock				FAC-Neutral 1est	· · · · · · · · · · · · · · · · · · ·	
			Hydric Sc	oil Indicators			
<b></b>	itosol				Concretions	dood I awar in Coad-1	Soils
His	stic Epipedon				High Organic Content in Su		, contro
X Su	Hidic Odor				Organic Streaking in Sandy		
Ac	juic Moisture Regime				Listed on Local Hydric Soils		
Re-	educing Conditions				Listed on National Hydric S		
GI GI	eyed or Low Chroma Colors				Other ( Explain in Basis of )	Delineation)	
<b>X</b> G							

#### BASIS OF DELINEATION:

Yes

Wetland Hydrology Present?

Delineation follows the extent of arrow-leaved tearthumb, sedge, and stiltgrass community with water stained leaves and saturation following topographic low depression adjacent to golf cart path.

Wetland?

		VV	ETLAND DA			DOI 500 000	) KIS
VETLAND ID:	Wetland 57			EVALUATOR:		L, RCL, ERB, GOO	J, <b>N</b> JO
DATE:	22-Apr-0			WEATHER: 50%	overcast and 50 degr	ees	
rmal circumstances	s exist on the site?	Y	res				
site significantly dis	sturbed (Atypical Situa	tion)?	No				
area a potential pr	oblem area?	t	<b>N</b> o	0.775	0.0000 45	0.0095 Ha	
ROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0236 Ac	0 % PFO	0% POW
ETATION			CLASSIFICATION:	100% PEM	0 % PSS		
	WETL			SPEC		STRATUM	INDICATOR
SPE	CIES	STRATUM	INDICATOR			Н	NS
Care	ex sp.	н	85% FAC-OBL	Poaceae or Gr		т	FACU
Typha	latifolia	н	OBL	Quercus Kalmia k		SS	FACU
Poaceae or 0	Gramineae sp.	Н	NS	Taraxacum		н	FACU-
Juncus	s effusus	Н	FACW+	Rubus		н	NS
cent of Dominant S			100%				
	<del> </del>	OILS			HYDROL	OGY	
MAPPEI	D SOIL UNIT: W	elisboro extremely story loa	m (WpB)				
HYDRIC	C SOIL UNIT:	Norwich		SOURCE OF HYDRO	DLOGY:	Ground	water seeps.
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFAC	E WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	ATER IN SOIL PIT:		0.
0-14"	2.5Y4/1	10YR5/8	silt loam	i e			
>14*	rock		rock	1	TELD INDICATORS RIMARY INDICATORS	;	
<del></del>	WETLAND FE	RINGE SOIL SCORE		-  ,	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 Ir	nches	
					Vater Marks		
					Orift Lines		
					Sediment Deposits		
	UPLANI	D SOIL SCORE		×	Orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATO	RS	
0-4"	10YR3/3		silt loam		Oxidized Root Channels	s in Upper 12 inch	es
4-8"	10YR4/4		silt loam	,	Water Stained Leaves		
8-16"	10YR5/6		silt loam		FAC-Neutral Test		
			Hydric Soi	Indicators			
	Historia		nyunc son		Concretions		
	Histosol -				High Organic Content in Su	rtace Layers in Sandy	Soils
X	Histic Epipedon  Sulfidio Odor				Organic Streaking in Sandy		
^	Sulfidic Odor  Aquic Moieture Regime				Listed on Local Hydric Soils		
	Aquic Moisture Regime  Reducing Conditions				Listed on National Hydric S	oils List	
	Gleyed or Low Chroma (	Colors			Other (Explain in Basis of I	Delineation)	
<u> </u>	- Or work Or or or or	·					
			Wetland D	etermination			
Hydrophytic Vegetation	on Present?	Yes		Hydric Soil Present?			
Wetland Hydrology P	resent?	Yes		Wetland?	Yes		
Wetland Hydrology P		Yes		Wetland?	Yes		

WETLAND DATA FORM

WETLAND ID: Wetland 58
DATE: 22-Apr-05 WEATHER: 50% overcast and 50 degrees

Do normal circumstances exist on the site? Yes
Is the site significantly disturbed (Atypical Situation)? No
Is the area a potential problem area? No

HYDROGEOMORPHIC CLASSIFICATION: SIZE: 0.0019 Ac 0.0008 Ha

VEGETATION CLASSIFICATION: 100% PEM 0 % PSS 0 % PFO 0% POW

WETLAND STRATUM INDICATOR SPECIES STRATUM INDICATOR

HOGEOMOLILLIC CENT	SIFICATION:			SIZE:	0.0019 Ac	0.0008 Ha		
ETATION			CLASSIFICATION:	100% PEM	0%PSS	0 % PFO	0% POW	
<del>4</del>	WET	TLAND		UPLAND				
SPECIES		STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR	
Impatiens cape	ensis	н	FACW	Hemeroo	allis fulva	н	UPL	
				Alliaria	petiolata	Н	FACU-	
cent of Dominant Specie	c that							
OBL, FACW, and FAC	Julian		100%					
. 052, 17,011, 4,10 17,0		SOILS		<u> </u>	HYDROL	OGY		
MAPPED SOI		Volusia extremely stony silt k	oam (VxB)					
HYDRIC SOIL		Chippewa		SOURCE OF HYDR	OLOGY:	Strong spring discharge a	nd semipermanently sat.	
		ORE SOIL SCORE		DEPTH OF SURFACE				
DEPTH	MATRIX	MOTTLE	<u>JEXTURE</u>	DEPTH TO FREE W	ATER IN SOIL PIT:			
0-3"	METHE	MATTE	gravel, altuvium	DEPTH TO SATURA				
		•		FIELD INDICATORS				
			li .	PRIMARY INDICATORS	<b>;</b>			
	METIAND E	RINGE SOIL SCORE		┥ ,	Inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 In	nches		
1917-1-112	MOTICE			Water Marks	iones			
				Drift Lines				
					Sediment Deposits			
	UPLAN	ID SOIL SCORE		×	Drainage Patterns			
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICATO	RS		
0-12"	10YR4/3		sandy loam	1	Oxidized Root Channel	s in Upper 12 inch	es	
	10111111				Water Stained Leaves			
				-	FAC-Neutral Test			
					The Nedia rest			
			Hydric Soi	I Indicators	······································			
Histos	ol				Concretions			
	Epipedon				<ul> <li>High Organic Content in Su</li> </ul>	rtace Layers in Sandy	Soils	
	c Odor				<ul> <li>Organic Streaking in Sandy</li> </ul>			
	Moisture Regime			×	 Listed on Local Hydric Soils			
	cing Conditions				<ul> <li>Listed on National Hydric S</li> </ul>			
	d or Low Chroma	Colore			Other (Explain in Basis of			
Cleye	d of Low Cisonia	CONTI			-			
			Wetland D	etermination				
Liverport die Verenteien Dese	ont?	Yes		Hydric Soil Present?	Yes			
		Yes		Wetland?	Yes			
Hydrophytic Vegetation Presi Wetland Hydrology Present?		165		TT GILLING .				

		,	Mt. Airy Le				
WETLAND ID:	Wetland 59			EVALUATOR:	PJD,	BTB, RCL, ERB	
DATE:	28-Apr	r-05		WEATHER: 5	60 degrees with rain in pas	t 24 hours	
Do normal circumstance	s exist on the site?		Yes				
Is the site significantly di	sturbed (Atypical Site	uation)?	No				
Is the area a potential pr	roblem area?		No				
HYDROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.1433 Ac	0.0580 Ha	
VEGETATION	***************************************		CLASSIFICATION:	15% PEM	0 % PSS	85 % PFO	0% POW
	WE	TLAND			UPLANE	)	
SPE	CIES	STRATUM	INDICATOR	SE	PECIES	STRATUM	INDICATOR
Care	ex sp.	н	85% FAC-OBL	Rosa	multiflora	н	FACU
Osmu	ında sp.	н	FAC - OBL	Ma	ilus sp.	T	NS
Onoclea	sensibilis	н	FACW	Plant	ago major	н	FACU
Acer	rubrum	т	FAC	Solida	igo rugosa	н	FAC
Vaccinium	corymbosum	SS	FACW-	Ace	r rubrum	Т	FAC
				Pruni	us serotina	Т	FACU
Percent of Dominant S			100%				
		SOILS			HYDROLO	OGY	
MAPPEL	D SOIL UNIT:	Rexford gravelty silt loa	ım (ReA)				
HYDRIC	SOIL UNIT:	Rexford		SOURCE OF HYD	ROLOGY:	Ground	water seeps.
	WETLAND	CORE SOIL SCORE	, ,	DEPTH OF SURF	ACE WATER:		1-5"
<u>DEPTH</u>	MATRIX	MOTTLE	<b>JEXTURE</b>	DEPTH TO FREE	WATER IN SOIL PIT:		4"
0-4*	10YR3/2		silt loam	DEPTH TO SATU	RATED SOIL:		
4-16"	2.5Y3/2	10YR3/3	sandy loam		FIELD INDICATORS		
					PRIMARY INDICATORS		
	WETLAND	FRINGE SOIL SCORE		×	Inundation		
DEDT!	********	MOTTLE	TEVTUDE	x	— _ 0	_1	

4-16"	2.5Y3/2	10YR3/3	sandy loam	FIELD INDICATORS
				PRIMARY INDICATORS
	WETLAND FRING	SE SOIL SCORE		X Inundation
DEPTH	MATRIX	MOTTLE	TEXTURE	X Saturated in Upper 12 Inches
				Water Marks
				Drift Lines
				Sediment Deposits
	UPLAND S	OIL SCORE		X Drainage Patterns
DEPTH	MATRIX	MOTTLE	TEXTURE	SECONDARY INDICATORS
0-12*	10YR5/3		sandy loam	Oxidized Root Channels in Upper 12 inches
>12"	rock		rock	X Water Stained Leaves
				FAC-Neutral Test

		Hydric Soil Indicators	
His	tosol		Concretions
His	tic Epipedon		High Organic Content in Surface Layers in Sandy Soils
Sul	ffidic Odor		Organic Streaking in Sandy Soils
Aq	uic Moisture Regime	X	Listed on Local Hydric Soils List
Re	educing Conditions		Listed on National Hydric Soils List
✓ Gk	eyed or Low Chroma Colors	With all the state of the state	Other ( Explain in Basis of Delineation)

#### Wetland Determination

Hydrophylic Vegetation Present? Yes Hydric Soil Present? Yes

Wetland Hydrology Present? Yes Wetland? Yes

#### BASIS OF DELINEATION:

Delineation follows extent of red maple, highbush blueberry, and osmunda fern community with saturated and inundated conditions with water stained leaves and drainage patterns. This PFO does contain low chroma and mottled soils. Upland inclusions are found in Wetland 59, including areas of Canada mayflower, but low chroma, mottled soils are still dominant.

WETLAND ID:	Wetland 60		EVALUATOR:	PJD, BT	B, RCL, ERB	
DATE:	28-Apr-05		WEATHER: 50 degre	rees with rain in past 2-	4 hours	
Do normal circumstance	s exist on the site?	Yes				
is the site significantly di	isturbed (Atypical Situation)?	No				
is the area a potential pr	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	1.6565 Ac	0.6702 Ha	

			01 1001510171011	PO: DEM	0 % PSS	100 % PFO	0% POW
GETATION			CLASSIFICATION:	0% PEM			
	WETL				UPLA		INDICATOR
SPE	ECIES	STRATUM	INDICATOR	SPEC		STRATUM	FAC-
Acer	rubrum	Т	FAC	Maianthemum		н -	
Veratro	um viride	Н	FACW+	Acer n.	ıbrum	Т	FAC
Onoclea	a sensibilis	н	FACW	Carya	ovata	Т	FACU-
Osmi	unda sp.	Н	FAC - OBL	Dennstaedtia	punctilobula	н	UPL
Vaccinium	corymbosum	SS	FACW-	Rubus alle	gheniensis	н	FACU-
and of Paralles as	S						
rcent of Dominant S			100%				
e OBL, FACW, and			100%		HYDRO	I OCY	
		OILS			niono	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		olusia extremely storry silt I	оат (VxB)			Groundwater seeps, st	ream flooding, and season
HYDRIC	C SOIL UNIT:	Chippewa		SOURCE OF HYDRO		sat	uration.
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFAC			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-16*	10YR4/1		sandy loam	DEPTH TO SATURA			
				·	FIELD INDICATOR	S	
				P	RIMARY INDICATOR	RS	
	WETLAND FR	INGE SOIL SCORE		×	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X 5	Saturated in Upper 12	Inches	
0-4"	10YR3/3		sitt toam		Water Marks		
4-10"	10YFI4/3	10YR5/4	sitt loam		Drift Lines		
10-16"	10YR3/2	10YR4/6	sit loam		Sediment Deposits		
	UPLANE	SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICAT	ORS	
0-3*	organic		organic	<b>.</b>	Oxidized Root Chann	els in Upper 12 inche	es
3-14"	10YB4/4		sandy loam		Water Stained Leave		
					FAC-Neutral Test	-	
					, , io , icana co.		
<del></del>			Hydric Soil	Indicators			
	Histosol		,		Concretions		
	- Histic Epipedon				High Organic Content in S	Surface Layers in Sandy	Soils
x	- Sulfidic Odor				Organic Streaking in San		
^	•				Listed on Local Hydric So		
	Aquic Moisture Regime				Listed on National Hydric		
X	Reducing Conditions				Other (Explain in Basis of		
<u> </u>	Gleyed or Low Chroma C	Colors			Other (Explain in basis C	or Deliberation,	
			Wetland De	etermination	Van		
Hydrophytic Vegetation		Yes		Hydric Soil Present?			
Wetland Hydrology P	resent?	Yes		Wetland?	Yes		

Delineation follows the extent of the sensitive fern, osmunda fern, and false hellobore community in red maple floodplain with low chroma, mottled and saturated soils with strong sulfidic odor.

#### Mt. Airy Lodge

WETLAND ID: DATE: ormal circumstance	Wetland 61 28-Apr-	25		EVALUATOR:	50 de with a		B, RCL, ERB	
	28-Apr-			WEATHER:	50 degrees with a	ain in past 24	4 hours	
ormal circumstance		Jo	Yes	***********	or and the			
		-4:10	No					
	isturbed (Atypical Situa	(non)	No					
e area a potential pr			NO	SIZI	<u>=</u> . 0.0	044 Ac	0.0018 Ha	
	CLASSIFICATION:		CLASSIFICATION:	100% PEM	0 % PSS		0 % PFO	0% POW
SETATION			CLASSIFICATION.	100%1 E.W		UPLAND		
		LAND	INDICATOR		SPECIES		STRATUM	INDICATO
	CIES	STRATUM	INDICATOR	ì	emum canadense		Н	FAC-
	nda sp.	Н	FAC - OBL	1	cer rubrum		T	FAC
	ex sp.	н	85% FAC-OBL	l	inus serotina		T	FACU
	Gramineae sp.	H	NS	!	uercus rubra		т	FACU-
Sphag	jnum sp.	Н	NS		uercus alba		T	FACU
rcent of Dominant S	Species that							
e OBL, FACW, and			100%			YDROLOG	:v	
		OILS				TDROLOG	· · · · · · · · · · · · · · · · · · ·	
	D SOIL UNIT:	Rexford gravelly silt loan	ı (ReA)				Season	ast flooding.
HYDRIC	SOIL UNIT:	Rexlord		SOURCE OF H	YDROLOGY: RFACE WATER:			
		ORE SOIL SCORE	TEVELIDE		EE WATER IN SOIL	PIT:		
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE		FURATED SOIL:			
0-6,	10YR3/4		sandy loam	DEPIN TO SA	FIELD INDIC	ATORS		
6-16" 10YR3/3 10YR4/4		sandy loam	İ	PRIMARY IND				
						CATOTIC		
		RINGE SOIL SCORE	TEVTURE	×	Inundation	40 lash		
DEPTH	MATRIX	MOTTLE	TEXTURE	Saturated in Opper 72 monoc				
				×	Water Marks			
				x	Drift Lines	!		
					Sediment Dep			
		D SOIL SCORE	TEVTUDE		Drainage Patt			
DEPTH	MATRIX	MOTTLE	TEXTURE					••
0-8"	10YR3/3		sandy loam sandy loam		<del></del>		Upper 12 inch	55
8-16°	10YR4/3		sandy loant		Water Stained			
					FAC-Neutral	lest		
<u> </u>			Hydric Soi	I Indicators				
	Histosol				Concretions			
	Histic Epipedon				High Organic Co	ontent in Surfac	e Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaki	ng in Sandy Soi	ils	
	Aquic Moisture Regime			х	Listed on Local	Hydric Soils Lis	at	
Х	Reducing Conditions				Listed on Nation	nal Hydric Soils	List	
	Gleyed or Low Chroma (	Colors		<del> </del>	Other ( Explain	in Basis of Delir	neation)	
	-							
			Wetland D	etermination			-	
Hydrophytic Vegetatio	n Present?	Yes		Hydric Soil Pre	esent? Yes			
Wetland Hydrology Pr	esent?	Yes		Wetland	? Yes			
BASIS OF DELI	NEATION:							
Ì								

WETLAND ID:	Wetland 62		EVALUATOR:	PJD, BT	B, ACL, EAB	
DATE:	28-Apr-05		WEATHER: 50	degrees with rain in past 2	4 hours	
Do normal circumstances	exist on the site?	Yes				
is the site significantly dis	sturbed (Atypical Situation)?	No				
Is the area a potential pro	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.5641 Ac	0.2282 Ha	

SETATION			CLASSIFICATION:	0% PEM	50 % PSS 50 % PFO 0% POW			
	WE	TLAND			UPLA	AND		
SF	PECIES	STRATUM	INDICATOR	SE	PECIES	STRATUM	INDICATOR	
	arex sp.	Н	85% FAC-OBL	Maianthem	ium canadense	н	FAC-	
	ra benzoin	SS	FACW-	Pote	entilla sp.	н	NS	
	na palustris	н	OBL	Carpinus caroliniana		SS	FAC	
	agnum sp.	н	NS	Car	ya ovata	т	FACU-	
	er rubrum	т	FAC	Hamame	elis virginiana	SS	FACU+	
	alleghaniensis	, Т	FAC	1	us serotina	т	FACU	
	ens capensis	· н	FACW	1				
	munda sp.	н	FAC - OBL					
rcent of Dominant	·	,,	,,, <u>,</u>					
e OBL, FACW, ar			100%	1				
e Obl., i ACW, ai	·	SOILS			HYDRO	OLOGY		
MADD	ED SOIL UNIT:	Wyoming gravelly sandy to	am (WvC)					
	RIC SOIL UNIT:	Wet spots		Seasonel high water table, flooding, SOURCE OF HYDROLOGY: seeps.			e, flooding, and groundwa	
11101		CORE SOIL SCORE		DEPTH OF SURF				
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE	WATER IN SOIL PIT:		4"	
0-6*	2.5Y3/2	11.21.24	silt loam	DEPTH TO SATURATED SOIL:				
6-16*	2.5Y3/2	10YR3/4	sandy loam		FIELD INDICATOR	RS		
¥ .¥	2.070/2				PRIMARY INDICATO	RS		
	WFTI AND	FRINGE SOIL SCORE		×	Inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 1	2 Inches		
				Water Marks				
				×	Drift Lines			
				×	Sediment Deposits			
	UPLA	ND SOIL SCORE		х	Drainage Patterns			
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY INDICA	TORS		
0-4"	10YR3/3		sandy loam	1	Oxidized Root Chan	nels in Upper 12 inche	es	
4-12"		10YR5/6	sandy loam	×	Water Stained Leave			
>12*	rock		rock		FAC-Neutral Test			
			Hydric Soi	Indicators				
	Histosol				Concretions			
	 Histic Epipedon				High Organic Content in	Surface Layers in Sandy	Soils	
X	Sulfidic Odor				Organic Streaking in Sa	ndy Soits		
	 Aquic Moisture Regim	e		х	Listed on Local Hydric S	Soils List		
Х					Listed on National Hydr	ic Soils List		
7	Gleyed or Low Chrom	a Colors			Other ( Explain in Basis	of Delineation)		
			Wetland De	etermination	10 Mar			
Hydrophytic Vegeta	tion Present?	Yes		Hydric Soil Prese				
Wetland Hydrology	Present?	Yes		Wetland?	Yes			

#### BASIS OF DELINEATION:

Delineation follows extent of channel with wide wetland fringe. This channel often becomes dominated by wetland habitat (over 50% of channel is wetland) that contains sedge, jewelweed, osmunda fern, red maple, and yellow birch with low chroma and mottled soils, water stained leaves, saturation, and inundation. Also, much of the upper portion of Wetland 62 contains side seeps with low chroma and mottled soils, with saturation and inundation and a similar vegetative community of hydrophytes. The western part of Wetland 62 (flags approximately 100 to 119) are mostly demarcating "channel" bank.

WETLAND ID:	Wetland 63	EVALUATOR:	PJD, 8TB, RCL, ERB
DATE:	28-Apr-05	WEATHER:	50 degrees with rain in past 24 hours
Do normal circumstance	s exist on the site?	Yes	
Is the site significantly di	sturbed (Atypical Situation)?	No	
is the area a potential pr	roblem area?	No	
HYDROGEOMORPHIC	CLASSIFICATION:	SIZE	: 0.0121 Ac 0.0049 Ha

BOOLOMOBBHIC				SIZE:	0.0121 Ac	0.0049 Ha	
	CLASSIFICATION:	CL	ASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
GETATION	WETLA				UPLAN	D	
SDE		STRATUM	INDICATOR	SPEC	HES	STRATUM	INDICATOR
	ECIES Inda sp.	<del>УПИЛОМ</del>	FAC - OBL	Carya d	ovata	Т	FACU-
		τ	FAC	Dryopte	ris sp.	н	NS
	sylvatica	т	FAC	Alliaria p		н	FACU-
Acer	rubrum	1	.,,,	Acer ru		т	FAC
rcent of Dominant S	Proging that						
e OBL, FACW, and			100%				
	SOI	LS			HYDROL	.OGY	
MAPPE		oming gravelly sandy loam (V	vyC)				
	C SOIL UNIT:	Wet spots		SOURCE OF HYDRO	OLOGY:	Small groundwater se	ep and seasonal saturation
	WETLAND COF	RE SOIL SCORE		DEPTH OF SURFAC	E WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	ATER IN SOIL PIT:		
0-8-	10YR4/1		siit loam	DEPTH TO SATURA	TED SOIL:		
8-11"	10YR4/2	YR4/3, 2.5Y4/3, 10YR4	silt loam	F	TELD INDICATORS	;	
11-16"	10YR4/3	10YR4/2, 10YR5/6	silt loam	Р	RIMARY INDICATOR	5	
	WETLAND FRIN	IGE SOIL SCORE		I	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Saturated in Upper 12 Inches			
				\\	Water Marks		
					Orift Lines		
				:	Sediment Deposits		
	UPLAND S	SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	\$E	CONDARY INDICATO	ORS	
0-6*	10YR3/3		silt loam		Oxidized Root Channe	ls in Upper 12 inch	es
6-14"	10YR4/3		silt loam	×	Water Stained Leaves		
					FAC-Neutral Test		
······································			Hydric Soil				
	Histosol 				Concretions	undered over in Sand	, Saile
	Histic Epipedon				High Organic Content in S		,
0	Sulfidic Odor				Organic Streaking in Sand		
	Aquic Moisture Regime			X	Listed on Local Hydric Soi		
×	Reducing Conditions				Listed on National Hydric		
7	Gleyed or Low Chroma Col	ors			Other (Explain in Basis of	Delineation)	
			Wetland De	etermination			
Hydrophytic Vegetation	on Present?	Yes		Hydric Soil Present?			
	resent?	Yes		Wetland?	Yes		

Delineation follows extent of water stained leaves groundwater seep with saturated, low chroma and mottled soils following osmunda fern and red maple community.

						-
WETLAND ID:	Wetland 64		EVALUATOR:	PJD, BTE	B, RCL, ERB	
DATE:	28-Apr-05		WEATHER:	50 degrees with rain in past 24	hours	
Do normal circumstance:	s exist on the site?	Yes				
Is the site significantly di	sturbed (Atypical Situation)?	No				
is the area a potential pr	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	4.1228 Ac	1.6681 Ha	

ROGEOMORPH	IC CLASSIFICATION:			SIZE:	4.1228 Ac	1.6681 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WETL	_AND			UPLAN	D	
SI	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Betula a	lleghaniensis	Т	FAC	Maianthemu	m canadense	н	FAC-
Rhodo	dendron sp.	SS	NS	Potentilla sp.		н	NS
Ace	er rubrum	т	FAC	Carpinus	caroliniana	T	FAC
Symploc	arpus foetidus	н	OBL	Carya	ovata	T	FACU-
	agnum sp.	н	NS	Hamameli	s virginiana	SS	FACU+
C	arex sp.	н	85% FAC-OBL	Prunus	serotina	т	FACU
Impati	ens capensis	н	FACW	ļ			
Tsuga	a canadensis	T	FACU	1			
rcent of Dominan	Species that						
e OBL, FACW, ar	nd FAC		100%				
	sc	OILS			HYDROL	OGY	
MAPP	ED SOIL UNIT: Chippew	va and Norwich extremely s	tony soils (CnB)				
HYDF	RIC SOIL UNIT:	Chippewa and Norwic	h	SOURCE OF HYDR	OLOGY:	Ground	water seeps.
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFAC	CE WATER:		
<b>DEPTH</b>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		0"
0-6"	2.5Y3/2		sit loam	DEPTH TO SATURA	ATED SOIL:		o <sup>*</sup>
6-16*	2.5Y5/1	2.5 <b>Y3/</b> 3	sandy loam		FIELD INDICATORS	5	
				_] '	PRIMARY INDICATOR	s	
	WETLAND FR	INGE SOIL SCORE		х	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	JRE X Saturated in Upper 12 Inches			
					Water Marks		
				X	Drift Lines		
				×	Sediment Deposits		
	UPLAND	SOIL SCORE		X	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICATO	ORS	
0-4"	10YR3/3		sandy loam		Oxidized Root Channel	ls in Upper 12 inch	es
4-12"	10YR5/6		sandy loam	×	Water Stained Leaves		
>12"	rock		rock		FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions		0.7
	Histic Epipedon				High Organic Content in S		SUES .
X	Sulfidic Odor				Organic Streaking in Sand		
	Aquic Moisture Regime			×	Listed on Local Hydric Soi		
X	Reducing Conditions			<del></del>	Listed on National Hydric \$		
×	Gleyed or Low Chroma C	Colors			Other (Explain in Basis of	Delineation)	
			Wetland De	etermination			
Hydrophytic Vegeta	ation Present?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology	Prospnt?	Yes		Wetland?	Yes		

Delineation follows extent of primary seep channel and associated tributary following sedge, skunk cabbage, jewelweed, red maple, and yellow birch community in topographically defined drainage pattern with water stained leaves, low chroma and mottled soils and saturated and inundated conditions.

		•••	ETLAND DA	.,			
WETLAND ID:	Wetland 65			EVALUATOR:	PJD	, BTB, RCL, ERB	
DATE:	28-Apr-	05		WEATHER: 5	0 degrees with rain in pa	st 24 hours	
normal circumstance:	s exist on the site?	,	Yes				
e site significantly di	sturbed (Atypical Situ	ation)?	No				
e area a potential pr	oblem area?		No				
PROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0496 Ac	0.0201 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WET	LAND			UPLAN	D	
SPE	CIES	STRATUM	INDICATOR	SP	ECIES	STRATUM	INDICATOR
Osmu	nda sp.	н	FAC - OBL	Cary	a ovata	Т	FACU-
Onoclea	sensibilis	н	FACW	Populus	tremuloides	Ŧ	NI
Carpinus	caroliniana	T	FAC	Acer	rubrum	т	FAC
Poaceae or 0	Gramineae sp.	Н	NS	Maianthem	um canadense	н	FAC-
ercent of Dominant S							
e OBL, FACW, and			100%		UVDDOL	OCY	
		OILS		<u> </u>	HYDROL	.OGT	
		Wyoming gravelly sandy loar	n (WyC)			Commission dischar	e and seasonal saturati
HYDRIC	SOIL UNIT:	Wet spots		SOURCE OF HYDI		0.000.000.000	
		ORE SOIL SCORE	TEVELIDE	DEPTH OF SURFA	WATER IN SOIL PIT:		
DEPTH	MATRIX	MOTTLE	TEXTURE	1			o <sup>c</sup>
0-8*	10YR2/2		silt loam	DEPTH TO SATUR	FIELD INDICATORS		
8-14"	10YR3/2	10YR4/4	silt loam		PRIMARY INDICATORS		
	WETLAND FI	RINGE SOIL SCORE			Inundation		
DEPIH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 I	nches	
0-8*	10YR4/3		sandy loam		_ _Water Marks		
8-14°	10YR3/2	10YR4/6	sandy loam	х	_Drift Lines		
					Sediment Deposits		
	UPLAN	D SOIL SCORE		х	_Drainage Patterns		
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	•	SECONDARY INDICATO	RS	
0-5*	10YR3/4		silt loam		_Oxidized Root Channel	ls in Upper 12 inche	s
5-16*	10YR4/4		silt loam		_Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions		
	Histic Epipedon				— High Organic Content in Su 	ırface Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in Sand	y Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric Soil	s List	
X	Reducing Conditions				Listed on National Hydric 5	Soits List	
Χ	Gleyed or Low Chroma	Colors			Other (Explain in Basis of	Delineation)	
		<del></del>	Wetland De	etermination			
Hydrophytic Vegetation	n Present?	Yes		Hydric Soil Present	? Yes		
Wetland Hydrology Pro	esent?	Yes		Wetland?	Yes		
BASIS OF DELI	NEATION:						
1							
ı							

WETLAND ID:	Wetland 66		EVALUATOR:	PJD, B1	B, RCL, ERB	
DATE:	28-Apr-05		WEATHER: 50 deg	rees with rain in past 2	4 hours	
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly o	fisturbed (Atypical Situation)?	No				
is the area a potential p	problem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.6187 Ac	0.2503 Ha	

DI IOGEOMONI I	IC CLASSIFICATION:						
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WETL	AND			UPLAN	D	
S	PECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
С	arex sp.	н	85% FAC-OBL	Prunus	serotina	Τ	FACU
Linde	era benzoin	SS	FACW-	Berbe	eris sp.	н	NS
Sph	agnum sp.	н	NS	Rubi	us sp.	н	NS
Ac	er rubrum	Т	FAC	Acer	rubrum	Т	FAC
Os	munda sp.	н	FAC - OBL	Geranium	maculatum	н	FACU
				Alliu	m sp.	н	NS
				Poaceae or	Gramineae sp.	н	NS
				Rosa r	nultiflora	н	FACU
ercent of Dominan	t Species that						
re OBL, FACW, a	nd FAC		100%				
	so	ILS			HYDROL	.OGY	
MAPP	PED SOIL UNIT:	Rexlord gravelly silt loam	(ReA)				
HYDF	RIC SOIL UNIT:	Rextord		SOURCE OF HYDR	OLOGY:	Groundwater seeps	and seasonal flooding.
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFAC	CE WATER:		1-6"
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-4*	2.5Y3/2		silt loam	DEPTH TO SATURA	ATED SOIL:		
4-16"	2.5Y4/1	10YR4/4	silty clay loam		FIELD INDICATORS	<b>S</b>	
				Į,	PRIMARY INDICATOR	s	
	WETLAND FRI	NGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12 I	nches	
					Water Marks		
				×	Drift Lines		
					Sediment Deposits		
	UPLAND	SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	<u> TEXTURE</u>	S	ECONDARY INDICATO	ORS	
0-8*	10YR4/3		sit loam		Oxidized Root Channe	ls in Upper 12 inche	s
8-16"	10YR4/2, 10YR4/3	10YR4/6	silt loam	×	Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soil	Indicators			
	Histosol				Concretions		
····	Histic Epipedon				High Organic Content in Su	rface Layers in Sandy S	Soils
	Sulfidic Odor				Organic Streaking in Sandy	y Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric Soil	s List	
х	Reducing Conditions			****	Listed on National Hydric S	Soils List	
*	Gleyed or Low Chroma Co	lors			Other (Explain in Basis of	Delineation)	
		·· <u>···································</u>	Wetland De	termination			
Hydrophytic Vegeta	tion Present?	Yes		Hydric Soil Present?	Yes		
	Present?	Yes		Wetland?	Yes		

Delineation follows the extent of drainage patterns with saturated and inundated conditions with a community of sphagnum moss, sedge, spicebush, and red maple with seep hydrology throughout most of the wetland. Portion (south) of the wetland is hydrated by seasonal flooding and groundwater.

### Airy Lodge

WETLAND ID:	Wetland 67	· · · · · · · · · · · · · · · · · · ·	TLAND DA	EVALUATOR:	PJD,	BTB, RCL, ERB	
DATE:	28-Apr-05			WEATHER: 50	degrees with rain in pas	t 24 hours	
ormal circumstances		Yes	5				
	turbed (Atypical Situation						
		No.					
e area a potential pro PROGEOMORPHIC				SIZE:	0.0098 Ac	0.0040 <b>H</b> a	
GETATION	CLASSIFICATION.	CI	ASSIFICATION:	100% PEM	0 % PSS	0%PFO	0% POW
SETATION	WETLA				UPLAND		
SPE		STRATUM	INDICATOR	SPEC	CIES	STRATUM	INDICATOR
Juncus		Н	FACW+	Rubus alleg		н	FACU-
Impatiens		н	FACW	Rosa m	ultiflora	н	FACU
	Gramineae sp.	н	NS				
rcent of Dominant Speed OBL, FACW, and			100%				
	so	ILS			HYDROLO	DGY	
MAPPED	SOIL UNIT:	Braceville gravelly loam (BrA	<b>(</b> )	Į			
HYDRIC	SOIL UNIT:	Rextord		SOURCE OF HYDRO		Precipitation collection (	and seasonal satural
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFAC			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-16"	10YR3/2	10YR2/1, 10YR4/4	disturbed soil	DEPTH TO SATURA			
				1	FIELD INDICATORS		
				<del> </del>	RIMARY INDICATORS		
		NGE SOIL SCORE			nundation		
DEPTH	XIFTAM	MOTTLE	TEXTURE		Saturated in Upper 12 In	ches	
					Water Marks		
					Drift Lines		
		2011 20005			Sediment Deposits		
555711	•	SOIL SCORE	TEVTURE		Drainage Patterns CONDARY INDICATOR	as	
DEPTH	MATRIX	MOTTLE	TEXTURE	1			
0-4"	10YR4/2		organic Ioam		Oxidized Root Channels	in Opper 12 inches	•
4-8" >8"	10YR5/4		rock		Water Stained Leaves		
20	TOCK		700.		FAC-Neutral Test		
			Hydric So	I Indicators			
	Histosol				Concretions		
	Histic Epipedon				High Organic Content in Sun	lace Layers in Sandy S	oils
	Sulfidic Odor			·	Organic Streaking in Sandy	Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric Soils		
Х	Reducing Conditions				Listed on National Hydric Sc		
<u></u>	Gleyed or Low Chroma Co	dors			Other (Explain in Basis of D	elineation)	
			Wetland C	etermination			
Hydrophytic Vegetation	n Present?	Yes	Tretiana L	Hydric Soil Present?	Yes		
Wetland Hydrology Pro		Yes		Wetland?	Yes		
BASIS OF DELI							
1							

#### Mt. Airy Lodge

METI AND ID:	Motional		ETLAND DA	EVALUATOR:	P.IC	, BTB, RCL, ERB	
WETLAND ID:	Wetland 68				degrees with rain in p		
DATE:	28-Apr-6			WEATHER: 50	degrees with rain in p	ast 24 Hours	
normal circumstances	s exist on the site?	`	res				
e site significantly dis	sturbed (Atypical Situa	ation)?	No				
e area a potential pr	oblem area?		No		0.4352 Ac 0.1761 Ha		
PROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.4352 Ac		
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0% POW	
	WET	LAND			UPLAND STRATHM INDICATE		
SPE	CIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATO
Onoclea	sensibilis	н	FACW	Tsuga ca	nadensis	Т	FACU
Acer r	rubrum	Т	FAC	Carya	ovata	τ	FACU-
Impatiens	s capensis	Н	FACW	Maianthemur	n canadense	н	FAC-
Toxicodend	fron radicans	н	FAC				
Care	ex sp.	н	85% FAC-OBL	1			
rcent of Dominant S			100%	·			
e obe, i noti, and		OILS			HYDRO	HYDROLOGY	
MADDED		olusia extremely stony silt lo	am (VvB)				
	SOIL UNIT: V	Chippewa	iii (****)	acupar or unapp	21.001/	Hillside seep an	d seasonal saturation.
TIDAL		ORE SOIL SCORE		SOURCE OF HYDRO			
DEDTU			TEXTURE	DEPTH TO FREE W			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SATURA			
0-4"	10YR4/1	10YR5/6	sit loam		FIELD INDICATOR	•	
4-8"	10YR4/1	10YR4/3, 10YR4/6		1	RIMARY INDICATOR		
8-12"	10YR4/3	10YR4/1, 10YR4/6	sit loam				
		RINGE SOIL SCORE	TEVENIE		nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	<del>                                     </del>	Saturated in Upper 12	Inches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
		D SOIL SCORE			Drainage Patterns	one	
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICAT		
0-4"	10YR4/2		organic		Oxidized Root Channe		es
4-8"	10YR5/4		loam	×	Water Stained Leaves		
>8*	rock		rock		FAC-Neutral Test		
	<del></del>		Hydric Soi	l ! Indicators			
1	Histosol		-		Concretions		
	Histic Epipedon				High Organic Content in S	urtace Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in Sand	ty Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric So	its List	
	Reducing Conditions			<del>*************************************</del>	Listed on National Hydric	Soils List	
	Gleyed or Low Chroma (	Colors			Other (Explain in Basis of	Delineation)	
	· · · · · · · · · · · · · · · · · · ·		Wetland D	etermination			
	Present?	Yes		Hydric Soil Present?	Yes		
Hydrophytic Vegetation							

Delineation follows the extent of water stained leaves and saturation following sensitive fern, sedge, and red maple community following low chroma, mottled soils with sulfidic odor and drainage patterns.

#### Mt. Airy Lodge

			WIL All y	-			
		•	WETLAND DA	TA FORM			
WETLAND ID:	Wetland 69			EVALUATOR:	PJD,	BTB, RCL, ERB	
DATE:	28- <b>A</b> pr-0	05		WEATHER: 50	degrees with rain in pas	t 24 hours	
Do normal circumstance	es exist on the site?		Yes				
Is the site significantly of	disturbed (Atypical Situa	ation)?	No				
is the area a potential p	problem area?		No				
HYDROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0163 Ac	0.0066 Ha	
VEGETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WET	LAND			UPLAND	)	
SP	ECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
· -	ex sp.	н	85% FAC-OBL	Tsuga c	anadensis	н	FACU
	s offusie	н	FACW+	Rhodode	endron sp.	SS	NS

	WETLA	ND			UPLAND			
SP	PECIES	STRATUM	INDICATOR	SPEC	EIES	STRATUM	INDICATOR	
		н	85% FAC-OBL	Tsuga can	adensis	H	FACU	
	us effusus	н	FACW+	Rhododen	dron sp.	SS	NS	
				Maianthemum	canadense	н	FAC-	
				Rubus alleg	heniensis	н	FACU-	
rcent of Dominant	Species that							
e OBL, FACW, an			100%		HYDRO	LOCY		
	SOII				HYDRO	LOGT		
		Braceville gravelly loam (	BrA)			Surface water runoff, p	recipitation collection, an	
HYDRI	IC SOIL UNIT:	Rextord		SOURCE OF HYDRO		seasona	d saturation.	
	WETLAND COR							
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA				
0-6"	organic and fill		organic and fill	DEPTH TO SATURA	IELD INDICATORS	e		
6-14"	10YR4/1	10YFI4/4	organic debris (disturbed)	l	RIMARY INDICATOR			
		05 00H 000DE						
	WETLAND FRIN		TEXTURE	"	nundation			
DEPTH	MATRIX	MOTTLE	TEXTONE		saturated in Upper 12 Vater Marks	ncres		
					Orift Lines			
					Sediment Deposits			
	LIPLAND S	OIL SCORE		1	Orainage Patterns			
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICAT	ors		
0-6*	10YR3/2		sit loam		Oxidized Root Channe	els in Upper 12 inche	es	
6-14"	10YR4/6		silt loam		Water Stained Leaves			
					FAC-Neutral Test			
			Hydric Soil I					
	Histosol —				Concretions			
	Histic Epipedon				High Organic Content in S		Soils	
	Sulfidic Odor				Organic Streaking in Sand			
	Aquic Moisture Regime				Listed on Local Hydric So			
×	Reducing Conditions				Listed on National Hydric			
×	Gleyed or Low Chroma Colo	nrs			Other (Explain in Basis of	f Delineation)		
			Wetland Det			<u> </u>		
Hydrophytic Vegetati	ion Present?	Yes		Hydric Soil Present?	Yes			
Wetland Hydrology F	Present?	Yes		Wetland?	Yes			

#### BASIS OF DELINEATION:

Delineation follows the extent of the sedge community within topographic low with inundation and water staining with disturbed, low chroma and mottled soils.

DATE: 28-Apr-05 WEATHER: 50 degrees with rain in past 24 hours  Do normal circumstances exist on the site? Yes  Is the site significantly disturbed (Atypical Situation)? No	VECETATION		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
DATE: 28-Apr-05 WEATHER: 50 degrees with rain in past 24 hours  Do normal circumstances exist on the site? Yes  Is the site significantly disturbed (Atypical Situation)? No	HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0313 Ac	0.0127 Ha	
DATE: 28-Apr-05 WEATHER: 50 degrees with rain in past 24 hours  Do normal circumstances exist on the site? Yes	is the area a potential pro	oblem area?	No				
DATE: 28-Apr-05 WEATHER: 50 degrees with rain in past 24 hours	Is the site significantly dis	sturbed (Atypical Situation)?	No				
WEI LAND ID. Weiland 70	Do normal circumstances	s exist on the site?	Yes				
WETLAND ID: Wetland 70 EVALUATOR: P.JD, BTB, HCL, EHB	DATE:	28-Apr-05		WEATHER: 50 degrees with rain in past 24 hours		24 hours	
	WETLAND ID:	Wetland 70		EVALUATOR:	PJD, F	BTB, RCL, ERB	

				0.0040.4-	0.0127 Ha	
DROGEOMORPHIC CLASSIFICATI	ION:		SIZE:	0.0313 Ac	0.0127 Ha	0% POW
GETATION		CLASSIFICATION:	100% PEM	0 % PSS		0%1044
	WETLAND			UPLAND		
SPECIES	STRATUM		SPECIE		STRATUM	INDICATOR
Juncus effusus	н	FACW+	Poaceae or Gran		н	NS EAGU
Carex sp.	Н	85% FAC-OBL	Taraxacum of		H	FACU-
			Rubus alleghe	niensis	Н	FACU-
ercent of Dominant Species that						
re OBL, FACW, and FAC		100%				
	SOILS			HYDROLO	OGY	
MAPPED SOIL UNIT:	Braceville gravelly k	am (BrA)			Hillside seep, surface	water runoff, and seaso
HYDRIC SOIL UNIT:	Rexford		SOURCE OF HYDROLO		sat	turation.
	ND CORE SOIL SCORE		DEPTH OF SURFACE V			
<u>DEPTH</u> <u>MATRI</u>			DEPTH TO FREE WATE			0.
0-16" 10YR4/	/2 10YR4/6	sit koam	DEPTH TO SATURATE	LD SOIL:		v
				MARY INDICATORS		
	ND FRINGE SOIL SCOR			ndation		
DEPTH MATR	NIX MOTTL	<u>E</u> <u>TEXTURE</u>	Sall	urated in Upper 12 Inc	ches	
				ter Marks		
				t Lines		
	IDI AND COU CCORE			diment Deposits		
	IPLAND SOIL SCORE	<u>E TEXTURE</u>		inage Patterns ONDARY INDICATOR	as	
<u>DEPTH MATE</u>	-	sit loam	1			
0-6" 10YR:		silt loam		idized Root Channels	in Opper 12 inche	25
Ola lotte	4/6	Sin Kodini	****	ater Stained Leaves		
			FA	C-Neutral Test		
Histosol		Hydric Soil		ncretions		
Histic Epipedon			<del></del>	th Organic Content in Surf	face Lavers in Sandy	Soils
Suffidic Odor				ganic Streaking in Sandy S		
Aquic Moisture Re	agime			ted on Local Hydric Soils I		
X Reducing Condition	-			ted on National Hydric So		
Gleyed or Low Cl				her (Explain in Basis of D		
Greyes of Low Ci	Iona Cools				,	
		Wetland De	etermination			
Hydrophytic Vegetation Present?	Yes		Hydric Soil Present? Yes Wetland? Yes			
Wetland Hydrology Present?	Yes		Welland: 16	3		

Delineation follows extent of soft rush and sedge community with low chroma, mottled and saturated soils with water staining. Small portion of wetland on golf course is inundated.

WETLAND ID:	Wetland 71		EVALUATOR:	PJD, BT	B, RCL, ERB	
DATE:	28-Apr-05		WEATHER: 50 deg	rees with rain in past 2	4 hours	
Do normal circumstances	exist on the site?	Yes				
Is the site significantly dis	sturbed (Atypical Situation)?	No				
is the area a potential pro	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0846 Ac	0.0342 Ha	

ROGEOMORPHIC	CLASSIFICATION.			SIZE:			
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WET	LAND			UPLANI	<b>O</b>	
SPE	CIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Poaceae or G	Gramineae sp.	н	NS	Poaceae or G	Gramineae sp.	н	NS
Tritolia	um sp.	н	NS	Trifoliu	um sp.	н	NS
				Į			
				1			
				Ì			
rcent of Dominant S			#DIV/0!				
re OBL, FACW, and			#DIV/0!		HYDROL	OGY	<u></u>
MADDEE	SOIL UNIT:	Braceville gravetly loam	BrA)				
	SOIL UNIT:	Rexford	, Sirvy	COURCE OF HYDR	OLOGY:	Hillside seep discharge	e and seasonal saturation
- ATDNO		ORE SOIL SCORE	······································	SOURCE OF HYDR DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
0-12"	10YR4/2	10YR4/6	silt loam	DEPTH TO SATURA	ATED SOIL:		
>12'	rock		rock		FIELD INDICATORS		
				1 ,	PRIMARY INDICATORS	;	
VI. ( )	WETLAND F	RINGE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X	Saturated in Upper 12 fr	nches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAN	D SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	Si	ECONDARY INDICATO	RS	
0-8"	10YF14/3	10YR4/6	silt loam		Oxidized Root Channels	s in Upper 12 inche	es
>8*	rock		rock		Water Stained Leaves		
					FAC-Neutral Test		
			Hydric Soil	Indicators			
ı	Histosol		,		Concretions		
	Histic Epipedon				- High Organic Content in Su	rface Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in Sandy	Soils	
	Aquic Moisture Regime			×	Listed on Local Hydric Soils	List	
X	Reducing Conditions				Listed on National Hydric Se	oils List	
×	Gleyed or Low Chroma	Colors			Other (Explain in Basis of D	Delineation)	
			Wetland De	etermination			
Hydrophytic Vegetation		Yes		Hydric Soil Present?			
Wetland Hydrology Pri	esent?	Yes		Wetland?	Yes		

Delineation follows the extent of saturation in mowed lawn setting of golf course with low chroma, mottled soils. Area is planted with a mixture of vegetation for the golf course, thus the reason for lack of hydrophytic vegetation.

0.0445 Ac 0.0180 Ha	EVALUATOR: PJD, UNEATHER: 50 degrees with rain in pas			Wetland 72	WETLAND ID:
0.0445 Ac	WEATHER: 50 degrees with rain in pas				
S 0% PFO 0% POW  UPLAND  STRATUM INDICATOR  H FACU-  H NS			Apr-05	: 28-Apr	DATE:
S 0% PFO 0% POW  UPLAND  STRATUM INDICATOR  H FACU-  H NS		Yes	?	tances exist on the site?	normal circumstanc
S 0% PFO 0% POW  UPLAND  STRATUM INDICATOR  H FACU-  H NS		No	Situation)?	ntly disturbed (Atypical Situ	e site significantly
S 0% PFO 0% POW  UPLAND  STRATUM INDICATOR  H FACU-  H NS		No		itial problem area?	ne area a potential (
UPLAND  STRATUM INDICATOR  H FACU-  H NS			<b>t</b> :	PHIC CLASSIFICATION:	DROGEOMORPHI
<u>STRATUM INDICATOR</u> H FACU- H NS	100% PEM 0 % PSS	CLASSIFICATION:			GETATION
H FACU- H NS			/ETLAND		
H NS	<u>SPECIES</u> Rubus allegheniensis	INDICATOR	STRATUM	SPECIES	
• •	Allium sp.	85% FAC-OBL	H	Carex sp.	
•	Prunus serotina	FACW FAC - OBL	H H	patiens capensis	
T FAC	Acer rubrum	THO TOBE	п	Osmunda sp.	Osii
				nant Species that	Percent of Dominant
		100%		, and FAC	are OBL, FACW, an
HYDROLOGY	HYDROLO		SOILS		
		(ReA)	Rexford gravelly silt loam	PPED SOIL UNIT:	MAPPE
Discharge from Channel 035 and seasonal satura	SOURCE OF HYDROLOGY:		Rexford	DRIC SOIL UNIT:	HYDRI
AU DIT-	DEPTH OF SURFACE WATER:	TENT IDE	CORE SOIL SCORE		
9E (2)1:	DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL:	TEXTURE silt loam	MOTTLE	MATRIX	DEPTH
	FIELD INDICATORS	sit ioam	10YFI4/6	10YR4/2	0-14"
	PRIMARY INDICATORS				
	Inundation		FRINGE SOIL SCORE	WETLAND E	· · · · · · · · · · · · · · · · · · ·
Linner 12 inches	X Saturated in Upper 12 Inc	TEXTURE	MOTTLE	MATRIX	DEPTH
	Water Marks			<u> </u>	
	Drift Lines				
eposits	Sediment Deposits				
tterns	X Drainage Patterns		AND SOIL SCORE	UPLAN	
INDICATORS	SECONDARY INDICATOR	TEXTURE	MOTTLE	MATRIX	DEPTH
ot Channels in Upper 12 inches	Oxidized Root Channels	organic/mineral mix		10YR3/2	0-4"
ed Leaves	X Water Stained Leaves	silt loam		10YR4/3	4-14"
l Test	FAC-Neutral Test				
		Hydric Soil I			
Secret in Surface Layon in South Sails	Concretions  Util Countries Countrie			Histosol	
Content in Surface Layers in Sandy Soils	High Organic Content in Surf			Histic Epipedon	
-	Crganic Streaking in Sandy S  X Listed on Local Hydric Soils I		••	Sulfidic Odor	<b></b>
	Listed on Local Plydric Soils L			Aquic Moisture Regime Reducing Conditions	×
	Other ( Explain in Basis of De			Gleyed or Low Chroma	
•					
	ermination	Wetland Dete			
	Hydric Soil Present? Yes		Yes	etation Present?	Hydrophytic Vegetation
	Wetland? Yes		Yes	ogy Present?	Wetland Hydrology P
				ELINEATION:	BASIS OF DEL
	•			ogy Present?	Wetland Hydrology P

WETLAND ID: Wetland 73 DATE: 11-Ma onormal circumstances exist on the site? the site significantly disturbed (Atypical Si the area a potential problem area? YDROGEOMORPHIC CLASSIFICATION: EGETATION	ituation)?	Yes No No	EVALUATOR:  WEATHER: Sunny and hot	PJD, BTB, AJL	
o normal circumstances exist on the site? the site significantly disturbed (Atypical Si the area a potential problem area? YDROGEOMORPHIC CLASSIFICATION: EGETATION	ituation)?	No	WEATHER: Sunny and hol		
the site significantly disturbed (Atypical Si the area a potential problem area? YDROGEOMORPHIC CLASSIFICATION: EGETATION		No			
the area a potential problem area? /DROGEOMORPHIC CLASSIFICATION: EGETATION					
DROGEOMORPHIC CLASSIFICATION:		No			
EGETATION					
			SIZE: 0.	0.0037 Ha	
WE		CLASSIFICATION:	100% PEM 0 % PSS	0 % PFO	0% POW
	ETLAND			UPLAND	
SPECIES	STRATUM	INDICATOR	SPECIES	STRATUM	INDICATOR
Carex sp.	н	85% FAC-OBL	Taraxacum officinale	н	FACU-
Saren ap.			Poaceae or Gramineae sp.	н	NS
			Trifolium sp.	н	NS
			Plantago major	н	FACU
			Veronica sp.	н	NS
ercent of Dominant Species that are OBL, FACW, and FAC		100%			
	SOILS		ı	HYDROLOGY	
MAPPED SOIL UNIT:	Philo silt loam (Ph)	)			
HYDRIC SOIL UNIT:	Holly		SOURCE OF HYDROLOGY:	Groundwater sex	op and stream flooding
······································	CORE SOIL SCORE		DEPTH OF SURFACE WATER:		
DEPTH MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATER IN SOI	L PIT:	
0-4" Organic		Organic	DEPTH TO SATURATED SOIL:		o
4-16" 2.5Y3/2	10YR4/4	silty sandy loam	FIELD INDIC	CATORS	
LOTOL	1011111	,, ·	PRIMARY IND	ICATORS	
METLAND	FRINGE SOIL SCORE				
DEPTH MATRIX	MOTTLE	TEXTURE		Ipper 12 Inches	
0-16" 10YR3/2	10YR2/1, 10YR4		Saturated in C	pper 12 inches	
5-16 107H3/2	1011121, 10111		Water Marks  X Drift Lines		
			Drift Lines		
LICIA	ND SOIL SCORE		X Prainage Patt		
		TEXTURE	X Drainage Patt SECONDARY II		
	MOTTLE	sandy loam			
				t Channels in Upper 12 inch	es
4-12" 10YR4/4		ioam	Water Stained		
>12" rock		rock	FAC-Neutral	Test	
Histosol		Hydric Soil	Indicators  Concretions		
Histic Epipedon			High Organic Co	ontent in Surface Layers in Sandy	Soils
Sulfidic Odor			Organic Streaki	ng in Sandy Soils	
Aquic Moisture Regime	è		X Listed on Local	Hydric Soils List	
X Reducing Conditions			Listed on Nation	nal Hydric Soils List	
X Gleyed or Low Chroma	a Colors		Other ( Explain	in Basis of Delineation)	
Sayou or con officing					
Hydrophytic Vegetation Present?	Yes	Wetland De	etermination  Hydric Soil Present? Yes		
Wetland Hydrology Present?	Yes		Wetland? Yes		
BASIS OF DELINEATION:	100				

MATERIA AND AND	C1		TLAND DA	EVALUATOR:	PJD,	BTB, KJS, ERB	
WETLAND ID:	Seep 1				y, clear, 50 degrees		
DATE:	12-Apr-05			WEATHER, SUIII	,, 5.0a., 50 oogrees		
normal circumstances		Ye					
	urbed (Atypical Situation)?						
the area a potential pro		N	o	SIZE:	0.0035 Ac	0.0014 Ha	
/DROGEOMORPHIC (	CLASSIFICATION:			0% PEM	0 % PSS	0 % PFO	0% PO
EGETATION			LASSIFICATION:	0% PEM:	UPLAND		
	WETLAND		" INCLEASE OF	SPECI		STRATUM	INDICAT
SPEC	CIES	STRATUM	INDICATOR	Tsuga cana		T	FACI
				Acer rub		T	FAC
				Quercus		Т	FAC
				Quercus		т	FAC
Percent of Dominant Spare OBL, FACW, and F			#DIV/0!				
	SOILS			<u> </u>	HYDROL	JGY	
MAPPED	SOIL UNIT: Che	nango gravelly loam (C	hB)			Grounds	rater seeps.
HYDRIC	SOIL UNIT:	Rexford		SOURCE OF HYDRO		Giodiale	raici socps
	WETLAND CORES			DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-4"	organic		organic	DEPTH TO SATURAT			
4-10"	10YR6/4	10YR6/8	sitty clay loam	1	ELD INDICATORS		
				4	RIMARY INDICATORS		
	WETLAND FRINGE				undation		
DEPTH	MATRIX	MOTTLE	TEXTURE		aturated in Upper 12 In	ches	
					ater Marks		
					rift Lines		
					ediment Deposits		
	<u>UPLAND SOI</u>		TEVTUDE		rainage Patterns CONDARY INDICATO	RS	
DEPTH	MATRIX	MOTTLE	TEXTURE silty clay loam				
0-16"	7.5YR6/3		Silly Clay Ioan		oxidized Root Channels	s in Opper 12 mone	15
Į.					Vater Stained Leaves		
				'	AC-Neutral Test		
			Hydric Sci	Indicators			
	listosol		Tiyana 301		Concretions		
					ligh Organic Content in Su	tace Layers in Sandy	Soils
	Histic Epipedon Buffidic Odor				Organic Streaking in Sandy		
				Criganic Streaking in Sandy Soils  X Listed on Local Hydric Soils List			
	Aquic Moisture Regime Reducing Conditions				isted on National Hydric S		
	Gleyed or Low Chroma Colors				Other (Explain in Basis of I		
	and you of Low Chilonia Colors						
			Wetland D	etermination			
Hydrophytic Vegetation	Present?	No		Hydric Soil Present?	No		
Wetland Hydrology Pre	sent?	Yes		Wetland?	No		
BASIS OF DELIN	NEATION:				· · · · · · · · · · · · · · · · · · ·		

		WETLAND DA					
WETLAND ID: Seep 2			EVALUATOR:		BTB, KJS, ERB		
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees			
normal circumstances exist on the	site?	Yes					
ne site significantly disturbed (Atypic	cal Situation)?	No					
ne area a potential problem area?		No					
DROGEOMORPHIC CLASSIFICAT	TION:		SIZE:	0.0421 Ac	0.0170 Ha		
GETATION		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW	
	WETLAND			UPLANI			
SPECIES	STRATUM	INDICATOR	SPECIES		STRATUM	INDICATO	
			Quercus ru		T	FACU-	
			Quercus al		T _	FACU	
			Quercus mor		T T	UPL FACU	
			Tsuga canad				
ercent of Dominant Species that re OBL, FACW, and FAC		#DIV/0!					
	SOILS			HYDROLO	OGY		
MAPPED SOIL UNIT:	Wyoming gravelly sand		1		C	vater seeps.	
HYDRIC SOIL UNIT:	Wet spots	i	SOURCE OF HYDROLO		Ground	vater seeps.	
	AND CORE SOIL SCORE		DEPTH OF SURFACE W				
<u>DEPTH</u> <u>MATE</u>			DEPTH TO FREE WATE				
0-4* organ		organic	DEPTH TO SATURATED				
4-10" 10YR6	5/4 10YR6/8	silty clay loam		D INDICATORS ARY INDICATORS			
		,	┥ 、				
	AND FRINGE SOIL SCOR			dation	-1		
DEPTH MATE	RIX MOTTL	E IEXIONE	Said	rated in Upper 12 in	cnes		
				er Marks			
				Lines ment Deposits			
	JPLAND SOIL SCORE			nage Patterns			
DEPTH MAT		E TEXTURE		NDARY INDICATOR	as		
0-4" 10YF		organic/mineral mix	Oxio	lized Root Channels	in Upper 12 inche	s	
4-16" 10YF	R4/6	sit loam		er Stained Leaves			
				-Neutral Test			
	<u> </u>	Hydric Soil	Indicators				
Histosol			Conc	retions			
Histic Epipedon			High	Organic Content in Surf	ace Layers in Sandy	Soils	
Sulfidic Odor			Orga	nic Streaking in Sandy	Soils		
Aquic Moisture F	legime		Liste	d on Local Hydric Soils	List		
Reducing Condit	ions		Listed on National Hydric Soils List				
Gleyed or Low C	throma Colors		Othe	r (Explain in Basis of D	elineation)		
		Wetland De	termination				
	No		Hydric Soil Present? No				
Hydrophytic Vegetation Present?			Wetland? No				

		V	/ETLAND DA	MAPONI			
WETLAND ID:	Seep 3			EVALUATOR:	PJD.	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny	, clear, 50 degrees		
normal circumstances	exist on the site?		Yes				
e site significantly dis	turbed (Atypical Situation)?		No				
ne area a potential pro	oblem area?		No				
OROGEOMORPHIC (	CLASSIFICATION:			SIZE:	0.0069 Ac	0.0028 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND				UPLAN	D	
SPEC	CIES	STRATUM	INDICATOR	SPECIE	S	STRATUM	INDICATOR
				Tsuga cana	densis	Т	FACU
				Trifolium	sp.	н	NS
				Carya ov	ata	Т	FACU-
				Taraxacum o	fficinale	н	FACU-
ercent of Dominant Sp	NOCips that						
re OBL, FACW, and F			#DIV/0!				
, , , , , , , , , , , , , , , , , , , ,	SOILS				HYDROL	OGY	
MAPPED	SOIL UNIT: Oquaga-Lackay	wanna extremely sto	ony loams (OxB)				
	SOIL UNIT:			SOURCE OF HYDROL	OGY:	Groundw	rater seeps.
	WETLAND CORE S	OIL SCORE		DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WAT	ER IN SOIL PIT:		
0-4"	organic		organic	DEPTH TO SATURATE	D SOIL:		
4-10"	10YR6/4	10YR6/8	silty clay loam	FIE	LD INDICATORS		
				PRI	MARY INDICATORS	<b>S</b>	
	WETLAND FRINGE	SOIL SCORE		X Inu	ndation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Sat	urated in Upper 12 Ir	nches	
				Wa	iter Marks		
				Dri	ft Lines		
				Se	diment Deposits		
	UPLAND SOIL	SCORE		Dra	ainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	ONDARY INDICATO	RS	
0-4"	10YR4/4		silt loam	o	tidized Root Channels	s in Upper 12 inche	s
4-12*	10YR5/4		silt loam	w	ater Stained Leaves		
>12"	rock		rock	F#	C-Neutral Test		
			Hydric Sol	l Indicators		and the second s	
Н	listosol			Co	ncretions		
}	listic Epipedon			Hig	gh Organic Content in Su	rlace Layers in Sandy S	soils
9	Sulfidic Odor			Or	ganic Streaking in Sandy	Soils	
, , , , , , , , , , , , , , , , , , ,	Aquic Moisture Regime			Lis	sted on Local Hydric Soils	List	
F	Reducing Conditions			Lk	sted on National Hydric S	oils List	
(	Gleyed or Low Chroma Colors			O	her (Explain in Basis of D	Delineation)	
	-	· · · · · · · · · · · · · · · · · · ·	Wetland De	etermination			***
Hydrophytic Vegetation	Present?	No		Hydric Soil Present? No	0		
1	sent?	Yes		Wetland? N	0		
Wetland Hydrology Pres							

WETLAND ID:		W	ETLAND DA	TA FORM			
	Vernal Pool 1			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny,	clear, 50 degrees		
normal circumstance	s exist on the site?	Y	'es				
he site significantly di	sturbed (Atypical Situation)	? 1	lo				
the area a potential pr	oblem area?	1	10				
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0344 Ac	0.0139 Ha	
GETATION		(	CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND	)			UPLANE		
SPE	CIES	STRATUM	INDICATOR	SPECIES	i	STRATUM	INDICATO
				Tsuga canade		T -	FACU
				Acer rubru		T _	FAC
				Quercus al Quercus rui		T T	FACU-
ercent of Dominant S	•						
are OBL, FACW, and			#DIV/0!	<del>                                     </del>	HYDROLO	nev .	
	SOILS		om (I bR)	<b></b>	HIDHOLO		
		nna extremely stony lo	am (LDB)			Storrnwaler r	unoff collection.
HTDHIC	SOIL UNIT:	POIL POORE		SOURCE OF HYDROLO DEPTH OF SURFACE W			1-12"
<u>DEPTH</u>	WETLAND CORE:	MOTTLE	TEXTURE	DEPTH TO FREE WATE			
0-8"	10YB4/1	1110111111	silty clay loam	DEPTH TO SATURATED			
8-16"	10YR3/2		sitty clay loam	FIEL	D INDICATORS		
				PRIM	ARY INDICATORS		
· · · · · · · · · · · · · · · · · · ·	WETLAND FRINGE	SOIL SCORE		× Inunc	lation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Satu	ated in Upper 12 Inc	ches	
				Wate	r Marks		
				Drift	Lines		
		<u></u>		Sedi	ment Deposits		
	UPLAND SOI	L SCORE			nage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	IDARY INDICATOR	RS	
0-16*	7.5YR6/3		sitty clay loam		ized Root Channels	in Upper 12 inche	s
				X Wate	er Stained Leaves		
				FAC	-Neutral Test		
				<u> </u>		·····	
	Histosot		Hydric Soil		retions		
	Histic Epipedon				Organic Content in Surl	ace Layers in Sandy 5	Soils
	Histic Epipedon Sulfidic Odor				nic Streaking in Sandy 5		
	Const Oddi				d on Local Hydric Soils I		
X	Aquic Moisture Regime				d on National Hydric Soi		
X	Aquic Moisture Regime Reducing Conditions						
X				Othe	r (Explain in Basis of De	elineation)	
X	Reducing Conditions			Othe	r (Explain in Basis of De	elineation)	
X	Reducing Conditions		Wetland De	Othe	r (Explain in Basis of De	elineation)	
X	Reducing Conditions Gleyed or Low Chroma Colors	No	Wetland De		r(Explain in Basis of De	elineation)	

		W	ETLAND DA	TA FORM			
WETLAND ID:	Vernal Pool 2			EVALUATOR:	PJD	, BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunr	ny, clear, 50 degrees		
normal circumstance	es exist on the site?		Yes				
ne site significantly	disturbed (Atypical Situation	n)?	No				
ne area a potential	problem area?		No				
DROGEOMORPHI	C CLASSIFICATION:			SIZE:	0.0065 Ac	0.0026 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
****	WETLA	ND.			UPLANI		
SE	PECIES	STRATUM	INDICATOR	SPECI		STRATUM	INDICATOR
Mu	isci sp.	Н	NS	Tsuga cana		T	FACU
				Acer rut		T -	FAC
				Quercus		T T	FACU-
				Quercus			
Percent of Dominant are OBL, FACW, and	·		#DIV/0!				
	SOIL	.s			HYDROL	OGY	
MAPPE	D SOIL UNIT: Lackay	vanna extremely stony k	oam (LbB)				
HYDRI	C SOIL UNIT:			SOURCE OF HYDROI	_OGY:	Surface wa	aler collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE	WATER:		1-4*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
0-16"	10YR6/2	10YR6/8	silty clay loam	DEPTH TO SATURAT	ED SOIL:		
				FI	ELD INDICATORS		
					IMARY INDICATORS	1	
	WETLAND FRING			X Int	undation		
DEPTH	MATRIX	MOTTLE	<u> TEXTURE</u>		turated in Upper 12 In	iches	
					ater Marks		
	•				ift Lines		
	UPLAND SO	OII CCORE			ediment Deposits		
DEPTH	MATRIX	MOTTLE	TEXTURE		rainage Patterns ONDARY INDICATOR	RS	
0-16"	7.5YR6/3	MOTTEE	sitty clay loam		xidized Root Channels		•
					ater Stained Leaves	in opportunition	-
					AC-Neutral Test		
			Hydric Soll	Indicators			
	Histosol			c	oncretions		
	Histic Epipedon			H	igh Organic Content in Sur	tace Layers in Sandy S	Soils
×	Sulfidic Odor			0	rganic Streaking in Sandy	Soils	
	Aquic Moisture Regime			ti	sted on Local Hydric Soils	List	
×	Reducing Conditions			نانا	sted on National Hydric Sc	riks List	
	Gleyed or Low Chroma Colors	\$		0	ther (Explain in Basis of D	elineation)	
Library E. M. N	- P		Wetland De	termination	20		
Hydrophytic Vegetatio		No No		Hydric Soil Present? Y  Wetland?			
Wetland Hydrology Pi		Yes		Wetland? N	~		
	ws extent of inundated	and saturated con	ditions with water stai	ned leaves.			

WETLAND ID:			ETLAND DA		N ID	BIB KIC EDD	
	Vernal Pool 3			EVALUATOR:		BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny,	clear, 50 degrees		
normal circumstanc	es exist on the site?		es				
ne site significantly of	disturbed (Atypical Situation)						
ne area a potential p	problem area?	N	lo		0.0000 4-	0.0028 Ha	
DROGEOMORPHIC	C CLASSIFICATION:			SIZE:	0.0069 Ac	0 % PFO	0% POW
GETATION		C	CLASSIFICATION:	0% PEM	0 % PSS		0,01,011
	WETLAN	D		005050	UPLAND	STRATUM	INDICATOR
SP	PECIES	STRATUM	INDICATOR	SPECIES		<u>5117710W</u> T	FACU
				Tsuga canade		, T	FAC
				Acer rubru		T	FACU
				Quercus all Quercus rut		, T	FACU-
ercent of Dominant ire OBL, FACW, and	•		#DIV/0!				
	SOIL	s			HYDROL	OGY	
MAPPE	ED SOIL UNIT: Lackaw	ranna extremely storry loa	am (Lb8)				
HYDRI	IC SOIL UNIT:			SOURCE OF HYDROLO	GY:	Stormwater (	unoil collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE W	ATER:		1-8"
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATE	R IN SOIL PIT:		
0-14"	10YR6/2	10YR6/8	sitty clay loam	DEPTH TO SATURATED			
				FIEL	D INDICATORS		
				PRIM	ARY INDICATORS		
	WETLAND FRING	E SOIL SCORE		X Inunc	dation		
DEPTH	MATRIX	MOTTLE	TEXTURE	Satu	rated in Upper 12 In	ches	
				Wate	er Marks		
				Drift	Lines		
				Sedi	ment Deposits		
	UPLAND SC				nage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	1	NDARY INDICATO		
0-16"	7.5YR6/3		sitty clay loam		lized Root Channels	in Upper 12 inche	es .
					er Stained Leaves		
				FAC	-Neutral Test		
			Hydric Soil	Indicators			
	Histosol		Hydric Soil		cretions		
	Histic Epipedon				Organic Content in Sur	tace Layers in Sandy	Soils
	Sulfidic Odor				anic Streaking in Sandy		
	Aquic Moisture Regime				ed on Local Hydric Soils		
×	Reducing Conditions			· · · · · · · · · · · · · · · · · · ·	ed on National Hydric Sc		
	Gleyed or Low Chroma Colors	à			er (Explain in Basis of D		
<b>Q</b> ac							
<u> </u>		<u> </u>	Wetland De	etermination			
<b>X</b>		\$1-		Hydric Soil Present? Yes			
Hydrophytic Vegetati	ion Present?	No					

WETLAND ID:							
	Vernal Pool 4			EVALUATOR:		BTB, KJS, ERB	
DATE:	12-Apr-0	5		WEATHER: sunny,	, clear, 50 degrees		
normal circumstance	es exist on the site?		Yes				
e site significantly o	disturbed (Atypical Situa	tion)?	No				
ne area a potential p	problem area?		No				
DROGEOMORPHIC	C CLASSIFICATION:			SIZE:	0.0871 Ac	0.0352 Ha	
GETATION			CLASSIFICATION:	0% PEM	0%PSS	0 % PFO	0% POW
	WETL	AND			UPLAND	)	
SP	PECIES	STRATUM	INDICATOR	SPECIE	S	STRATUM	INDICATOR
Mu	isci sp.	н	NS	Tsuga canad	lensis	Т	FACU
Kalmia	angustifolia	SS	FAC	Acer rubro	um	Т	FAC
				Quercus ru	ıbra	Т	FACU-
				Kalmia latif	folia	SS	FACU
				Quercus a	alba	Т	FACU
ercent of Dominant	Species that						
re OBL, FACW, and	d FAC		100%		HYDROLO	nev .	
		DILS	1 (I-D)		HIDROL		
		kawanna extremely stony	ioam (LDB)	1		Surface w	ater collection.
HYDRI	IC SOIL UNIT:			SOURCE OF HYDROLO DEPTH OF SURFACE V		Contract III	1-4"
	WETLAND CO	ORE SOIL SCORE		DEPTH OF SURFACE V			
DEPTH	MATRIX	MOTTLE	TEXTURE	1			
0-14"	10YR6/1	10YR6/8	sitty clay loam	DEPTH TO SATURATE	LD INDICATORS		
				1	MARY INDICATORS		
				┥ 、			
		INGE SOIL SCORE	TEVTIDE		ndation		
DEPTH	MATRIX	MOTTLE	TEXTURE		urated in Upper 12 in	cnes	
					ter Marks		
					t Lines		
	APPLANT	CON CCORE			diment Deposits		
ocor.		SOIL SCORE	TEXTURE		iinage Patterns INDARY INDICATOR	25	
DEPTH	MATRIX	MOTTLE	sit loam	1			_
0-4"	organic		siit loam		idized Root Channels	in Upper 12 inche	!S
4-12"	7.5YR6/8		Siii Koam		iter Stained Leaves		
				FA	C-Neutral Test	_	
			Hydric Soi	I Indicators			
	Histosol —				ncretions	tann I gunne in Court	Soils
	Histic Epipedon				h Organic Content in Surf		
	Sulfidic Odor —				ganic Streaking in Sandy		
	Aquic Moisture Regime				ted on Local Hydric Soils		
×	Reducing Conditions				ted on National Hydric So		
×	Gleyed or Low Chroma C	olors		Oth	ner (Explain in Basis of D	ielineation)	
			Wetland D	etermination			
Hydrophytic Vegetati	ion Present?	No		Hydric Soil Present? Ye	s.		
Wetland Hydrology F		Yes		Wetland? No	)		
	INEATION:						
	LINEATION:						
DASIS OF DEL							
BASIS OF DEL							
				ss and sheep laurel in and	) - P		

WETLAND ID:							
WE I LAND ID:	Vemal Pool 5			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny,	clear, 50 degrees		
normal circumstand	ces exist on the site?	Yes					
e site significantly	disturbed (Atypical Situation)?	No					
ne area a potential	problem area?	No					
	C CLASSIFICATION:			SIZE:	0.0028 Ac	0.0011 Ha	
GETATION		CL	ASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND				UPLAND		
91	PECIES	STRATUM	INDICATOR	SPECIES	<u> </u>	STRATUM	INDICATOR
<u> </u>		<u> </u>		Tsuga canad	ensis	Т	FACU
				Acer rubru	ım	T	FAC
				Quercus ru	bra	т	FACU-
				Kalmia latif	olia	SS	FACU
				Quercus a		T	FACU
ercent of Dominant	,		#DŧV/0!				
re OBL, FACW, ar	nd FAC SOILS		#DIA/O	<del>                                     </del>	HYDROLO	OGY	
NAADDI		na extremely storry loarn	(LbB)	<b>1</b>			
		a careniery story toath	,	COURCE OF UNDERST	icv.	Surface w	rater runott.
HTUH	IIC SOIL UNIT: WETLAND CORE SO	OIL SCOPE		DEPTH OF SURFACE V			6-
DEDTU		MOTTLE	TEXTURE	DEPTH TO FREE WATE			
DEPTH 0-4*	<u>MATRIX</u> 7.5YR3/2	7.5YR4/6	sity clay loam	DEPTH TO SATURATE			
4-12"		7.5YR5/6, 7.5YR4/6	sitty clay loam	1	LD INDICATORS		
4-12	7.51 HQ2	7.511.50, 7.511.40	ony way roun	1	MARY INDICATORS		
· · · ·	WETLAND FRINGES	SOIL SCORE		× Inun	dation		
DEPTH	MATRIX	MOTTLE	TEXTURE		rated in Upper 12 In	ches	
					er Marks		
				Drift	Lines		
					iment Deposits		
	UPLAND SOIL	SCORE			nage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	NDARY INDICATO	RS	
0-4"	organic		silt loam	Oxi	dized Root Channels	in Upper 12 inches	s
4-12"	7.5YR6/8		silt loam		ter Stained Leaves		
					C-Neutral Test		
		***************************************	Ib deia Cai	Undicators			
	Histosol		nyaric soi	I Indicators  Cor	cretions		
	Histic Epipedon			Hig	n Organic Content in Sur	face Layers in Sandy S	Soils
×	Sulfidic Odor			Org	anic Streaking in Sandy	Soils	
	Aquic Moisture Regime			List	ed on Local Hydric Soils	List	
×	Reducing Conditions			List	ed on National Hydric Sc	oils List	
~	Gleyed or Low Chroma Colors			Oth	er (Explain in Basis of D	relineation)	
			Wetland D	etermination  Hydric Soil Present? Ye			
				riyunc son Fresence Te	4		
Hydrophytic Vegetat Wetland Hydrology		No Yes		Wetland? No			

WETLAND ID:							
	Vemal Pool 6			EVALUATOR:	PJD	, BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunny	, clear, 50 degrees		
normal circumstances		•	/es				
	sturbed (Atypical Situation	)?	٧o				
he area a potential pr	`		No				
DROGEOMORPHIC				SIZE:	0.0064 Ac	0.0026 Ha	
GETATION	02.001.10/11.011		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
	WETLAN				UPLAN	D	
SPE	CIES	STRATUM	INDICATOR	SPECIE	S	STRATUM	INDICATOR
	X.4¥			Tsuga canad	densis	т	FACU
				Acer rubr	um	Ŧ	FAC
				Quercus re	ubra	Т	FACU-
				Kalmia lati	folia	ss	FACU
				Quercus a	alba	Т	FACU
ercent of Dominant S tre OBL, FACW, and			#DIV/0!				
, , , , , , ,	SOIL	s			HYDROL	.OGY	
MAPPEL		anna extremely stony k	oam (LbB)				
	SOIL UNIT:			SOURCE OF HYDROL	DGY:	Surface wa	iter collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE			12"
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WAT	ER IN SOIL PIT:		
0-16*	10YR5/4	10YR5/6	sitty clay loam	DEPTH TO SATURATE	D SOIL:		
				FIE	LD INDICATORS	}	
				PRI	MARY INDICATORS	S	
***************************************	WETLAND FRING	SE SOIL SCORE		X Inui	ndation		
DEPTH	MATRIX	MOTTLE	TEXTURE		urated in Upper 12 I	nches	
	<del></del>				ter Marks		
				Dri	it Lines		
				Sec	diment Deposits		
	UPLAND SO	OIL SCORE		Dra	ainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SECO	ONDARY INDICATO	RS	
0-4"	organic		sit loam	Ox	idized Root Channel	ls in Upper 12 inche	s
4-12"	7.5YR6/8		sit loam	× wa	ater Stained Leaves		
				FA	C-Neutral Test		
			Hudric Soi	I Indicators			
	Histosol		Hydric 301		ncretions		
	Histic Epipedon			Hiç	gh Organic Content in Su	rrtace Layers in Sandy S	Soils
	Suffidic Odor				ganic Streaking in Sandy		
					ted on Local Hydric Soil		
	Aquic Moisture Regime				ted on National Hydric S		
	Aquic Moisture Regime Reducing Conditions						
	Reducing Conditions	s		Ot	her (Explain in Basis of	Delineation)	
		s		Ot	her (Explain in Basis of	Delineation)	
	Reducing Conditions	S	Wetland D	etermination	her (Explain in Basis of	Delineation)	
	Reducing Conditions Gleyed or Low Chroma Colon	s No	Wetland D		<u> </u>	Delineation)	

Vernal Pool 7  12-Apr-05 s exist on the site?		Yes	EVALUATOR: WEATHER: sunny, cl	PJD, ear, 50 degrees	BTB, KJS, ERB	
s exist on the site?		Yes	WEATHER: sunny, cl	ear, 50 degrees		
		Yes				
sturbed (Atypical Situation	n)?	No				
oblem area?		No				
CLASSIFICATION:			SIZE:	0.1245 Ac	0.0504 Ha	
		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	0% POW
WETLAN	ND			UPLAND		
CIES	STRATUM	INDICATOR	SPECIES			INDICATOR
						FACU
			1			FAC
						FACU-
			1			FACU
			Quercus aloa	1	1	FACU
pecies that						
FAC		#DIV/0!				
SOIL	.s			HYDROLO	OGY	
SOIL UNIT: Morris	s extremely stony silt loa	am (MoB)				
SOIL UNIT:	Norwich		SOURCE OF HYDROLOG	Y:	Surface wa	ater collection.
WETLAND CORE	E SOIL SCORE		DEPTH OF SURFACE WA	TER:		
MATRIX	MOTTLE	TEXTURE	1			
10YR5/4	10YR5/6	sity clay loam				
			1			
				RY INDICATORS		
			Indida			
MATRIX	MOTTLE	TEXTURE	- Satura		ches	
LIDI AND S	OIL SCORE					
		TEXTURE		-	RS	
	D. 2021.20	sit loam				s
7.5YR6/8		sitt loam			in opper 12 mone	•
			,,,,,,	vodiai voo		_
		Hydric Soll	Indicators	····		
Histosol			Concre	tions		
Histic Epipedon			High O	rganic Content in Surf.	ace Layers in Sandy S	Soils
Sulfidic Odor			Organic	Streaking in Sandy 5	Soits	
Aquic Moisture Regime			X Listed o	on Local Hydric Soils i	List	
Reducing Conditions			Listed (	on National Hydric Soi	its List	
Sleyed or Low Chroma Colors	S		Other (	Explain in Basis of Do	elineation)	
	****					
		Wetland De				
	Yes		wettand? No			
EATION:						
s extent of inundated	and saturated con	ditions.				
	Pecies that FAC SOIL SOIL UNIT: Morris SOIL UNIT: WETLAND CORI MATRIX 10YR5/4  WETLAND FRING MATRIX  Organic 7.5YR6/8  Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions	WETLAND  CIES STRATUM  Pecies that  FAC  SOILS  SOIL UNIT: Morris extremely story silt for SOIL UNIT: Norwich  WETLAND CORE SOIL SCORE  MATRIX MOTTLE  10YRS/4 10YRS/6   WETLAND FRINGE SOIL SCORE  MATRIX MOTTLE  MOTTLE  UPLAND SOIL SCORE  MATRIX MOTTLE  Organic  7.5YR6/8  Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Present? No sent? Yes	Pecies that FAC #DIV/O!  SOILS SOIL UNIT: Morris extremely story silt loam (MoB) SOIL UNIT: Norwich WETLAND CORE SOIL SCORE MATRIX MOTTLE TEXTURE 10YR5/4 10YR5/6 silty clay loam  WETLAND FRINGE SOIL SCORE MATRIX MOTTLE TEXTURE 10YR5/4 10YR5/6 silty clay loam  WETLAND FRINGE SOIL SCORE MATRIX MOTTLE TEXTURE  MATRIX MOTTLE TEXTURE  SILTURE  WETLAND FRINGE SOIL SCORE MATRIX MOTTLE TEXTURE  HATRIX MOTTLE TEXTURE  SILTURE  WETLAND SOIL SCORE MATRIX MOTTLE TEXTURE  SILTURE  HYDRIC SOIL  HYDRIC SOIL  HYDRIC SOIL  SILTURE  WETLAND SOIL SCORE MATRIX MOTTLE TEXTURE  SILTURE  SILTURE  SILTURE  SILTURE  WETLAND FRINGE SOIL SCORE MATRIX MOTTLE TEXTURE  SILTURE  SILTURE  WETLAND CORDINATE SILTURE  WETLAND SOIL SCORE MATRIX MOTTLE TEXTURE  SILTURE  SILTURE  SILTURE  WETLAND CORDINATE  WETLAND COR	CLASSIFICATION: 0%-PEM  WETLAND  CIES STRATUM INDICATOR  SPECIES Tsuga canaden Acer rubrum Ouercus rubrum Ouercus rubrum Ouercus albsi  Pecies that FAC #DIV/O!  SOIL UNIT: Morris extremely stony silt loam (MoB)  SOIL UNIT: Norwich  WETLAND CORE SOIL SCORE MATRIX MOTILE TEXTURE 10YR5/4 10YR5/6 silty clay loam  WETLAND FRINGE SOIL SCORE MATRIX MOTILE TEXTURE  MATRIX MOTILE TEXTURE  MATRIX MOTILE TEXTURE  Water Drift Li Sedim  UPLAND SOIL SCORE MATRIX MOTILE TEXTURE  MATRIX MOTILE TEXTURE  Sedim  UPLAND SOIL SCORE MATRIX MOTILE TEXTURE  MATRIX MOTILE TEXTURE  Sedim  UPLAND SOIL SCORE MATRIX MOTILE TEXTURE  Sedim  UPLAND SOIL SCORE MATRIX MOTILE TEXTURE  SECONE  MATRIX MOTILE TEXTURE  SECONE  MATRIX MOTILE TEXTURE  SECONE  MATRIX MOTILE TEXTURE  SECONE  MATRIX MOTILE TEXTURE  SECONE  MATRIX MOTILE TEXTURE  SECONE  Sedim  Water  FAC-N  Hydric Soil Indicators  Histosol  Acquict Moissure Regime  X Listed of Sideyed or Low Chroma Colors  Wetland Determination  Present? No  Wetland Determination	WETLAND  WETLAND  WETLAND  WETLAND  NDIGATOR  SPECIES  Tsuga canaderais Acer rubrum Quercus rubra Kalmia latifolia Quercus alba  Peccies that  FAC  SOILS  SOILS  SOILS  SOILS  SOURCE OF HYDROLOGY: DEPTH TO FREE WATER: 10YRS/4 10YRS/6 silly clay beam MATRIX MOTILE 10YRS/4 10YRS/6 SIPLED INDICATORS  WETLAND FRINGE SOIL SCORE MATRIX MOTILE 1EXTURE 10YRS/4 10YRS/6 SIPLED INDICATORS PRIMARY INDICATORS  WETLAND FRINGE SOIL SCORE MATRIX MOTILE 1EXTURE  MATRIX MOTILE 1EXTURE  MATRIX MOTILE 1EXTURE  MATRIX MOTILE 1EXTURE  MATRIX MOTILE 1EXTURE  SECONDARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS  Water Marks Drift Lines Sediment Deposits Drianage Patterns SECONDARY INDICATOR Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Hydric Soil Indicators  FAC-Neutral Test  Listed on Local Hydric Soil Lated on National Hydric Soil Lated on National Hydric Soil Present? No Hydric Soil Present? N	CLASSIFICATION: 0% PEM 0% PS% 0% PFO  WETLAND  WETLAND  INDIGATOB  SPECIES STRATUM INDIGATOB  SPECIES STRATUM INDIGATOB  SPECIES STRATUM To Quercus rubra To Prinche Soll SCORE MATRIX MOTILE TEXTURE TO Principage Patterns SECONDARY INDICATORS To principage Patterns To Quidred Root Channels in Upper 12 inches Texture T

		***************************************				
WETLAND ID: LOW 001			EVALUATOR:	PJD, I	3TB, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sun	ny, clear, 50 degrees		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly d	listurbed (Atypical Situation)?	No				
is the area a potential p	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	16.7600 Ac	6.7811 Ha	
VECETATION		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW

SPECIES STEATUM NOBCATOR  SPECIES STEATUM NOBCATOR  SPECIES STEATUM NOBCATOR  SPECIES STEATUM NOBCATOR  SPECIES STEATUM NOBCATOR  Processe of Grammacs sp. H NS  Triforum sp. H NS  Triforum sp. H NS  TRIFORUM sp. H NS  SOURCE OF HYDROLOGY  MARPED SOIL UNIT: Pres all base (Pt)  MYPRIC SOIL UNIT: Sp. ALE  SOURCE OF HYDROLOGY: Suttained in United Steature of Source  WETLAND CORE SOIL SCORE  EETH MATER MOTILE TEXTURE  DEPTH TO SATURATED SOIL:  SOURCE OF HYDROLOGY: Suttained in Upper 12 inches  WETLAND FRINGE SOIL SCORE  DEPTH OF SER STATEMEN SOLESTING  WETLAND FRINGE SOIL SCORE  DEPTH MATER MOTILE TEXTURE  DEPTH TO SATURATED SOIL:  WETLAND FRINGE SOIL SCORE  DEPTH MATER SOIL SCORE  Suturated in Upper 12 inches  Water Market  Dett Lines  MATER MOTILE TEXTURE  DEPTH TO SATURATED SOIL  MATER MOTILE TEXTURE  DEPTH TO SATURATED SOIL  MATER MOTILE TEXTURE  DEPTH TO SATURATED SOIL  Water Standard Leaver  SCOREGE OF Charmes in Upper 12 inches  Water Standard Leaver  FAC -Negloral Text  PAGE SOIL Indicators  Hydric Soil Indicators  Wetland Determination  Hydric Soil Lind on Indicator Injuries Soil Lin  Lines on Injury Source  Wetland Determination  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is stately Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is stately Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is stately Soil Lind on Indicator Injury Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is standy Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is standy Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is standy Soil Lin  Hydrogenic Cortes in Sulface Layer in Sarry's Soils  Opens Swelling is standy Soil Lin  Hydrogenic Present?  New Land Determination  Hydrogenic Present?  New Land Determination  Hydrogenic Present of I popographic low and follows waters edge.	DROGEOMORPHIC (	CLASSIFICATION:			SIZE:	16.7600 AC	0.7011110	
SPECIES STRATUM PUDICATOR  SPECIES STRATUM PUDICATOR  Processe of Grammeras Spories that  COBL FACW, and FAC  SOILS  MAPPED SOIL UNIT: Preciations (Print) HYDROLOGY  MATRIX MOTTLE TEXTURE DEPTH MATRIX MOTTLE TEXTURE DEPTH TO REIRE WATER IN SOIL PT: DEPTH TO SATURATE OSOIL: FILE INDICATORS PRIMARY	GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
Trend of Dominant Spoces that  OBL FACW, and FAC  SOILS  MAPPED SOIL UNIT: Price of borner  HYDRIC SOIL UNIT: Price of borner  WITHAND CORE SOIL SCORE  DEFIN MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY MOLOCATORS  PRIMARY MOLOCATORS  DOMINGRAP PROBRES PRIMARY  AND MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  AND MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  AND MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  DOMINGRAP PROBRES PRIMARY  MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX MATRIX MOTTLE IEXTURE  DOMINGRAP PROBRES PRIMARY  MATRIX		WETLA	AND			UPLAN	iD	
Trilolum sp. H NS  Trilolum sp. H ND  Trilolum sp.	SPE	CIES	STRATUM	INDICATOR	SPEC	DES	STRATUM	INDICATOR
Coert of Dominant Species that    DOBL FACW, and FAC					Poaceae or G	ramineae sp.	н	
SOIL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Phib sit loam (Ph) HYDRIC SOIL UNIT: Phib sit loam (Ph) HYDRIC SOIL UNIT: Southor water collection.  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTTLE IEXTURE  DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH MATRIX MOTTLE IEXTURE Sediment Deposits Diritums Sediment Deposits Diritums SECONDARY INDICATORS Water Marke Dirit Lines SECONDARY INDICATORS Water Stained Leaves FAC-Neutral Test  Hetosel Hetosel Hetosel Hetosel Hetosel Gleyed or Low Chrona Coors  Wetland Determination Hydric Soil Indicators  Wetland Determination Hydrophytic Vegetation Present? No Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes					Trifoliu	m sp.	н	NS
SOILS  MAPPED SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL FRIED INDICATORS PRIMARY INDICA								
SOILS  MAPPED SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL FRIED INDICATORS PRIMARY INDICA								
SOIL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Pride six koam (Pri) HYDRIC SOIL UNIT: Pride six koam (Pri) HYDRIC SOIL UNIT: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PRIMARY INDICATORS PRIMA					1			
SOIL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Pride six koam (Pri) HYDRIC SOIL UNIT: Pride six koam (Pri) HYDRIC SOIL UNIT: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PRIMARY INDICATORS PRIMA								
SOILS  MAPPED SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL FRIED INDICATORS PRIMARY INDICA								
SOILS  MAPPED SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: Pride sit kom (Ph) HYDRIC SOIL UNTI: SOURE DEPTH MATRIX MOTTLE IEXTURE DEPTH MATRIX MOTTLE IEXTURE DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL PIT: DEPTH TO SATURATE SOIL FRIED INDICATORS PRIMARY INDICA								
SOIL, FACW, and FAC  SOILS  MAPPED SOIL UNIT: Phib sit loam (Ph) HYDRIC SOIL UNIT: Phib sit loam (Ph) HYDRIC SOIL UNIT: Southor water collection.  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTTLE IEXTURE  DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH TO SATURATED SOIL PIT: DEPTH MATRIX MOTTLE IEXTURE Sediment Deposits Diritums Sediment Deposits Diritums SECONDARY INDICATORS Water Marke Dirit Lines SECONDARY INDICATORS Water Stained Leaves FAC-Neutral Test  Hetosel Hetosel Hetosel Hetosel Hetosel Gleyed or Low Chrona Coors  Wetland Determination Hydric Soil Indicators  Wetland Determination Hydrophytic Vegetation Present? No Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes Wetland Determination Hydrology Present? Yes	ercent of Dominant St	pecies that						
SOILS  MAPPED SOIL UNTI: Philo all foam (Phi) HYDRIC SOIL UNTI: Philo all foam (Phi) HYDRIC SOIL UNTI: Philo all foam (Phi) HYDRIC SOIL UNTI: Philo all foam (Phi) HYDRIC SOIL UNTI: SOURCE SOILS CORE  DEPTH PART				#DIV/0!	İ			
MAPPED SOIL UNIT: Phips all loam (Pri) HYDRIC SOIL UNIT: Phips all loam (Pri) HYDRIC SOIL UNIT: SUPERINGE SOIL SCORE DEPTH MATRIX MOTTLE IEXTURE DEPTH OF SURFACE WATER: 16.50 DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS Sediment Deposits DEPTH MATRIX MOTTLE IEXTURE SECONDARY INDICATORS PRIMARY INDICATORS SEDIMENT OF PARTIES  DEPTH MATRIX MOTTLE IEXTURE SECONDARY INDICATORS PRIMARY INDICATORS SEDIMENT OF PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS  A Valer Salined Leaves FAC-Neutral Test  Hydric Soil Indicators  History Hastory Hastory Hastory Hastory Gleyed or Low Chroma Colors  Wetland Determination  Hydrocopy Present? No Hydroc Soil Present? Ver Wetland Determination  Hydrocopy Present? Ver Wetland Province Of Presen			ILS			HYDROI	LOGY	
HYDRIC SOIL UNIT:  WETLAND CORE SOIL SCORE DEPTH MATRIX MOTTLE IEXTURE  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  WATER: *66  DEPTH TO SURFACE WATER: *66  DEPTH TO SURFACE WATER: *66  WATER: *66  WATER: *66  WATER: *66  WATER: *66  DEPTH TO SURFACE WATER: *66  WATER: *66	MAPPED							
DEPTH MATRIX MOTILE TEXTURE  DEPTH TO FRUE WATER IN SOIL PIT: DEPTH TO FACE WATER IN SOIL PIT: DEPTH TO FACE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL. FIELD INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS Difft Lines Difft Lines Sediment Deposits Difft Line					SOURCE OF HYDRO	OLOGY:	Surface wa	ter collection.
DEPTH MATRIX MOTTLE IEXTURE Inundisted 56.6  WETLAND FRINGE SOIL SCORE  DEPTH MATRIX MOTTLE IEXTURE  DEPTH TO SATURATED SOIL: FIELD INDICATORS  PRIMARY INDICATORS  X Inundistion  Saturated in Upper 12 Inches  Water Marks  Drift Lee  Sediment Deposits  Drainage Patterns  Sediment Deposits  Drainage Patterns  SECONDARY INDICATORS  Water Stained Leaves  FAC-Neutral Test  Hatiseol  Hetic Epipedon  Suffac Coor  Aquic Moistura Regime  Aquic Moistura Regime  Geyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present?  No  Wetland Determination  Hydrophytic Vegetation Present?  Yes  Wetland Policy Present?  Wetland Policy Vegetation Present?  Wetland DELINEATION:			BE SOIL SCORE		~~~			>6.6'
Inundated 5.66*    DEPTH TO SATURATED SOIL:   FIELD INDICATORS   PRIMARY INDICATORS   PRIMARY INDICATORS   PRIMARY INDICATORS	DEPTH			TEXTURE	DEPTH TO FREE W.	ATER IN SOIL PIT:		
FIELD INDICATORS PRIMARY INDICATORS PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 inches  Water Marks Drift Lines Sediment Deposits DEPTH MATRIX MOTTLE TEXTURE  DEPTH MATRIX MOTTLE TEXTURE  DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS  >5° 107R4/6 107R4/6 stil boar Oxidized Root Channels in Upper 12 inches  Water Stained Leaves FAC-Neutral Test  Histosol Histosol Histosol Sulfide Odor Sulfide Odor Sulfide Odor Sulfide Odor Glapac Sreaking in Sandy Soils Lated on Local Hydric Soils List Leted on National Hydric Soils List  Leted on National Hydric Soils List  Wetland Determination Hydrophytic Vegetation Present? Yes Watersoft Present? Yes Wetland? No Wetland?		MATTIM	MO LICE	<u></u>	ł			
WETLAND FRINGS SOIL SCORE  DEETH MATRIX MOTTLE TEXTURE  LUPLAND SOIL SCORE  OFFI MATRIX  WETLAND FRINGS SOIL SCORE  DIFFI Lines  Sediment Deposits  Dorainage Patterns  SECONDARY INDICATORS  Oxidized Root Channels in Upper 12 inches  SECONDARY INDICATORS  Oxidized Root Channels in Upper 12 inches  Water Stained Leaves FAC-Neutral Test  Histosol  Histosol  Histosol  Histosol  Aquic Moisture Regime  Reducing Conditions  Gleyed or Low Chroma Colors  Wetland Determination  Wetland Determination  Wetland Present?  No  Wetland Present?  No  Wetland Present?  Wetland Present?  No  No  No  No  No  No  No  No  No  N	market > 0.0				i		S	
WETLAND FRINGE SOIL SCORE   Depth   MATRIX   MOTTLE   TEXTURE   Saturated in Upper 12 inches   Water Marks   Drift Lines   Sediment Deposits   Drimage Patterns   Sediment Deposits   Drimage Patterns   SECONDARY INDICATORS					l .			
MATRIX MOTTLE IEXTURE  Saturated in Upper 12 Inches  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns  DEPTH MATRIX MOTTLE IEXTURE  O-8" 107R43 107R46 silt barn O-kti PAC-Neutral Test  Hydric Soil Indicators  Histocol Histic Epipedon Histic Epipedon Sulfide Codor Aque Moisure Regime Reducing Conditions  Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination Hydric Soil Present? Yes Wetland? No  Water Stained Leaves FAC-Neutral Test  Concretions Histic Epipedon Listed on Local Hydric Soils List Usted on National Hydric Soils List Other (Explain in Basis of Definacion)  Wetland Determination Hydric Soil Present? Yes Wetland? No		MET AND EDIN	NGE SOIL SCORE		→ ,			
Water Marks Drift Lines Sediment Deposits DePth MATRIX MOTTLE TEXTURE O-8" 107R4/3 10YR4/6 sit loam O-kidized Root Channels in Upper 12 Inches Water Stained Leaves FAC-Neutral Test  Hydric Soil Indicators  Histosol Hestic Epipedon Hestic Epipedon Sulfidic Odor Aquis Moisture Regime Reducing Conditions Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination Hydric Soil Present? Yes Wetland? No	DERTH			TEXTURE			Inches	
Drift Lines Sediment Deposits DEPTH MATRIX MOTTLE TEXTURE SECONDARY NDICATORS  0-8" 10YR4/5 10YR4/6 silk loam Oxidized Root Channels in Upper 12 Inches -5" rock Water Stained Leaves FAC-Neutral Test  Histosol Concretions Histic Epipedon High Organic Content in Surface Layers in Sandy Solks Sulfidic Odor Organic Streaking in Sandy Solks  Sulfidic Odor Used on National Hydric Soils List Gleyed or Low Chroma Colors  Wetland Determination Hydrophytic Vegetation Present? No Hydric Soil Present? Yes Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:	DELLE	MATHA	MOTILE	THE COLUMN			iliones	
Sediment Deposits   Drainage Patterns								
DEPTH   MATRIX   MOTTLE   TEXTURE   SECONDARY INDICATORS								
DEPTH MATRIX MOTTLE TEXTURE SECONDARY INDICATORS  O-8" 10YF4/3 10YF4/6 silt loam Oxidized Root Channels in Upper 12 Inches  Water Stained Leaves FAC-Neutral Test  Histosol FAC-Neutral Test  Histic Epipedon Fisch Codor Crance Regime Feducing Conditions  Reducing Conditions Feducing Conditions  Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present? No Hydro Soil Present? Yes  Wetland Hydrology Present? Yes Wetland?  BASIS OF DELINEATION:		LIDI AND	CON SCORE					
O-8" 10YR4/5 10YR4/6 silt loam Oxidized Root Channels in Upper 12 inches	OFPTI			TEVTLIBE		-	ORS	
rock rock water Stained Leaves FAC-Neutral Test  Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination Hydrophytic Vegetation Present? No Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Wetland Stained Leaves FAC-Neutral Test Concretions Hydric Soil Indicators Concretions Hydric Soils Content in Surface Layers in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Basis of Delineation)  Wetland Determination Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Wetland Present? No No Hydric Soil Present? No No Hydric Soil Present? No No No No No No No No No No No No No					1			•
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydric Soil Indicators  FAC-Neutral Test  Concretions High Organic Content in Surface Layers in Sandy Soils Corganic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Basis of Delineation)  Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes Wetland Hydrology Present? Yes Wetland Present? No Wetland? No  BASIS OF DELINEATION:			101140					9
Histosol Histo Epipedon Histo Codor Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination Hydrophytic Vegetation Present? No Wetland Hydrockyoly Present? Yes Wetland Hydrockyoly Present? Yes Wetland PLINEATION:	>6	FOCK		1004			i	
Histic Epipedon  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present?  Wetland Hydrology Present?  Yes  Wetland?  Yes  Wetland?  Concretions  High Organic Content in Surface Layers in Sandy Soils  Listed on Local Hydric Soils List  Listed on National Hydric Soils List  Other (Explain in Basis of Delineation)  Wetland Determination  Hydrophytic Vegetation Present?  Yes  Wetland?  No  BASIS OF DELINEATION:						FAC-Neutral Test		
Histic Epipedon  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present?  Wetland Hydrology Present?  Yes  Wetland?  Yes  Wetland?  Concretions  High Organic Content in Surface Layers in Sandy Soils  Listed on Local Hydric Soils List  Listed on National Hydric Soils List  Other (Explain in Basis of Delineation)  Wetland Determination  Hydrophytic Vegetation Present?  Yes  Wetland?  No  BASIS OF DELINEATION:		· · · · · · · · · · · · · · · · · · ·		Hydric Soi	l Indicators	,		
Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present?  Wetland Hydrology Present?  Yes  Wetland?  Hydrology Present?  Yes  Wetland Pack Soils Present?  Yes  Wetland?  Wetland?  Hydrology Present?  Yes  Wetland?		History		riyane oo		Concretions		
Sulfidic Odor  Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Presem? Yes Wetland?  No  BASIS OF DELINEATION:							urface Layers in Sandy S	Soils
Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland?  No Hydric Soil Present? No Hydric Soil Present? No Hydric Soil Present?  Wetland Hydrology Present?  Yes Wetland?  No Hydric Soil Present?  Yes  Wetland?  No Hydric Soil Present?  Yes  Wetland?								
Reducing Conditions Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland?  No Wetland?  No Wetland?  Wetland?  No Wetland?								
Gleyed or Low Chroma Colors  Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:						•		
Wetland Determination  Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:		_	l			-		
Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:		Gleyed or Low Chroma Col	ors			-		
Hydrophytic Vegetation Present? No Hydric Soil Present? Yes  Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:		···		Wetland D	etermination			
Wetland Hydrology Present? Yes Wetland? No  BASIS OF DELINEATION:	Lhudmohatic Voquatation	Deno out?	No	Wetterio D		Yes		
BASIS OF DELINEATION:	1							
			165	···				
Delineation follows extent of topographic low and follows waters edge.	BASIS OF DELI	NEATION:						
Delineation follows extent of topographic low and follows waters edge.	ł							
Delineation follows extent of topographic low and follows waters edge.								
Delineation follows extent of topographic low and follows waters edge.								
	Delineation follow	vs extent of topograp	hic low and follows	waters edge.				

	WETLAND		UPLAND			
VEGETATION		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	0.4100 Ac	0.1659 Ha	
Is the area a potential pro	oblem area?	No				
Is the site significantly disturbed (Atypical Situation)?		No				
Do normal circumstances	exist on the site?	Yes				
DATE:	12-Apr-05		WEATHER:	sunny, clear, 50 degrees		
WETLAND ID:	POW 001		EVALUATOR:	PJI	o, BTB, KJS, ERB	

SPECIES	WETLAI		INDICATOR	Poaceae or G	0 % PSS  UPLAN  CIES  Gramineae sp.	0 % PFO  D  STRATUM  H	100% POW  INDICATOR  NS
SPECIES	WETLAI		INDICATOR	Poaceae or G	CIES	STRATUM	
<u>species</u>		STRATUM	INDICATOR	Poaceae or G			
				1	Gramineae sp.	н	NS
				1			
				Trifolia	um sp.	н	NS
				İ			
ercent of Dominant Species th	at			1			
re OBL, FACW, and FAC			#DIV/0!				
	SOIL	s			HYDROL	OGY	
MAPPED SOIL U	NIT: E	Braceville gravelly loam (Br	rA)				
HYDRIC SOIL U	NIT:	Rextord		SOURCE OF HYDR		Surface w	ater collection.
<u>w</u>	ETLAND COR	E SOIL SCORE		DEPTH OF SURFAC			>2
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W			
Inundated >2'				DEPTH TO SATURA			
				1	FIELD INDICATORS		
				<b>_</b>	PRIMARY INDICATORS	5	
<u>w</u>	ETLAND FRING	GE SOIL SCORE			Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 I	nches	
				Water Marks			
					Drift Lines		
					Sediment Deposits		
		OIL SCORE	TEVTIDE		Drainage Patterns ECONDARY INDICATO	n <b>e</b> s	
DEPTH	MATRIX	MOTTLE 10YR4/6	TEXTURE silt loam				
0-8*	10YR4/3	10174/6	rock		Oxidized Root Channe Water Stained Leaves	is in Opper 12 inche	: <del>&gt;</del>
>8*	rock		1001		FAC-Neutral Test		
					PAC-Neutral Test		
and the second s			Hydric Soi	l Indicators			
Histosol			.,		Concretions		
Histic Epip	edon				- High Organic Content in Su	urlace Layers in Sandy	Soils
Suttidic Oc					<ul> <li>Organic Streaking in Sandy</li> </ul>	y Soils	
	sture Regime				<ul> <li>Listed on Local Hydric Soil</li> </ul>	s List	
Reducing					Listed on National Hydric S	Soils List	
	Low Chroma Color	rs			Other (Explain in Basis of	Delineation)	
					-		
			Wetland D	etermination			
Hydrophytic Vegetation Present?		No		Hydric Soil Present?	Yes		
Wetland Hydrology Present?		Yes		Wetland?	No		
BASIS OF DELINEATIO	N:	F					

WETLAND ID:	POW 002		ETLAND DA	EVALUATOR:	PJE	), BTB, KJS, ERB	
DATE:	12-Apr-05				ny, clear, 50 degrees		
			Yes	***************************************	,,,,		
normal circumstance			No				
	disturbed (Atypical Situation						
ne area a potential p			No	SIZE:	1.5600 Ac	0.6312 Ha	
	CLASSIFICATION:		OL ACCIFICATION.	0% PEM	0 % PSS	0 % PFO	100% PO
GETATION			CLASSIFICATION:	0% PEM	UPLAN		
	WETLAN			ODEO		STRATUM	INDICATO
SPI	ECIES	STRATUM	INDICATOR	SPEC		H	NS
				Poaceae or Gr		Н	NS
				Tritoliur	n sp.	"	110
ercent of Dominant S							
re OBL, FACW, and	FAC		#DIV/0!	<u> </u>			
	SOIL	.s			HYDRO	LOGY	
MAPPE	D SOIL UNIT: B	raceville gravelly loam (	BrA)				
HYDRIC	C SOIL UNIT:	Rexford		SOURCE OF HYDRO	LOGY:	Surface w	ater collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE	WATER:		>2'
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
inundated >2"				DEPTH TO SATURAT	ED SOIL:		
				F	ELD INDICATORS	3	
				PI	RIMARY INDICATOR	s	
	WETLAND FRING	SE SOIL SCORE		X In	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	aturated in Upper 12	Inches	
					later Marks		
				D	rift Lines		
					ediment Deposits		
	UPLAND SO	OIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICATO	ORS	
0-4"	10YR4/2	<u></u>	organic				NC.
4-8"	10YR5/4		loam		oxidized Root Channe		:5
>8"	rock		rock		Vater Stained Leaves		
	iock		10011		AC-Neutral Test		
	Histosol		Hydric Soi		Concretions		
	•				ligh Organic Content in Si	urlace Lavers in Sandy	Soils
	Histic Epipedon				organic Streaking in Sand		
	Sulfidic Odor				isted on Local Hydric Soi	•	
	Aquic Moisture Regime						
	Reducing Conditions				isted on National Hydric S		
<del></del>	Gleyed or Low Chroma Colon -	6			Other (Explain in Basis of	Delineation)	
			Making D	etermination			
			Wettano De				
Hydrophytic Vegetation	n Present?	No	wettano De	Hydric Soil Present?	Yes		

Delineation follows extent of topographic low and follows waters edge.

		V.	ILILAND DA	1741 011101			
WETLAND ID:	POW 003			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05	1		WEATHER: sunr	ny, clear, 50 degrees		
normal circumstances ex	•		Yes				
ne site significantly distur		on)?	No				
he area a potential proble	, ,,		No				
DROGEOMORPHIC CL	ASSIFICATION:			SIZE:	0.2500 Ac	0.1012 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
	WETL	AND			UPLANI	)	
SPECIE	S	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
				Poaceae or Gra	amineae sp.	н	NS
				Trifoliun	n sp.	н	NS
				1			
ercent of Dominant Spec							
re OBL, FACW, and FA	····		#DIV/0!		LIVE DOLL	200	· · · · · · · · · · · · · · · · ·
	so			<b>-</b>	HYDROL	JG 1	
MAPPED S		Braceville gravelly loam	(BrA)			Surface water	× collection
HYDRIC SC		Rexford		SOURCE OF HYDRO		Surface wav	>2'
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFACE			>2
DEPTH	<u>XIBTAM</u>	MOTTLE	TEXTURE	DEPTH TO FREE WA			
inundated >2'				DEPTH TO SATURAT			
					ELD INDICATORS		
					RIMARY INDICATORS		
	WETLAND FRI	NGE SOIL SCORE		X In	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	aturated in Upper 12 In	ches	
				w	ater Marks		
				D	rift Lines		
				s	ediment Deposits		
	UPLAND	SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTUBE	SEC	CONDARY INDICATOR	RS	
0-4"	10YR4/2		organic	c	xidized Root Channels	in Upper 12 inches	
4-8*	10YR5/4		loam	v	Vater Stained Leaves		
>8"	rock		rock	F	AC-Neutral Test		
				<u>_l</u>			
			Hydric Soil	Indicators			
Hist	osol				Concretions		
Hist	ic Epipedon			<u> </u>	ligh Organic Content in Sur	face Layers in Sandy So	oils
Sutt	idic Odor				Organic Streaking in Sandy		
	ic Moisture Regime			L	isted on Local Hydric Soils	List	
				L	isted on National Hydric Sc	oils List	
Aqu	ducing Conditions				Other (Explain in Basis of D	elineation)	
Aqu Rec	ducing Conditions eyed or Low Chroma Col	lors					
Aqu Rec	-	lors					
Aqu Rec	-	lors	Wetland De	etermination			
Aqu Rec	yed or Low Chroma Col	No	Wetland De	etermination Hydric Soil Present?	Yes		
Aqı Rec Gle	esent?		Wetland De	Hydric Soil Present?	res No		
Aqu Rec Gle Hydrophytic Vegetation Pro Wetland Hydrology Preser	yed or Low Chroma Col esent?	No	Wetland De	Hydric Soil Present?			
Aqu Rec Gle Hydrophytic Vegetation Pro	yed or Low Chroma Col esent?	No	Wetland De	Hydric Soil Present?			
Aqu Rec Gle Hydrophytic Vegetation Pro Wetland Hydrology Preser	yed or Low Chroma Col esent?	No	Wetland De	Hydric Soil Present?			
Aqu Rec Gle Hydrophytic Vegetation Pro Wetland Hydrology Preser	yed or Low Chroma Col esent?	No	Wetland De	Hydric Soil Present?			
Aqu Rec Gle Hydrophytic Vegetation Pro Wetland Hydrology Preser	yed or Low Chroma Col esent? at? ATION:	No Yes		Hydric Soil Present?			

				HIDLAND		
VEGETATION		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.4700 Ac	0.1902 Ha	
is the area a potential p	roblem area?	No				
Is the site significantly d	listurbed (Atypical Situation)?	No				
Do normal circumstance	es exist on the site?	Yes				
DATE:	12-Apr-05		WEATHER: sur	nny, clear, 50 degrees		
WETLAND ID:	POW 004		EVALUATOR:	PJD, E	STB, KJS, ERB	
		WEILAND DA	TAFURIN			

	CLASSIFICATION:			SIZE:	0.4700 Ad	0.1902 Ha		
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW	
	WETLA	IND		UPLAND				
<u>SPEC</u>	CIES	STRATUM	INDICATOR	Poaceae or G	CIES Gramineae sp. um sp.	<u>STRATUM</u> H H	<u>INDICATOR</u> NS NS	
ercent of Dominant Sp	ecies that							
re OBL, FACW, and F			#DIV/0!		LWDDG	N OCY		
	SOI		41.5	<u> </u>	HYDRO	EOG T		
	SOIL UNIT: Mor SOIL UNIT:	ris extremely stony silt loa Norwich	an (MOD)	COMBOE OF THE	OLOGY:	Surface w	ater collection.	
nibric:	WETLAND COF			SOURCE OF HYDRA DEPTH OF SURFACE			>2	
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W				
Inundated >2'	WATTAK	111011-55	1.5	DEPTH TO SATURA				
					FIELD INDICATOR	s		
				,	PRIMARY INDICATOR	as		
	WETLAND FRIN	IGE SOIL SCORE		×	Inundation			
DEPIH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12	Inches		
					Water Marks			
					Drift Lines			
					Sediment Deposits			
	UPLAND S	SOIL SCORE			Drainage Patterns			
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICAT	ORS		
0-4"	10YR4/4		sitt loam		Oxidized Root Chann	els in Upper 12 inche	es	
4-12"	10YR5/4		silt loam		Water Stained Leaves	s		
>12"	rock		rock		FAC-Neutral Test			
	*		Hydric Soil	Indicators				
н	istosol		Tryunc 300		Concretions			
	istic Epipedon				High Organic Content in S	Surface Layers in Sandy	Soils	
	ulfidic Odor				Organic Streaking in San			
···	quic Moisture Regime				Listed on Local Hydric So	oils List		
	leducing Conditions				Listed on National Hydric	Soils List		
	sleyed or Low Chroma Colo	ors			Other (Explain in Basis o	f Delineation)		
<u> </u>	·		Wetland De	termination				
i	Present?	No	Wettand De	Hydric Soil Present?	Yes			
Hydrophytic Vegetation F				Wetland?	No			
Hydrophytic Vegetation f Wetland Hydrology Pres	ent?	Yes						

WETLAND ID:	POW 005		EVALUATOR:	PJD, E	STB, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sur	nny, clear, 50 degrees		
Do normal circumstance	s exist on the site?	Yes				
Is the site significantly di	sturbed (Atypical Situation)?	No				
Is the area a potential pr	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.2400 Ac	0.0971 Ha	
VECETATION		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW

STIOGEOMOTII TIIO	CLASSIFICATION:	_					
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
	WETLA	AND			UPLA	ND	
SPE	CIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
				Poaceae or G	aramineae sp.	н	NS
				Trifoli	um sp.	н	NS
ercent of Dominant S	pecies that			Ì			
e OBL, FACW, and			#DIV/0!	1			
	so	ils			HYDRO	LOGY	
MAPPEL	SOIL UNIT: Mor	ris extremely storny silt loa	am (MoB)				
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDR	OLOGY:	Surface w	ater collection.
***	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFAC	CE WATER:		>2'
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
Inundated >2'				DEPTH TO SATURA	ATED SOIL:		
					FIELD INDICATOR	s	
				1 ,	PRIMARY INDICATOR	RS	
	WETLAND FRIE	IGE SOIL SCORE		<b>1</b> ×	Inundation		
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>		Saturated in Upper 12	Inches	
					Water Marks		
					Drift Lines		
_					Sediment Deposits		
	UPLAND S	SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SI	ECONDARY INDICAT	ORS	
0-4"	10YR4/4		silt loam		Oxidized Root Channe	els in Upper 12 inche	es
4-12*	10YR5/4		siit loam		Water Stained Leaves	5	
>12*	rock		rock		FAC-Neutral Test		
							·····
			Hydric Soil	Indicators			
	Histosol				Concretions	o de control de la Canada	Caile
	Histic Epipedon				High Organic Content in S		3016
	Sulfidic Odor				Organic Streaking in Sand		
	Aquic Moisture Regime				Listed on Local Hydric So		
·····	Reducing Conditions				Listed on National Hydric		
	Gleyed or Low Chroma Col	anc			Other (Explain in Basis o -	Demeation	
		, <del>, , , , , , , , , , , , , , , , , , </del>	Wetland De	etermination			
Hydrophytic Vegetation	Present?	No		Hydric Soil Present?	Yes		
	esent?	Yes		Wetland?	No		

Delineation follows extent of topographic low and follows waters edge.

WETLAND ID:	POW 006	<u> </u>	EVALUATOR:	PJD, BTB	, KJS, ERB
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees	
Do normal circumstance	s exist on the site?	Yes			
Is the site significantly dis	sturbed (Atypical Situation)?	No			
Is the area a potential pr	oblem area?	No			
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	1.8500 Ac	0.7485 Ha

WHEN 0% PSS 0 % PFO 100% POW  UPLAND  SPECIES STRATUM INDICATOR Poaceae or Gramineae sp. H NS  Trifolium sp. H NS  WHEN STRATUM INDICATOR SPECIAL STRATUM INDICATOR SPRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches Water Marks
SPECIES STRATUM INDICATOR Poaceae or Gramineae sp. H NS Trifolium sp. H NS  HYDROLOGY  SOURCE OF HYDROLOGY: Surface walter collection. DEPTH OF SURFACE WATER: >2 DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
Poaceae or Gramineae sp. H NS Tritolium sp. H NS  HYDROLOGY  SOURCE OF HYDROLOGY: Surface walter collection.  DEPTH OF SURFACE WATER: >2 DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
HYDROLOGY  SOURCE OF HYDROLOGY: DEPTH OF SURFACE WATER: DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
HYDROLOGY  SOURCE OF HYDROLOGY: DEPTH OF SURFACE WATER: DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
SOURCE OF HYDROLOGY:  DEPTH OF SURFACE WATER:  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
DEPTH OF SURFACE WATER: >2  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
DEPTH OF SURFACE WATER: >2  DEPTH TO FREE WATER IN SOIL PIT:  DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation  Saturated in Upper 12 Inches
DEPTH TO FREE WATER IN SOIL PIT: DEPTH TO SATURATED SOIL: FIELD INDICATORS PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
DEPTH TO SATURATED SOIL:  FIELD INDICATORS  PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
FIELD INDICATORS  PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
PRIMARY INDICATORS  X Inundation Saturated in Upper 12 Inches
X Inundation Saturated in Upper 12 Inches
Saturated in Upper 12 Inches
Water Marks
Drift Lines
Sediment Deposits
Drainage Patterns
SECONDARY INDICATORS
Oxidized Root Channels in Upper 12 inches
Water Stained Leaves
FAC-Neutral Test
Indicators
Concretions
High Organic Content in Surface Layers in Sandy Soils
Organic Streaking in Sandy Soils
Listed on Local Hydric Soils List
Listed on National Hydric Soils List
Other ( Explain in Basis of Delineation)
etermination
Hydric Soil Present? Yes
Wetland? No

			ETLAND DA	EVALUATOR:	DIU	BTB, KJS, ERB	
WETLAND ID:	POW 007			EVALUATOR: WEATHER: sunny,	clear, 50 degrees	DID, IWO, CITO	
DATE:	12-Apr-05			WEATHER. Suring,	clear, 50 degrees		
ormal circumstances e			Yes				
	urbed (Atypical Situation)?		No No				
e area a potential prob			NO	SIZE:	0.5300 Ac	0.2144 Ha	
PROGEOMORPHIC C	LASSIFICATION:	······································	CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
GETATION	WETLAND	`	CLASSIFICATION.		UPLAN	D	
SPECI		STRATUM	INDICATOR	SPECIE	 §	STRATUM	INDICATOR
SFEC	ico	<u>Samuen</u>		Poaceae or Gran	nineae sp.	н	NS
				Quercus a	lba	Т	FACU
				Kalmia latif	olia	ss	FACU
				Taraxacum of	ficinale	н	FACU-
				Rubus s	p.	н	NS
rcent of Dominant Spe	ecies that						
e OBL, FACW, and F			#DIV/0!	<u> </u>	HYDROL	OGY	
·····	SOILS				HIDHOL		
MAPPED S	33.2 3	ro extremely stony lo	ат (Wpb)	COLUMN OF LAMBOUR	nev.	Surface v	vater collection.
HYDRIC S		0011 00005		SOURCE OF HYDROLO DEPTH OF SURFACE N			>2
DEDT	WETLAND CORE	MOTTLE	TEXTURE	DEPTH TO FREE WATER IN SOIL PIT:			
DEPTH Inundated >2'	MATRIX	MOTTE	15012115	DEPTH TO SATURATE			
inunciateo >2				<b>\</b>	LD INDICATORS	;	
				PRII	MARY INDICATOR	s	
	WETLAND FRING	E SOIL SCORE		× Inur	ndation		
DEPIH	MATRIX	MOTTLE	TEXTURE	Sat	urated in Upper 12 I	nches	
				Wa	ter Marks		
				Drii	ft Lines		
				Se	diment Deposits		
	UPLAND SO	IL SCORE			ainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		ONDARY INDICATO		
0-4"	10YR3/3		sit loam	o×	idized Root Channe	ls in Upper 12 inch	ies
4-8"	10YR4/4		sit loam		ater Stained Leaves		
8-16"	10YR5/6		sit toam	FA	C-Neutral Test		
			Hydric Soi	Indicators			
Hi	istosol				ncretions		
H	istic Epipedon				gh Organic Content in S		/ Soils
s	ultidic Odor				ganic Streaking in Sand		
Α	quic Moisture Regime				sted on Local Hydric Soi		
8	leducing Conditions				sted on National Hydric		
	Gleyed or Low Chroma Colors			O	ther (Explain in Basis of	<i>решеаноп)</i>	
			Wetland D	etermination			
	Present?	No		Hydric Soil Present? Y			
Hydrophytic Vegetation I				Wetland? N	io.		

### unt Ainy Lodge

MET AND ID.		VV	ETLAND DA			570 KIC 505			
WETLAND ID: POW 008			EVALUATOR: PJD, BTB, KJS, ERB						
DATE: 12-Apr-05			WEATHER: sunn	y, clear, 50 degrees					
normal circumstances	s exist on the site?	Y	es						
ne site significantly dis	sturbed (Atypical Situation	1)? 1	lo						
the area a potential problem area?									
DROGEOMORPHIC CLASSIFICATION:				SIZE:	0.2600 Ac	0.1052 Ha			
GETATION		(	CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% PO		
	WETLAN	1D			UPLANI				
SPE	CIES	STRATUM	INDICATOR	SPEC	ES	STRATUM	INDICATO		
				Tsuga cana	adensis	т	FACU		
				Trifolium	ı sp.	н	NS		
				Carya o	vata	Т	FACU		
				Taraxacum	officinale	н	FACU		
Percent of Dominant Species that are OBL, FACW, and FAC #DIV/0!									
SOILS					HYDROL	OGY			
MAPPED	SOIL UNIT: Oquaga-Lac	ckawanna extremely stor	y loams (OxC)						
HYDRIC	SOIL UNIT:			SOURCE OF HYDRO	LOGY:	Surface wa	ter collection.		
	WETLAND COR	E SOIL SCORE		DEPTH OF SURFACE	WATER:		>2'		
DEPTH	MATRIX	MOTTLE	<u>TEXTURE</u>	DEPTH TO FREE WA	TER IN SOIL PIT:				
Inundated >2'				DEPTH TO SATURAT	ED SOIL:				
				FI	ELD INDICATORS				
				PF	IMARY INDICATORS				
	WETLAND FRING	GE SOIL SCORE		X In	undation				
DEPTH	MATRIX	X MOTTLE TEXTURE		Si	aturated in Upper 12 In	iches			
				w	ater Marks				
				D	rift Lines				
				s	ediment Deposits				
	UPLAND S	OIL SCORE		D	rainage Patterns				
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	ONDARY INDICATO	RS			
0-4*	10YR4/4		silt loam	o	xidized Root Channels	s in Upper 12 inche	s		
4-12"	10YR5/4		sit toam	Water Stained Leaves					
>12"	rock		rock	F	AC-Neutral Test				
		to the state of th	Hydric Soi	I Indicators	concretions				
Histosol					oncreuors ligh Organic Content in Sur	face Lavers in Sandy 5	Soils		
	Histic Epipedon						-		
	Sulfidic Odor			Organic Streaking in Sandy Soils  Listed on Local Hydric Soils List					
			Aquic Moisture Regime			Listed on Local Hydric Soils List  Listed on National Hydric Soils List			
	Aquic Moisture Regime			1	isted on National Hydric Sa	oils List			
	Aquic Moisture Regime Reducing Conditions	_		<del></del>					
	Aquic Moisture Regime	rs		<del></del>	isted on National Hydric So Other (Explain in Basis of C				
	Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Color		Wetland D	etermination	Other (Explain in Basis of C				
	Aquic Moisture Regime Reducing Conditions Gleyed or Low Chroma Color	ns No Yes	Wetland Do	etermination Hydric Soil Present?	Other (Explain in Basis of C				

		W	ETLAND DA	TA FORM				
WETLAND ID:	POW 009			EVALUATOR:		BTB, KJS, ERB		
DATE:	12-Apr-05			WEATHER: sunny, clear, 50 degrees				
normal circumstance	es exist on the site?	Υ	'es					
e site significantly d	isturbed (Atypical Situation)?	١	lo					
ne area a potential p	roblem area?	t	No					
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.1700 Ac	0.0688 Ha		
GETATION		(	CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW	
	WETLAND				UPLAN			
SPECIES		STRATUM INDICATOR		SPECIE		STRATUM INDICAT		
				Tsuga canad		Τ	FACU NS	
				Trifolium s	•	н 	FACU-	
				Carya ova Taraxacum of		т н	FACU-	
ercent of Dominant S			#DIV/0!					
ire OBL, FACW, and FAC #DIV/0!			HYDROL	.OGY				
MAPPE		vanna extremely stor	ry loams (OxB)		111			
MAPPED SOIL UNIT: Oquaga-Lackawanna extremely story loams (OxB) HYDRIC SOIL UNIT:			SOURCE OF HYDROLO	OGY:	Surface wa	ter collection.		
	WETLAND CORES	OIL SCORE		DEPTH OF SURFACE WATER:			>2	
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATER IN SOIL PIT:				
Inundated >2'				DEPTH TO SATURATED SOIL:				
				FIELD INDICATORS				
				PRII	MARY INDICATORS	5		
	WETLAND FRINGE	SOIL SCORE		X Inur	ndation			
DEPTH	MATRIX	MOTTLE TEXTURE		Sat	urated in Upper 12 l	nches		
				Water Marks				
				Drif	t Lines			
			Sediment Deposits					
	<u>UPLAND SOIL</u>				inage Patterns NDARY INDICATO	nD¢		
DEPTH	MATRIX	MOTTLE	TEXTURE				_	
0-4*	10YR4/4		silt loam silt loam	Oxidized Root Channels in Upper 12 inches			5	
4-12" 10YR5/4			rock	Water Stained Leaves				
>12"	rock		lock	FA	C-Neutral Test			
			Hydric Soil	Indicators				
	Histosol				ncretions	urforce I grown in France .	Soile	
Histic Epipedon				High Organic Content in Surface Layers in Sandy Soils			aius	
	Suffidic Odor Aquic Moisture Regime			Organic Streaking in Sandy Soils  Listed on Local Hydric Soils List  Listed on National Hydric Soils List				
	_			Other ( Explain in Basis of Delineation)				
	Reducing Conditions				her (Explain in Rasis of	Delineation)		
	_			Ot	her (Explain in Basis of	Delineation)		
	Reducing Conditions		Wetland De	Ot etermination	her (Explain in Basis of	Delineation)		
Hydrophylic Vegetatic	Reducing Conditions Gleyed or Low Chroma Colors	No	Wetland De		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Delineation)		

Delineation follows extent of topographic low and follows waters edge.

		_		T4 F0DM			
		•	WETLAND DA	IAFORM			
WETLAND ID:	POW 010			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER:	sunny, clear, 50 degrees		
Do normal circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential problem area?  HYDROGEOMORPHIC CLASSIFICATION:			Yes				
			No				
			No				
				SIZE:	1.6300 Ac	0.6595 Ha	
VEGETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
WETLAND			UPLAND				
SPECIES		STRATUM	INDICATOR	SPECIES		STRATUM	INDICATOR
2.2	<u> </u>			Tsuga canadensis		т	FACU

			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
GETATION WETLAND		ND					
		STRATUM	INDICATOR	SPI	CIES	STRATUM	INDICATOR
<u> </u>	<u>neo</u>			Tsuga c	anadensis	т	FACU
				Trifol	ium sp.	н	NS
				Cary	a ovata	т	FACU-
				Taraxacu	m officinale	н	FACU-
				]			
				<b>\</b>			
rcent of Dominant Sp	ecies that			Ì			
e OBL, FACW, and F			#DIV/0!				
	SOIL	.s			HYDR	OLOGY	
MAPPED	SOIL UNIT: Oquaga-Lac	ckawanna extremely st	ony loams (OxB)				
	SOIL UNIT:			SOURCE OF HYDE	ROLOGY:	Surface v	vater collection.
	WETLAND COR	E SOIL SCORE		DEPTH OF SURFA	CE WATER:		>2"
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	1	WATER IN SOIL PIT:		
Inundated >2'				DEPTH TO SATUR			
				1	FIELD INDICATO		
				_	PRIMARY INDICATO	ORS	
	WETLAND FRING	GE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper	12 Inches	
					_Water Marks		
					_Drift Lines		
					_Sediment Deposits		
	UPLAND S	OIL SCORE			_Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	1	SECONDARY INDICA		
0-4"	10YR4/4		sit loam		_	nnels in Upper 12 inch	ies
4-12"	10YR5/4		silt loam		_Water Stained Leav	ves	
>12"	rock		rock		FAC-Neutral Test		
			Hydric Soi	I Indicators		· · · · · · · · · · · · · · · · · · ·	
	Histosol		nyano es.		Concretions		
	Histic Epipedon				 High Organic Content i	in Surtace Layers in Sandy	y Soits
	Sulfidic Odor				Organic Streaking in S	iandy Soils	
	Aquic Moisture Regime				<ul> <li>Listed on Local Hydric</li> </ul>	Soils List	
	Reducing Conditions				Listed on National Hyd	tric Soils List	
	Gleyed or Low Chroma Colo	ors			Other ( Explain in Basi	is of Delineation)	
	•						
			Wetland D	etermination			
l	Present?	No		Hydric Soil Presen	t? Yes		
Hydrophytic Vegetation		Yes		Wetland?	No		
Hydrophytic Vegetation Wetland Hydrology Pre	sent?	160					

# **Mount Airy Lodge**

WETLAND ID:				EVALUATOD:	ות	D, BTB, KJS, ERB	
	POW 011			EVALUATOR:			
DATE:	12-Apr-05		V	WEATHER: sun	ny, clear, 50 degrees	9	
normal circumstances exi		-10	Yes				
e site significantly disturt		1)?	No				
e area a potential proble			No	0175	0.3500 Ad	0.1416 Ha	
DROGEOMORPHIC CLA	SSIFICATION:			SIZE:	0.3500 AC	0% PFO	100% POW
GETATION			CLASSIFICATION:	0% PEM	UPLA		100701 011
	WETLAN			CDEC.		STRATUM	INDICATO
SPECIES	ž	STRATUM	INDICATOR	SPEC		H	NS
				Poaceae or Gr Tritoliur		н	NS
				THOSE			
rcent of Dominant Specie e OBL, FACW, and FAC			#DIV/0!				
	SOIL	s			HYDRO	LOGY	
MAPPED SO	IL UNIT: Lackaw	anna extremely stony	loam (LbB)				
HYDRIC SOI	L UNIT:			SOURCE OF HYDRO	LOGY:	Surface wat	er collection.
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE	WATER:		>2'
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
inundated >2'				DEPTH TO SATURAT	ED SOIL:		
				F	ELD INDICATOR	s	
				PF	RIMARY INDICATOR	RS	
	WETLAND FRING	E SOIL SCORE		Xin	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	aturated in Upper 12	Inches	
				w	ater Marks		
				D	rift Lines		
				s	ediment Deposits		
	UPLAND SC	OIL SCORE		D	rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	CONDARY INDICAT	ORS	
0-8-	10YR4/3	10YR4/6	silt loam	c	xidized Root Chann	els in Upper 12 inches	3
>8*	rock		rock	v	Vater Stained Leave	s	
				F	AC-Neutral Test		
			Hydric Soi	Indicators			
Histos	lo				Concretions		
Histic	Epipedon				ligh Organic Content in S	Surface Layers in Sandy S	oits
Sulfid	ic Odor				Organic Streaking in San	dy Soils	
Aquic	Moisture Regime				isted on Local Hydric Sc		
Redu	cing Conditions			L	isted on National Hydric	Soils List	
Gleye	ed or Low Chroma Colors				Other (Explain in Basis o	f Delineation)	
			Wetland De	etermination			
	ent?	No		Hydric Soil Present?			
Hydrophytic Vegetation Pres		Yes		Wetland?	No		
Hydrophytic Vegetation Pres Wetland Hydrology Present?							
	TION:						
Wetland Hydrology Present?	TION:						
Wetland Hydrology Present?	TION:						

# Mount Airy Lodge WETI AND DATA FORM

WETLAND ID:		WE	TLAND DAT	AFUNI			
	POW 012			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunn	y, clear, 50 degrees		
normal circumstance	es exist on the site?	Υe	»s				
e site significantly d	fisturbed (Atypical Situation)?	No.	)				
ne area a potential p	roblem area?	N	5			0,2266 Ha	
DROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.5600 Ac	0% PFO	100% POW
GETATION		C	LASSIFICATION:	0% PEM	0 % PSS		100%1 017
	WETLAND			ODEO	UPLANI	STRATUM	INDICATOR
SPI	ECIES	STRATUM	INDICATOR	SPEC Poaceae or Gra		H	NS NS
			ļ	Poaceae of Gra		н	NS
ercent of Dominant S			#DIV/0!				
	SOILS				HYDROL	OGY	
MAPPE	D SOIL UNIT: Lackawa	nna extremely storry loa	ım (LbB)			Curdoon to	rater collection.
HYDRI	C SOIL UNIT:			SOURCE OF HYDRO		Sunace w	>2'
	WETLAND CORE			DEPTH OF SURFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SATURA			
Inundated >2'					IELD INDICATORS		
				1	RIMARY INDICATORS		
	WETLAND FRINGE	SOIL SCORE		– × <sub>ir</sub>	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE		aturated in Upper 12 la	nches	
	<del></del>			v	Vater Marks		
					rift Lines		
				8	ediment Deposits		
	UPLAND SO	L SCORE			Prainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICATO		
0-8"	10YR4/3	10YR4/6	sitt loam		Oxidized Root Channel	ls in Upper 12 inch	es
	rock		rock		Water Stained Leaves		
>8"							
>8*				<u> </u>	FAC-Neutral Test		
>8"			Hvdric Soil		-AC-Neutral Test		
>8"	Histosol		Hydric Soil	Indicators	Concretions		
>8"	Histosol  Histic Epipedon		Hydric Soil	Indicators		urtace Layers in Sandy	Soils
>8"	_		Hydric Soil	Indicators	Concretions		Soils
>8"	Histic Epipedon		Hydric Soil	Indicators	Concretions High Organic Content in St	y Soils	Soils
>8"	Histic Epipedon  Sulfidic Odor		Hydric Soil	Indicators	Concretions High Organic Content in St Organic Streaking in Sand; Listed on Local Hydric Soil Listed on National Hydric S	y Soils Is List Soils List	Soils
>8"	Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime		Hydric Soil	Indicators	Concretions High Organic Content in St Organic Streaking in Sand Listed on Local Hydric Soli	y Soils Is List Soils List	Soils
>8"	Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions			Indicators	Concretions High Organic Content in St Organic Streaking in Sand; Listed on Local Hydric Soil Listed on National Hydric S	y Soils Is List Soils List	Soils
	Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed or Low Chroma Colors			Indicators	Concretions  High Organic Content in St Organic Streaking in Sand; Listed on Local Hydric Soil Listed on National Hydric S Other (Explain in Basis of	y Soils Is List Soils List	Soils
>8"  Hydrophytic Vegetati Wetland Hydrology F	Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed or Low Chroma Colors  ion Present?	No Yes		Indicators	Concretions  High Organic Content in St Organic Streaking in Sand; Listed on Local Hydric Soil Listed on National Hydric S Other (Explain in Basis of	y Soils Is List Soils List	Soils

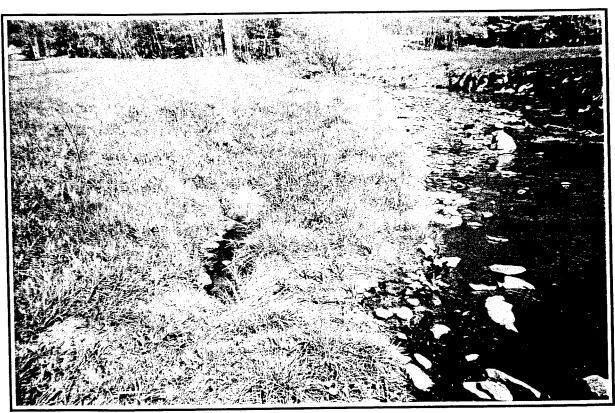
## Mount Airy Lodge

WETLAND ID:							
	POW 013			EVALUATOR:		BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunn	y, clear, 50 degrees		
normal circumstances e	xist on the site?		Yes				
ne site significantly distu	rbed (Atypical Situation	n)?	No				
ne area a potential probl	em area?		No				
DROGEOMORPHIC CL				SIZE:	0.6000 Ac	0.2428 Ha	
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	0%PFO	100% POW
	WETLAN	ND			UPLAN	>	
SPECII		STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATO
<u> </u>	E.E.			Poaceae or Gr	amineae sp.	н	NS
				Trifoliur	n sp.	н	NS
ercent of Dominant Spec	cies that						
re OBL, FACW, and FA	.С		#DIV/0!				
	SOIL				HYDROL	OGY	
MAPPED S	OIL UNIT: Lackay	wanna extremely stony	oam (LbB)			Curlane	ater collection.
HYDRIC S				SOURCE OF HYDRO		Surrace wa	>2°
	WETLAND COR	E SOIL SCORE		DEPTH OF SURFACE			~
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
inundated >2"				DEPTH TO SATURAT	ED SOIL:		
				l l	IELD INDICATORS		
				PI	RIMARY INDICATORS	3	
	WETLAND FRING	GE SOIL SCORE		× In	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	aturated in Upper 12 Ir	nches	
		•		ν	ater Marks		
					rift Lines		
				s	ediment Deposits		
	UPLAND S	OIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATO	RS	
0-8"	10YR4/3	10YR4/6	sitt loam		xidized Root Channel	s in Upper 12 inche	s
>8*	rock		rock		Vater Stained Leaves		
				· · · · · · · · · · · · · · · · · · ·	AC-Neutral Test		
					710 1100 111 1101		
			Hydric Soil	Indicators			
					Concretions		
His	atosol			1	tigh Organic Content in Su	rtace Layers in Sandy S	Soils
	tosol tic Epipedon						
His					Organic Streaking in Sandy	Soils	
His Sul	stic Epipedon				Organic Streaking in Sandy Listed on Local Hydric Soils		
His Sul Aq	stic Epipedon Ifidic Odor				_	List	
His Sul Aq Re	stic Epipedori Midic Odor Luic Moisture Regime	a			isted on Local Hydric Soils	List oils List	
His Sul Aq Re	stic Epipedon flidic Odor uic Moisture Regime educing Conditions	rs			isted on Local Hydric Soils	List oils List	
His Sul Aq Re	stic Epipedon flidic Odor uic Moisture Regime educing Conditions	rs	Wetland De	etermination	isted on Local Hydric Soils isted on National Hydric S Other (Explain in Basis of I	List oils List	
His Sul Aq Re	tic Epipedon Midic Odor uic Moisture Regime educing Conditions eyed or Low Chroma Color	rs No	Wetland De	etermination Hydric Soil Present?	isted on Local Hydric Soils isted on National Hydric S Other (Explain in Basis of I	List oils List	

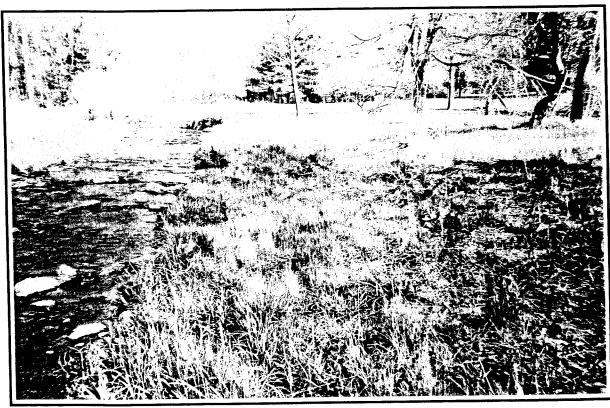
## Mount Airy Lodge

VETLAND ID:	P()W 014			EVALUATOR:	130,	BTB, KJS, ERB	
DATE:	POW 014 12-Apr-05			WEATHER: su	nny, clear, 50 degrees		
		,	Yes				
ormal circumstance	isturbed (Atypical Situation)?		No				
			No.				
e area a potential pr	CLASSIFICATION:			SIZE:	0.4700 Ac	0.1902 Ha	
SETATION	CEASSIFICATION.		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
IETATION	WETLAND				UPLAN	D	
SPF	ECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATO
<u> Ji L</u>	-016.0	OHMON		Poaceae or 0	Gramineae sp.	н	NS
				Trifoli	um sp.	н	NS
rcent of Dominant S			#DIV/0!		HYDROL	.OGY	
MADDE		na extremely story	loam (LbB)	1			
	C SOIL UNIT:	_ 3	,	SOURCE OF HYDE	ROLOGY:	Surface w	ater collection.
***************************************	WETLAND CORES	OIL SCORE		DEPTH OF SURFA			>2"
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE V	VATER IN SOIL PIT:		
inundated >2'	MATCHA	11.32.12.22		DEPTH TO SATUR	ATED SOIL:		
					FIELD INDICATORS	<b>;</b>	
					PRIMARY INDICATOR	s ·	
	WETLAND FRINGE	SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 I	nches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLAND SOIL	SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	\$	ECONDARY INDICATO	ORS	
0-8"	10YR4/3	10YR4/6	silt loam		_Oxidized Root Channe	ls in Upper 12 inche	es
>8*	rock		rock		_Water Stained Leaves		
					_FAC-Neutral Test		
		***************************************					
			Hydric Soi	I Indicators			
	Histosol				Concretions  Link Openin Content in S	urtana Lauper in Cando	Soils
	Histic Epipedon				High Organic Content in S		-JUND
	Sulfidic Odor -			*****	Organic Streaking in Sand		
	Aquic Moisture Regime				Listed on Local Hydric Soi		
	Reducing Conditions				Listed on National Hydric		
	Gleyed or Low Chroma Colors				Other (Explain in Basis of —	G-CHI FOOLIOTI)	
			181111	otormination			
			Wetland D	etermination Hydric Soil Present	? Yes		
Hydrophytic Vegetation		No		Wetland?	No No		
Wetland Hydrology P		Yes		wetani:			
BASIS OF DEL	INEATION:						

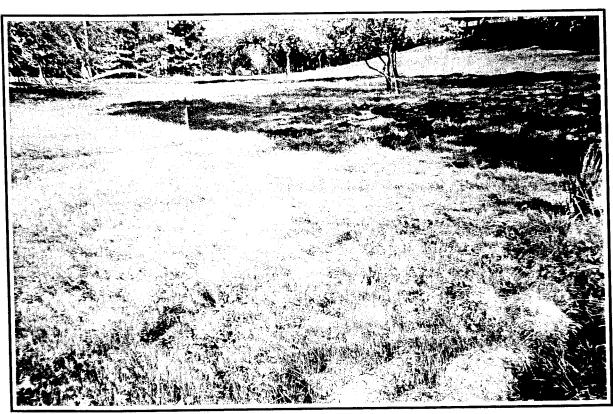
# APPENDIX D - PHOTOGRAPH LOG



**Photograph No. 1:** Wetland 13 located in the floodplain immediately adjacent to Forest Hills Run.



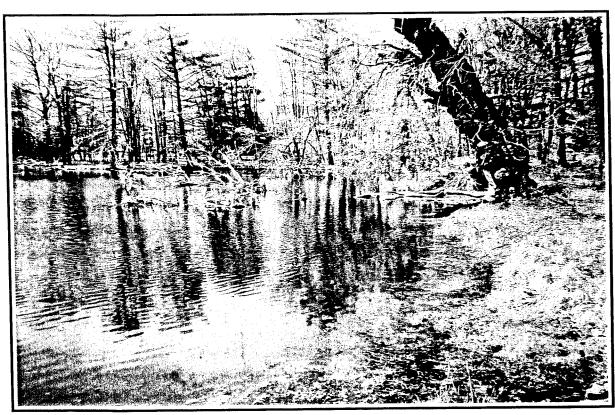
**Photograph No. 2:** Wetland 14 also located on a low lying floodplain bench adjacent to Forest Hills Run.



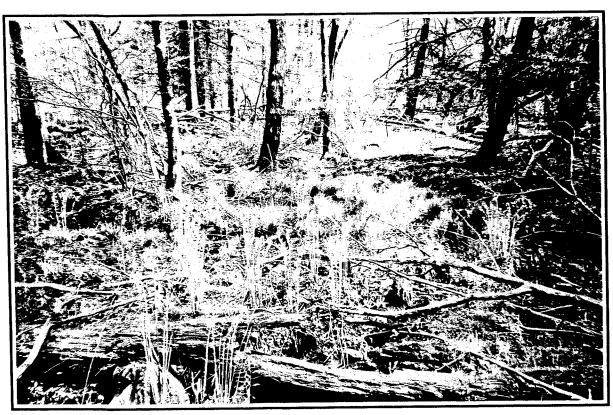
Photograph No. 3: Palustrine emergent Wetland 15 in a mowed/maintained lawn area.



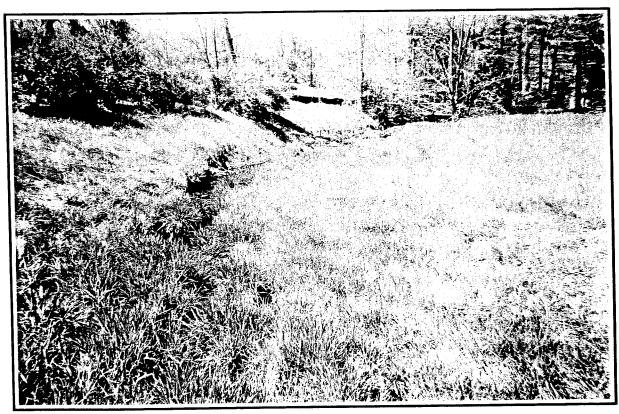
**Photograph No. 4:** Palustrine forested Wetland 31 near S.R. 611.



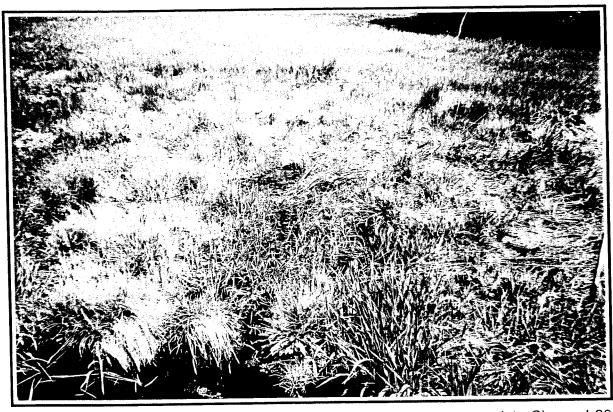
**Photograph No. 5:** Palustrine open-water portion of Wetland 32. A small portion of this wetland is forested and similar to WL-31.



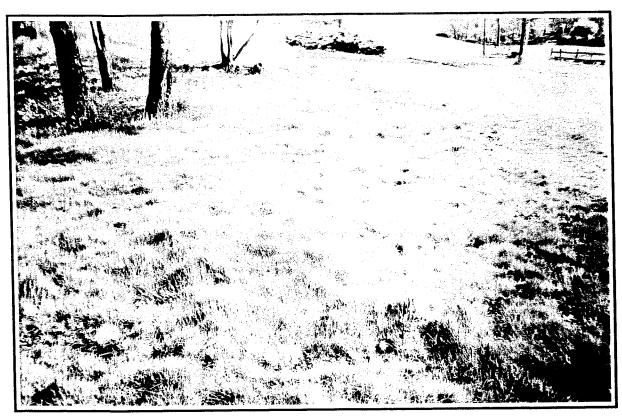
**Photograph No. 6:** Densely wooded palustrine forested Wetland 33.



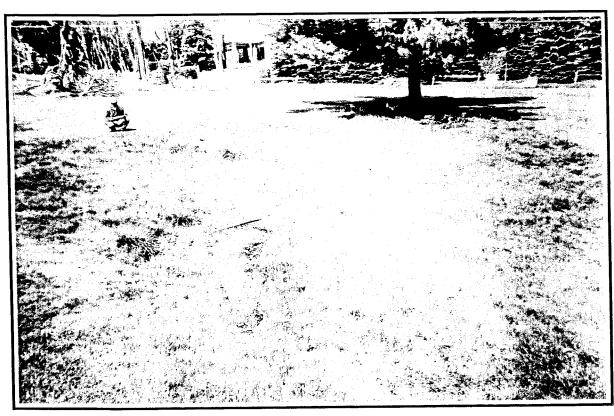
**Photograph No. 7:** Palustrine emergent floodplain bench wetland (WL-37) along Channel 23.



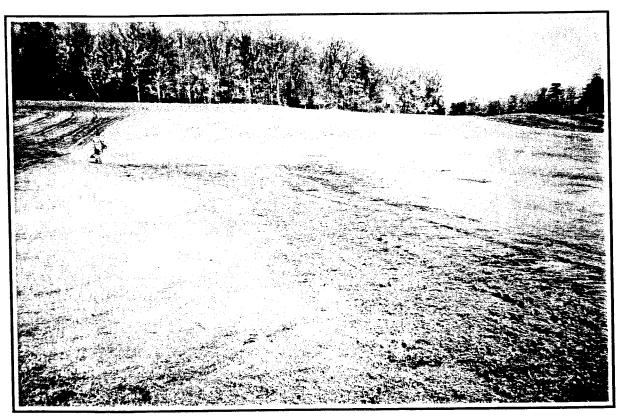
Photograph No. 8: Draintile outlet in Wetland 37 and drainage pattern into Channel 23 (bottom of picture).



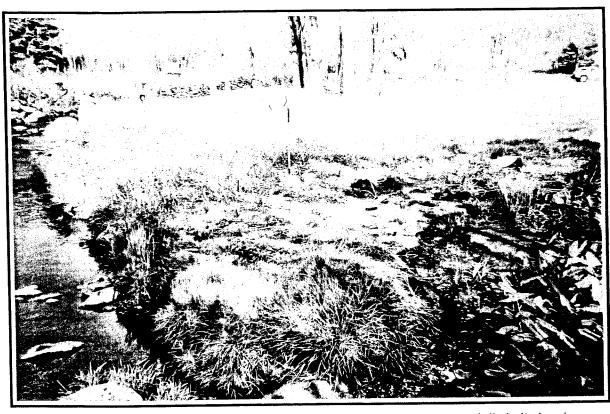
**Photograph No. 9:** Wetland 45 is very similar to Wetland 15.



 $\textbf{Photograph No. 10:} \ \ \text{Wetland 55 is similar to Wetlands 15 and 45}.$ 



**Photograph No. 11:** Wetland 71 is similar to Wetlands 15, 45, and 71.



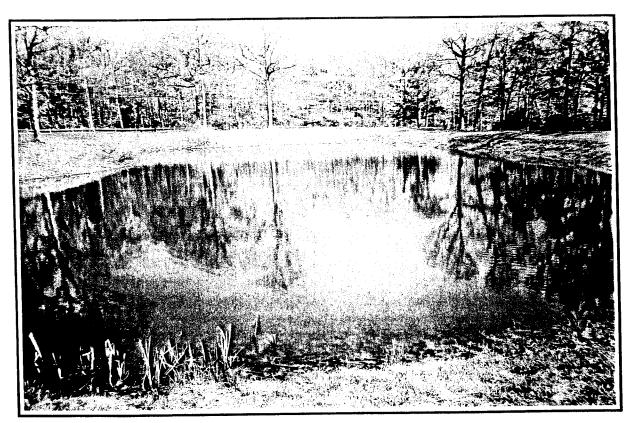
**Photograph No. 12:** Wetland 73 is similar to Wetlands 13 and 14, especially in its landscape position, hydrology and functions/values.



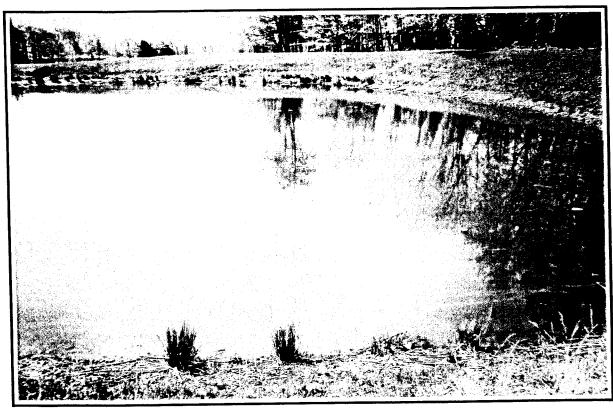
Photograph No. 13: Pond 4 is located on the golf course.



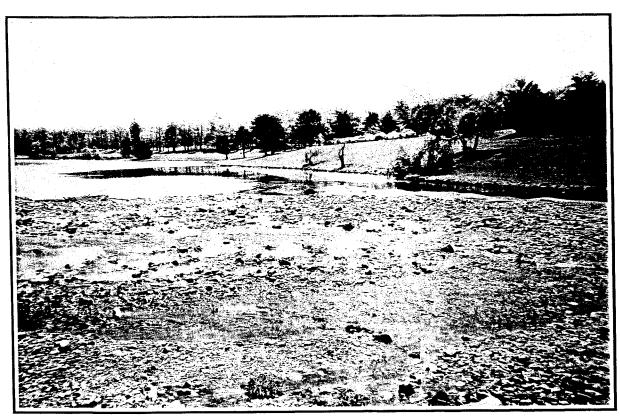
**Photograph No. 14:** Pond 5 is just upslope of Pond 4. Also, Pond 4 and 5 are similar to Pond 6 (not pictured).



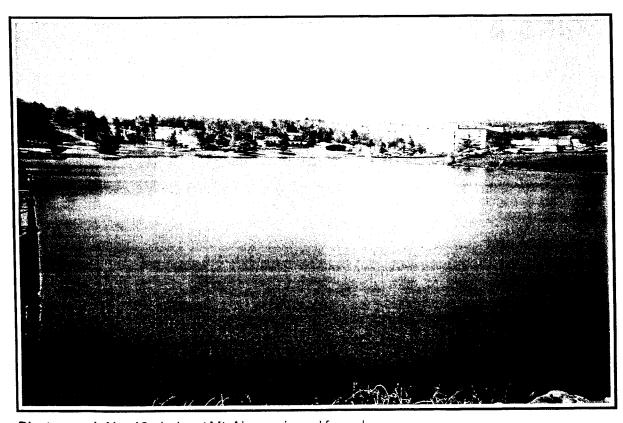
Photograph No. 15: Pond 13.



**Photograph No. 16:** Pond 14 (slightly downslope from Pond 13).



Photograph No. 17: Delta created by confluence of Forest Hills Run with Lake at Mt. Airy.



Photograph No. 18: Lake at Mt. Airy as viewed from dam.

## APPENDIX E -THREATENED AND ENDANGERED SPECIES COORDINATION

2601 North Front Street arrisburg, PA 17110-1185



Phone: 717-232-0593

800-892-6532

Fax:

717-232-1799

Raleigh, NC

E-mail: skellyloy@skellyloy.com Internet: www.skellyloy.com

January 19, 2005

Mr. Justin Newell Pennsylvania Department of Conservation and Natural Resources Bureau of Forestry Post Office Box 8552 Harrisburg, Pennsylvania 17105-8552

Re:

Threatened and Endangered Species Assessment Request, Mount Airy

Lodge Improvement Project

Dear Mr. Newell:

Skelly and Loy, Inc. is in the process of conducting environmental studies pertaining to the Mount Airy Lodge Improvement Project in Paradise Township, Monroe County, Pennsylvania. Skelly and Loy is compiling all the data that are necessary for a Pennsylvania Department of Environmental Protection and U.S. Army Corps of Engineers Joint Permit Application for the project area. Part of the requirements for these documents is to determine the presence of threatened and endangered species within the project area.

Please review the enclosed map and identify any known threatened and endangered plant or animal species that may occur in the project area. Thank you for your time and attention to this project. If you have any questions regarding the project, please call me at the above number.

Sincerely yours,

SKELLY and LOY, Inc.

Karen M. Johnston Botanist

**Enclosures** 

Paul DeAngelo

Andrew Longenecker

1605054

File:

T&E\_LTRS\_KMJ.wpd

State College, PA Hagerstown, MD Morgantown, WV Office Locations: Pittsburgh, PA

AME of Skally and Lov Harrishura PA

3930-PM-WM0041 Rev. 12/2004

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERSHED MANAGEMENT BUREAU OF WATERWAYS ENGINEERING

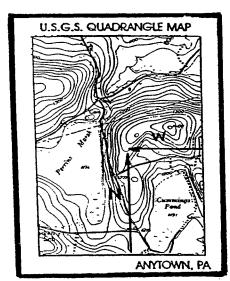
FOR OFFICIAL USE ONLY
PNDI Screening
Reviewer
DatePhone No
Phone ivo.

# SUPPLEMENT NO. 1 PENNSYLVANIA NATURAL DIVERSITY INVENTORY SEARCH FORM

This form provides site information necessary to perform a computer screening for species of special concern listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, the Pennsylvania Fish and Boat Code or the PA Game and Wildlife Code. Records regarding species of special concern are maintained by PA DCNR in a computer database called the "Pennsylvania Natural Diversity Inventory" (PNDI). Results from this search are not intended to be a conclusive compilation of all potential special concern resources located within a proposed project site. On-site biological surveys may be recommended to provide a definitive statement on the presence or absence, or degree of natural integrity of any project site. Results of this PNDI search are valid for one year after the initial search or conclusion of coordination with the jurisdictional agency (whichever is later), then a new PNDI coordination process must be initiated, and a new PNDI search is required. The search area should include the entire area that presently or in the future requires a permit or authorization.

Please complete the information below, attach an 8½" x 11" photocopy (DO NOT REDUCE) of the portion of the U.S.G.S. Quadrangle Map that identifies the project location and outlines the approximate boundaries of the project and mail to the appropriate DEP regional office or delegated County Conservation District prior to completing a Chapter 105 environmental assessment or any other DEP permit application. (SEE REVERSE SIDE FOR LIST OF OFFICES AND ADDRESSES).

NAME: Karen Johnston
ADDRESS: Skelly and Low Inc.
2601 North Front Street
Harrisburg, PA 1711C
PHONE: (717) 232-0593
COUNTY: Monroe County
MUNICIPALITY: Paradise Township
U.S.G.S. 7½ Minute Quadrangle
Mount Pocono, PA
PROJECT DESCRIPTION AND SIZE (Briefly describe entire area relevant to your project, including acreage.)
The Mount Airy lodge Improvement project involves the refurbishing
project involves the refurbishing
and expension of the existing
and expension of the existing facility. Total project area: 456 acres

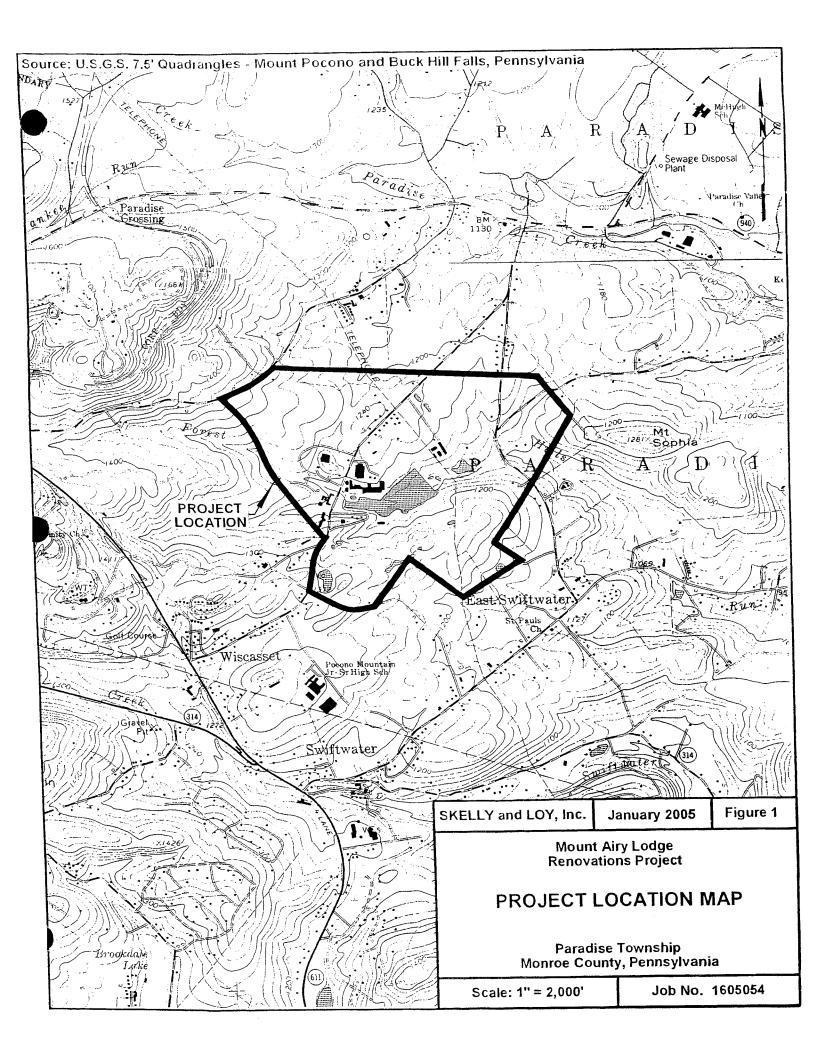


•			
Latitude <sup>8</sup>	41.00.4L"	Longitude <u>75</u> °	19. 23.
(OR)	North (Up)		inches
	West (to the left) _		inches
- INDIC	CATE BY LATITUDE A	AND LONGITUDE:	; OR IEAREST ONE
TENT	TH INCH MEASURIN	IG FROM THE E	DGE OF THE

SCREENING I	RESULTS - F	ollow the	directions of	the	checked	block
SCREENING I	RESULTS - F	ollow the	directions of	the	checked	block

	No potential conflicts were encountered during the PNDI inquiry. Include this form and the PNDI receipt with your
انـــــا	Chapter 105 environmental assessment or other DEP permit application submissions.
	Detential conflicts must be resolved by contacting the natural resource agencies listed on the PNDI receipt.

Potential conflicts must be resolved by contacting the natural resource agencies listed on the PNDI receipt. Please provide a copy of this form and the PNDI receipt along with a brief description of your project to the listed agency for consultation and recommendations. Include this form, the printed PNDI search results and the natural resource agency's written recommendation with your Chapter 105 environmental assessment or other DEP permit application submissions.



2601 North Front Street Harrisburg, PA 17110-1185

mail: skellyloy@skellyloy.com Internet: www.skellyloy.com



Phone: 717-232-0593

800-892-6532

Fax:

717-232-1799

January 19, 2005

Mr. James Leigey
Wildlife Impact Review Coordinator
Pennsylvania Game Commission
Bureau of Land Management
Division of Environmental Planning
and Habitat Protection
2001 Elmerton Avenue
Harrisburg, Pennsylvania 17110-9797

Re: Threatened and Endangered Species

Assessment Request, Mount Airy

Lodge Improvement Project

Dear Mr. Leigey:

Skelly and Loy, Inc. is in the process of conducting environmental studies pertaining to the Mount Airy Lodge Improvement Project in Paradise Township, Monroe County, Pennsylvania. Skelly and Loy is compiling all the data that are necessary for a Pennsylvania Department of Environmental Protection and U.S. Army Corps of Engineers Joint Permit Application for the project area. Part of the requirements for these documents is to determine the presence of threatened and endangered species within the project area.

Please review the enclosed map and identify any known threatened and endangered plant or animal species that may occur in the project area. Thank you for your time and attention to this project. If you have any questions regarding the project, please call me at the above number.

Sincerely yours,

SKELLY and LOY, Inc.

Karen M. Johnston Botanist

Enclosures

cc: Paul DeAngelo

Andrew Longenecker

1605054

File: T&E\_LTRS\_KMJ.wpd

Office Locations: Pittsburgh, PA Morgantown, WV State College, PA Hagers:

Affiliated Company: AMS of Skelly and Loy, Harrisburg, PA

Hagerstown, MD

3930-PM-WM0041 Rev. 12/2004

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERSHED MANAGEMENT
BUREAU OF WATERWAYS ENGINEERING

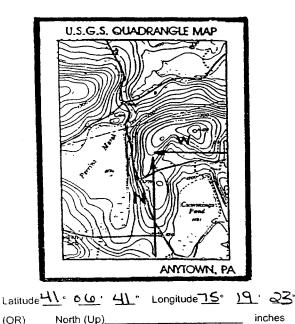
FOR OFFICIAL USE ONLY	
PNDI Screening	
Reviewer	_
Date	
Phone No.	

# SUPPLEMENT NO. 1 PENNSYLVANIA NATURAL DIVERSITY INVENTORY SEARCH FORM

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Please complete the information below, attach an 8½" x 11" photocopy (DO NOT REDUCE) of the portion of the U.S.G.S. Quadrangle Map that identifies the project location and outlines the approximate boundaries of the project and mail to the appropriate DEP regional office or delegated County Conservation District prior to completing a Chapter 105 environmental assessment or any other DEP permit application. (SEE REVERSE SIDE FOR LIST OF OFFICES AND ADDRESSES).

NAME: Karen Johnston
ADDRESS: Skelly and Lay, Inc.
2601 North Front Street
Harrisburg, PA 17110
PHONE: (717) 232-0593
COUNTY: Monroe County
MUNICIPALITY: Paradise Township
U.S.G.S. 7½ Minute Quadrangle
Mount Pocono, PA
PROJECT DESCRIPTION AND SIZE (Briefly describe entire area relevant to your project, including acreage.)
The Moint Airy lodge Improvement project involves the refurbishing and expension of the existing facility. Total project area: 456 acres
project involves the returbishing
and expansion of the existing
facility. Total project area = 456 acres



West (to the left) \_\_\_\_\_\_ inches

- INDICATE BY LATITUDE AND LONGITUDE; -- OR -- INDICATE PROJECT LOCATION TO THE NEAREST ONE
TENTH INCH MEASURING FROM THE EDGE OF THE
, MAP IMAGE FROM THE LOWER RIGHT CORNER.

COREENING DECIMAR	Collow tho	directions	of the	checked	block
SCREENING RESULTS -	Follow the	directions	or me	CHecken	DIOCK.

No potential conflicts were encountered during the PNDI inquiry. Include this form and the PNDI receipt with your
 Chapter 105 environmental assessment or other DEP permit application submissions.
 Listed on the DNDI receipt

Potential conflicts must be resolved by contacting the natural resource agencies listed on the PNDI receipt. Please provide a copy of this form and the PNDI receipt along with a brief description of your project to the listed agency for consultation and recommendations. Include this form, the printed PNDI search results and the natural resource agency's written recommendation with your Chapter 105 environmental assessment or other DEP permit application submissions.

2601 North Front Street Prrisburg, PA 17110-1185

E-mail: skellyloy@skellyloy.com Internet: www.skellyloy.com



Phone: 717-232-0593

800-892-6532

Fax:

717-232-1799

January 19, 2005

Mr. David Densmore U.S. Fish and Wildlife Service 315 South Allen Street, Suite 322 State College, Pennsylvania 16801

Re:

Threatened and Endangered Species

Assessment Request, Mount Airy

Lodge Improvement Project

#### Dear Mr. Densmore:

Skelly and Loy, Inc. is in the process of conducting environmental studies pertaining to the Mount Airy Lodge Improvement Project in Paradise Township, Monroe County, Pennsylvania. Skelly and Loy is compiling all the data that are necessary for a Pennsylvania Department of Environmental Protection and U.S. Army Corps of Engineers Joint Permit Application for the project area. Part of the requirements for these documents is to determine the presence of threatened and endangered species within the project area.

Please review the enclosed map and identify any known threatened and endangered plant or animal species that may occur in the project area. Thank you for your time and attention to this project. If you have any questions regarding the project, please call me at the above number.

Sincerely yours,

SKELLY and LOY, Inc.

Karen M. Johnston Botanist

Enclosures

cc: Pa

Paul DeAngelo

Andrew Longenecker

1605054

File:

T&E\_LTRS\_KMJ.wpd

3930-PM-WM0041 Rev. 12/2004

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERSHED MANAGEMENT BUREAU OF WATERWAYS ENGINEERING

FOR OFFICIAL USE ONLY
PNDI Screening Reviewer Date
Phone No

# SUPPLEMENT NO. 1 PENNSYLVANIA NATURAL DIVERSITY INVENTORY SEARCH FORM

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NAME: Karen Johnston
ADDRESS: Skelly and Lay, Inc.
2601 North Front Street
Harrisburg, PA 17110
PHONE: (717) 232-0593
COUNTY: Monroe County
MUNICIPALITY: Paradise Tourship
U.S.G.S. 71/2 Minute Quadrangle
Mount Pocono, PA
PROJECT DESCRIPTION AND SIZE (Briefly describe entire area relevant to your project, including acreage.)
The Mount Airy Lodge Improvement
The Mount Ainy Lodge Improvement project involves the refurbishing
and expansion of the existing
and expansion of the existing facility. Total project area = 456 acres

U.S.G.S. QUADRANGLE MAP
47 -
Camara
- F
ANYTOWN, PA

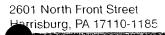
Latitude	11. 00. AT.	Longitude 15°	17. 52
(OR)	North (Up)		inches
	West (to the left)		inches

 INDICATE BY LATITUDE AND LONGITUDE; -- OR - INDICATE PROJECT LOCATION TO THE NEAREST ONE TENTH INCH MEASURING FROM THE EDGE OF THE
 MAP IMAGE FROM THE LOWER RIGHT CORNER.

SCREENING RESULTS - Follow the directions of the checked block.

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Potential conflicts must be resolved by contacting the natural resource agencies listed on the PNDI receipt.  Please provide a copy of this form and the PNDI receipt along with a brief description of your project to the listed
agency for consultation and recommendations. Include this form, the printed PNDI search results and the natural

resource agency's written recommendation with your Chapter 105 environmental assessment or other DEP permit application submissions.



hail: skellyloy@skellyloy.com Internet: www.skellyloy.com



Phone: 717-232-0593

800-892-6532

Fax:

717-232-1799

January 19, 2005

Ms. Kathy Derge Natural Diversity Section Division of Environmental Services Pennsylvania Fish and Boat Commission 450 Robinson Lane Bellefonte, Pennsylvania 16823

Re:

Threatened and Endangered Species Assessment Request, Mount Airy

Lodge Improvement Project

Dear Ms. Derge:

Skelly and Loy, Inc. is in the process of conducting environmental studies pertaining to the Mount Airy Lodge Improvement Project in Paradise Township, Monroe County, Pennsylvania. Skelly and Loy is compiling all the data that are necessary for a Pennsylvania Department of Environmental Protection and U.S. Army Corps of Engineers Joint Permit Application for the project area. Part of the requirements for these documents is to determine the presence of threatened and endangered species within the project area.

Please review the enclosed map and identify any known threatened and endangered plant or animal species that may occur in the project area. Thank you for your time and attention to this project. If you have any questions regarding the project, please call me at the above number.

Sincerely yours,

SKELLY and LOY, Inc.

Karen M. Johnston Botanist

**Enclosures** 

Paul DeAngelo CC:

Andrew Longenecker

1605054

File: T&E\_LTRS\_KMJ.wpd

State College, PA Office Locations: Pittsburgh, PA Affiliated Company: AMS of Skelly and Loy, Harrisburg, PA

**一种,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是** 



# Pennsylvania Natural Diversity Inventory

Scientific Information and expertise for the conservation of Pennsylvania's native biological diversity

DCNR, Bureau of Forestry

March 4, 2005

Karen Johnston Skelly and Loy 2601 North Front Street Harrisburg, PA 17110

Re:

Pennsylvania Natural Diversity Inventory Review, PER NO: 17301

Mount Airy Lodge Improvement Project

Paradise Twp, Monroe County

#### Dear Ms. Johnston:

In response to the request received January 20, 2005 to perform a PNDI Database Search of the above-mentioned project, we have reviewed the area using the Pennsylvania Natural Diversity Inventory (PNDI) information system.

PNDI records indicate that no occurrences of species of special concern are known to exist within the project area referenced above, therefore we do not anticipate any impact on endangered, threatened, or rare species at this location.

PNDI attempts to be a complete information resource on species of special concern located within the Commonwealth. However, it may not contain all location information for species within the jurisdiction of other agencies. Please contact the Fish and Boat Commission, the Game Commission and US Fish and Wildlife Service for more information on species within their purview.

PNDI is the environmental review function of the Pennsylvania Natural Heritage Program, and uses a site-specific information system that describes significant natural resources within the Commonwealth. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the Department of Conservation and Natural Resources, The Nature Conservancy and the Western Pennsylvania Conservancy. This response represents the most up-to-date summary of the PNDI data files and is good for one year. An absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations.

Feel free to phone our office if you have questions concerning this response or the PNDI system, and please refer to the P.E.R. Reference Number at the top of the letter in future correspondence concerning this project.

Sincerely,

Ellen M. Shultzabarge

**Environmental Review Specialist** 

P: 717-772-0258 F: 717-772-0271



### United States Department of the Interior

#### FISH AND WILDLIFE SERVICE

Pennsylvania Field Office 315 South Allen Street, Suite 322 State College, Pennsylvania 16801-4850

February 18, 2005

Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110-1185

Re: USFWS Project #20050380

Dear Ms. Johnston:

This responds to your letter of January 19, 2005, requesting information about federally listed and proposed endangered and threatened species within the area affected by the proposed Mount Airy Lodge Improvements Project located in Paradise Township, Monroe County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

The proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

To determine the potential effects of the proposed project on bog turtles and their habitat, begin by identifying all wetlands in, and within 300 feet of, the project area. The project area includes all areas that will be permanently or temporarily affected by any and all project features, including building, roads, staging areas, utility lines, outfall and intake structures, wells, stormwater retention or detention basins, parking lots, driveways, lawns, etc. The area of investigation should be expanded when project effects might extend more than 300 feet from the project footprint. For example, the hydrological effects of some projects (e.g., large residential or commercial developments; golf courses; community water supply wells) might extend well beyond the project footprint due to the effects that impervious surfaces or groundwater pumping may have on the hydrology of nearby groundwater-dependent wetlands. Wetlands should be included on a map showing existing as well as proposed project features.



FEB 2 2 2005

If someone qualified to identify and delineate wetlands has, through a field investigation, determined that no wetlands are located in or within 300 feet of the project area (or within the expanded investigation area, as described above), it is not likely that your project will adversely affect the bog turtle. If this is the case, no further consultation with the Fish and Wildlife Service is necessary, although we would appreciate receiving a courtesy copy of the wetland investigator's findings for our files.

If wetlands have been identified in or within 300 feet of the project area (or in an expanded investigation area, as described above), their potential suitability as bog turtle habitat should be assessed, as described under "Bog Turtle Habitat Survey" (Phase 1 survey) of the enclosed Guidelines for Bog Turtle Surveys. A list of qualified bog turtle surveyors is enclosed, although the habitat survey could also be conducted by someone not on this list (e.g., a biologist or wetland scientist with training in bog turtle habitat identification). A Phase 1 field form and report template are enclosed for your convenience and use. Survey results should be submitted to the Service for review and concurrence.

If potential bog turtle habitat is found in or near the project area, efforts should be made to avoid any direct or indirect impacts to those wetlands (see enclosed *Bog Turtle Conservation Zones*). Avoidance of direct and indirect effects means no disturbance to or encroachment into the wetlands (e.g., filling, ditching or draining) for any project-associated features or activities. Adverse effects may also be anticipated to occur when lot lines include portions of the wetland; when an adequate upland buffer is not retained around the wetland (see *Bog Turtle Conservation Zones*); or when roads, stormwater/sedimentation basins, impervious surfaces, or wells affect the hydrology of the wetland.

We recommend that if potential habitat is found, you submit (along with your Phase 1 survey results) a detailed project description and detailed project plans documenting how direct and indirect impacts to the wetlands will be avoided. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey should be done, as described under "Bog Turtle Survey" (Phase 2 survey) of the Guidelines. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors), and survey results should be submitted to the Service for review and concurrence.

In cases where adverse effects to federally listed species cannot be avoided, further consultation with the Service would be necessary to avoid potential violations of section 9 (prohibiting "take" of listed species) and/or section 7 (requiring federal agencies to consult) of the Endangered Species Act. Information about the section 7 and section 10 consultation processes (for federal and non-federal actions, respectively) can be obtained by contacting this office or accessing the Service's Endangered Species Home Page (http://endangered.fws.gov).

This response relates only to endangered and threatened species under our jurisdiction based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Jennifer Dombroskie of my staff at 814-234-4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

David Densmore

Supervisor

**Enclosures** 



#### established 1866

### Pennsylvania Fish & Boat Commission

C007 & 7 NAU

Division of Environmental Services Natural Diversity Section 450 Robinson Lane Bellefonte, PA 16823-9620 (814) 359-5237 Fax: (814) 359-5175

January 25, 2005

IN REPLY REFER TO SIR # 18068

Our Mission:

SKELLY AND LOY KAREN JOHNSTON 2601 N FRONT STREET HARRISBURG, PA 17110-1185

RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species MOUNT AIRY LODGE IMPROVEMENT PROJECT PARADISE Township/Borough, MONROE County, Pennsylvania

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code. The absence of recorded information from our files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A Species Impact Review is valid for one year only.

X NO AD	VERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT
	Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation regarding rare species is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.
	An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.
If you have any	questions regarding this review, please contact the biologist indicated below:
Jeff So	
X Kathy	Derge 814-359-5186
make copies of	a copy of our "SIR Request Form", which is to be used for all future species impact review requests. Please the attached form and use with all future project reviews. Thank you in advance for your cooperation and simportant matter of species conservation and habitat protection.  DATE: January 25, 2005  Christopher A. Urban Chief, Natural Diversity Section

www.fish.state.pa.us

#### COMMONWEALTH OF PENNSYLVANIA



## PENNSYLVANIA GAME COMMISSION

2001 ELMERTON AVENUE, HARRISBURG, PA 17110-9797

February 16, 2005

Ms. Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110

Re: Mount Airy Lodge Improvement Project

456-Acre Site

Paradise Township, Monroe County, PA

Dear Ms. Johnston:

This is in response to your letter dated January 19, 2005, requesting information concerning endangered and threatened species of birds and mammals and impacts to State Game Lands as related to the proposed project.

Our office review has determined that no state listed endangered or threatened species of birds or mammals are known to occur within the proposed project area. Except for occasional transient individuals, this project should not impact any endangered or threatened species of birds or mammals recognized by the Pennsylvania Game Commission. Also, no State Game Lands are located close enough that any impacts to them are anticipated by the proposed project. However, should project plans change or if additional information on endangered or threatened species or State Game Lands becomes available, this determination may be reconsidered.

The proposed project may impact wetlands which this agency considers as critical and unique habitat. You should be aware that any impacts to wetlands or other bodies of water will require permits from the Department of Environmental Protection under Chapter 105 and the U.S Army Corps of Engineers under Section 404 of the Clean Water Act.

If you have any questions, please contact me at (717) 783-5957.

Very truly yours,

Yames R. Leigey

Wildlife Impact Review Coordinator Division of Environmental Planning

And Habitat Protection

Bureau of Land Management

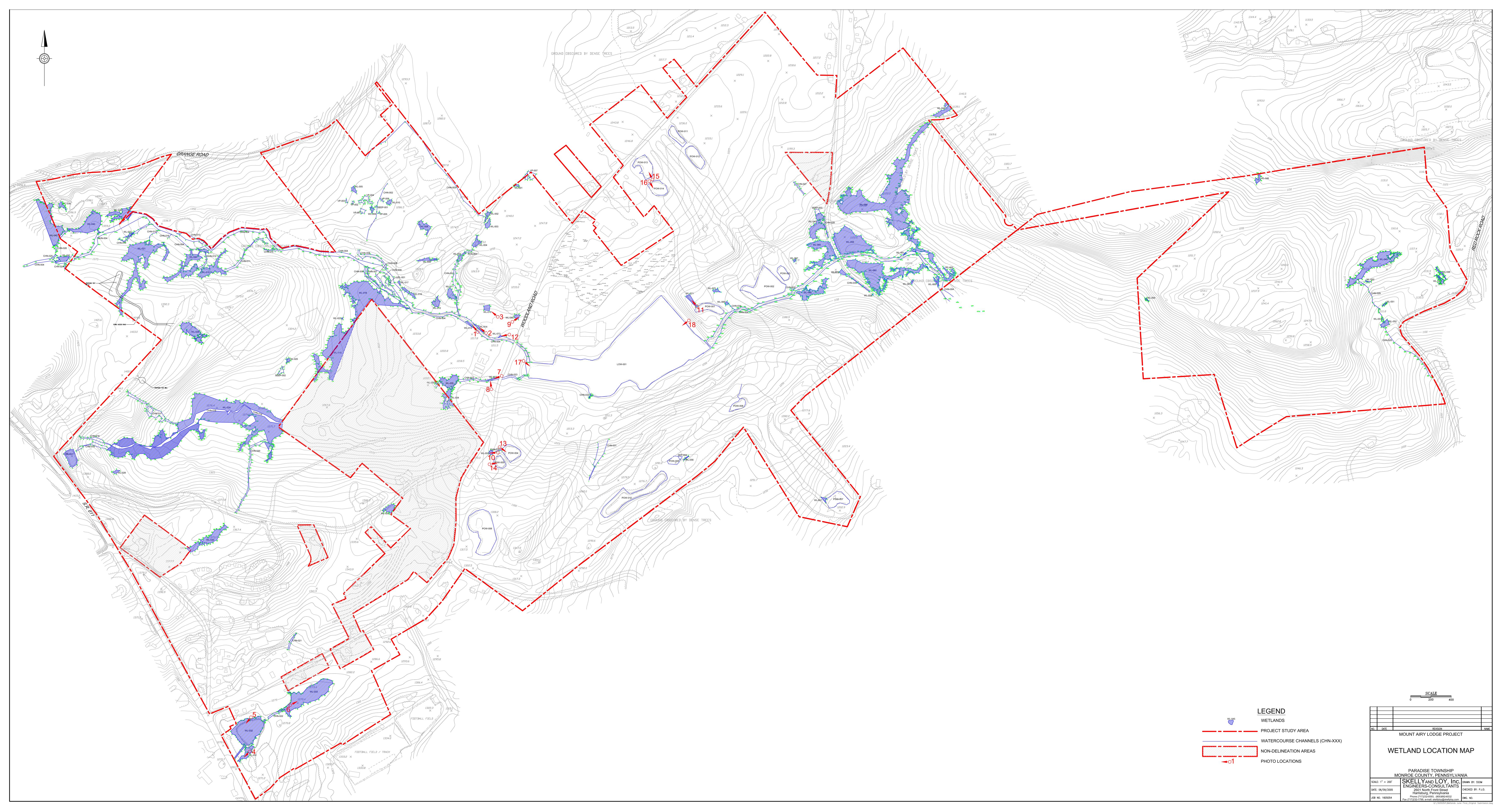
JRL/pfb

Attachment

Cc: File

Schweitzer Zindell

APPENDIX F - WETLAND LOCATION MAP



### APPENDIX D -CULTURAL RESOURCE ASSESSMENT AND COORDINATION LETTERS



# Commonwealth of Pennsylvania Pennsylvania Historical and Museum Commission Bureau for Historic Preservation

Commonwealth Keystone Building, 2nd Floor 400 North Street Harrisburg, PA 17120-0093 www.phmc.state.pa.us

July 25, 2005

Douglas Dinsmore Skelly and Loy 2601 North Front Street Harrisburg, PA 17110-1185

TO EXPEDITE REVIEW USE BHP REFERENCE NUMBER

Re: ER 05-2325-089-A

COE: Mount Airy Lodge Project, Paradise Twp., Monroe Co.

Dear Mr. Dinsmore:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999. These requirements include consideration of the project's potential effect upon both historic and archaeological resources.

In our opinion no archaeological investigations are necessary in this project area.

Your request does not include sufficient information. We are unable to proceed with our review for historic structures. Although you have provided a good history of the property, the photographs, physical description, and site map are not adequate. You will need to provide this information on a Pennsylvania Historic Resource Survey Form. Please provide 35mm or digital photographs, set on high resolution, of each building, keyed to a site map. Photographs should be no smaller than 3x5. Some buildings may require more than one view. In addition, please explain which buildings will be affected by the proposed project.

If you need further information please consult Ann Safley at (717) 787-9121.

Sincerely,

Con Safley for Douglas McLearen, Chief

Division of Archaeology & Protection

DMcL/ras

2601 North Front Street Harrisburg, PA 17110-1185



Phone: 717-232-0593 800-892-6532

Fax: 717-232-1799

E-mail: skellyloy@skellyloy.com Internet: www.skellyloy.com

June 14, 2005

Ms. Jean Cutler
The Bureau for Historic Preservation
The Pennsylvania Historical and Museum Commission
Commonwealth Keystone Building, Second Floor
400 North Street
Harrisburg, Pennsylvania 17120-0093

Re:

Mount Airy Lodge Project

Paradise Township

Monroe County, Pennsylvania

Dear Ms. Cutler:

Skelly and Loy, Inc. is assisting Mount Airy No. 1 LLC and CECO Associates, Inc. with environmental work for the Mount Airy Lodge Project. Mount Airy No. 1 LLC proposes to demolish the existing Mount Airy Lodge main building complex and, in its place, construct a seven-story hotel and casino. The highway (S.R. 1013, Woodland Road) leading from S.R. 0611 to the new hotel and casino will also be improved. Skelly and Loy conducted background research and a windshield survey to identify and evaluate the historic resources within and near the proposed project.

#### PHMC FILE REVIEW

The investigation of potential historic properties began with a review of Pennsylvania Archaeological Site Survey files at the Bureau for Historic Preservation, part of the Pennsylvania Historical and Museum Commission (PHMC) in Harrisburg, Pennsylvania. The review revealed no previously identified archaeological sites within the Mount Airy project area. In 1991, Skelly and Loy conducted archaeological studies and completed a Phase I report for a project just south of the Mount Airy project area and found no significant archaeological remains.

Within the Mount Airy project area, there are no properties previously listed or determined eligible for listing in the National Register of Historic Places. No properties within the Mount Airy project area were recorded on the 1996 Monroe County Historical Association historic building survey.

Three properties near the project area have been previously surveyed as a part of a Monroe County Planning Commission Comprehensive Historic Sites Survey. No determinations were made regarding their eligibility.

#### **AREA OF POTENTIAL EFFECTS**

The development of the Area of Potential Effects (APE) began with a windshield survey of the area of the proposed project. The APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist" [36 CFR §800.16(d)]. Additionally, the APE "is influ-

Office Locations: Pittsburgh, PA Morgantown, WV State College, PA Hagerstown, MD Raleigh, NC

Ms. Jean Cutler Page 8 June 14, 2005

enced by the scale and nature of an undertaking and may be different for different kinds of effects" [36 CFR §800.16(d)].

The proposed project consists of the demolition of the existing main building of Mount Airy Lodge and the construction of a new hotel and casino. The highway connection between the proposed hotel and casino, S.R. 1013 (Woodland Road), and its intersection with S.R. 0611 will also be improved. The APE includes the approximate area where construction would occur (Figures 1 and 2). It begins at the intersection of S.R. 0611 and S.R. 1013 and runs to the south-southeast along the eastern edge of pavement of S.R. 0611 for approximately 300 feet. The APE then parallels S.R. 1013 to the east and northeast for approximately 4,500 feet. It then turns to the east, making a wide arc to the north, for approximately 750 feet. The APE then turns to the east, again making a slow curve to the northeast for approximately 1,800 feet, across the lake besides the main lodge building.

The APE then turns to the north for approximately 600 feet. It then turns to the northwest then west for approximately 650 feet, then to the northwest for approximately 800 feet. The APE then turns to the southwest for approximately 550 feet, then to the northwest again for approximately 525 feet. It then turns to he southwest for approximately 750 feet. The APE then follows a long curve to the south and southeast for approximately 950 feet. From there, the APE turns south for approximately 700 feet, and then jogs east for approximately 55 feet. The APE then turns south and southeast for approximately 4,600 feet back to the eastern edge of pavement of S.R. 0611. From there, it follows the eastern edge of pavement of S.R. 0611 back to the point of origin.

The APE encompasses the proposed construction and its immediate environs.

#### **ON-SITE REVIEW**

Skelly and Loy undertook a windshield survey of the Mount Airy project area, which consisted of the Mount Airy Lodge and Strickland's Mountain Inn properties. Approximately 56 buildings that are at least 50 years old stand on the Mount Airy Lodge and Strickland's Mountain Inn property. Some of the Strickland's Mountain Inn buildings date from the 1890 to 1910 period. The Mount Airy buildings began circa 1920. Both properties experienced extensive expansion beginning about 1954. This expansion resulted in many new buildings, and the old ones were remodeled. Mount Airy Lodge acquired Strickland's Mountain Inn about this time.

Mount Airy began as the concept of John and Suzanne Martens, Slovak-born entrepreneurs from Brooklyn. According to two newspaper articles (December 31, 2004, in the *Scranton Times Tribune* by David Falchek, and March 6, 2005, in *The Morning Call* by Matt Birkbeck), the Martens purchased a 15-room boarding house in 1936. They converted the boarding house into a hotel, the originally called Mount Airy House. The Martens operated Mount Airy House by themselves for about 15 years.

In 1951, Suzanne's nephew, Emil Wagner, joined the Martens' operation at Mount Airy House. Wagner, according to his obituary published in the *Pocono Record* on November 5,

Ms. Jean Cutler Page 8 June 14, 2005

1999, had escaped Czechoslovakia before the Communist coup of 1948, moving to Switzerland. Wagner's father had been in the hotel business, and this experience had been further strengthened by attendance at the Hotel School in Lausanne, Switzerland. There, Wagner learned the business styles of the great Swiss resorts.

Wagner's education and experience became a catalyst for a transformation of Mount Airy House. Wagner reformed the House into a European-styled Mount Airy Lodge. With the Martens, Wagner pioneered the concept of the Pocono resort. They advertised in New York City and Philadelphia area papers, offering inexpensive, activity-filled, romantic getaways. Wagner and the Martens became the first to equip their resort with novelty tubs and mirror-ceiling rooms. After the Martens' deaths, Wagner operated Mount Airy Lodge and Strickland's Mountain Inn until his death in 1999. By then, competition from a renovated Atlantic City, cruise ships, and newer Pocono resorts had edged Mount Airy Lodge and Strickland's Mountain Inn near bankruptcy. The combined resort operated under Chapter 11 of the Bankruptcy Code after 1999; after a sharp decrease in bookings following the terrorist attacks of September 11, 2001, it closed. The resort has been closed since 2001, although the golf course remains operating.

#### **Consideration of Criterion A**

Looking at Criterion A, Mount Airy Lodge made a contribution to the long-term trend of Pocono resorts. The Martens and Wagner pioneered the concept of romantic getaways. However, the Pocono Mountains had been a tourist destination for half a century prior to Mount Airy. According to Monroe County's Web site (under *History*), hotels to accommodate tourists began to be built following the arrival of the railroad in what is now East Stroudsburg in 1871. By 1900, a special fast train brought tourists from New York City. Although the Martens' and Wagner's contributions changed the face of Pocono resorts, it does not reach the level of a significant contribution to the broad patterns of our nation's history. Mount Airy Lodge should not be considered significant under Criterion A.

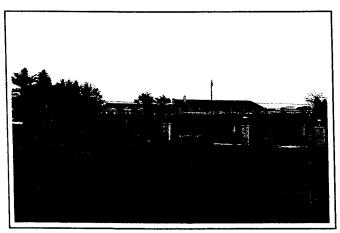
Strickland's Mountain Inn began as a few resort homes at a crossroads, now called East Swiftwater, in the period between 1890 and 1900. Additional buildings were added slowly until after World War II, when several additional buildings, including the main buildings, were constructed. Catering to couples, Strickland's Mountain Inn was acquired by Mount Airy Lodge in the mid-1950's. As such, Strickland's Mountain Inn does not pose a significant contribution to the broad patterns of our nation's history and should not be considered significant under Criterion A.

#### **Consideration of Criterion B**

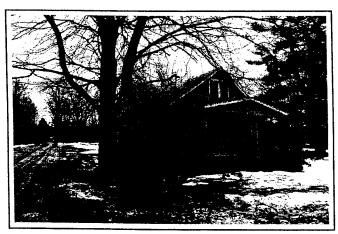
Looking at Criterion B, John and Suzanne Martens and Emil Wagner became locally important persons, and their contribution, as noted in the discussion of Criterion A, changed the area from small crossroads hotels into sprawling resorts. However important to the local area the Martens' and Wagner's contributions were, it does not reach the level of a significant person in our nation's history. As a result, the Martens, Wagner, and Mount Airy Lodge should not be considered significant under Criterion B.

#### **Consideration of Criterion C**

Looking at Criterion C, the buildings of Mount Airy Lodge that are 50 years old and over have either been extensively altered or are common examples of unremarkable buildings. For example, the original Mount Airy Lodge is barely recognizable behind a circa 1970 reception area and porte-cochère (Photograph Nos. 1 and 2). Other buildings, like the circa 1930 gable-end cottage along S.R. 1013 (Photograph No. 3) and the camp buildings across the road from the lodge (Photograph No. 4), retain their original form and fabric but are undistinguished examples of common resort buildings of the period. As a result, Mount Airy Lodge should not be considered significant under Criterion C.



**Photograph No. 1** – The main entrance of Mount Airy Lodge, looking east. The original boarding house is visible at the left center with its gable-end dormers.



Photograph No. 3 - A circa 1930 resort cottage, looking south.



Photograph No. 2 – The northern end of the main building, looking south. The original boarding house can be seen in the right center, with the gable-end dormers. This view shows the back of the original boarding house while the view in Photograph No. 1 shows the front.



**Photograph No. 4 –** Circa 1930 resort lodges, looking northwest.

Ms. Jean Cutler Page 8 June 14, 2005

Strickland's Mountain Inn followed a similar course to the Mount Airy Lodge. Older buildings were extensively altered; porches were enclosed, additions grafted onto older fabric. One of the earlier buildings, for example, a late Victorian cottage near to the intersection of Carlton and Upper Swiftwater Roads, has an enclosed porch that obscures its detailed entrance and first-floor windows (Photograph No. 5). It has an addition on the back; its layout, fabric, and fenestration have all been altered. The original Strickland's Mountain Inn, circa 1920, with its gable-end dormers, has been extensively altered with additions on the back and the one-story full-front porch enclosed (Photograph No. 6). All of the buildings 50 years old and older of Strickland's Mountain Inn have been extensively altered. As a result, it should not be considered significant under Criterion C.



**Photograph No. 5 –** Late Victorian cottage, looking southeast. This is one of the properties of Strickland's Mountain Resort.



Photograph No. 6 — Original main building of Strickland's Mountain Resort, looking northeast. The gambrel roof and gable-end dormers suggest a date of circa 1920.

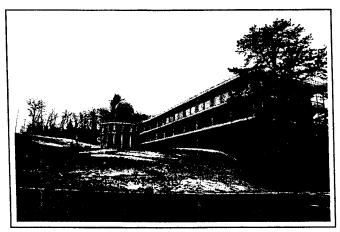
#### **Consideration of Criterion D**

Looking at Criterion D, little potential exists for historic archaeological remains. The original landscape has been altered by continuous construction through the years. The proposed construction will occur in areas that have or have recently had buildings on them. The area of the main building of Mount Airy Lodge has been extensively altered by the construction of the resort buildings and parking areas. Skelly and Loy recommends that no additional survey occur.

#### **Consideration of Historic Districts**

Considering historic districts, neither Mount Airy Lodge nor Strickland's Mountain Inn qualifies as historic districts. Both have collections of buildings 50 years old and over; however, modern buildings stand among the historic ones. Immediately to the southwest of the main building of Mount Airy Lodge stands a circa 1965 hotel (Photograph No. 7). The circa 1975

southern façade of the main building of the Mount Airy Lodge, facing the lake, exhibits the Post-Modern style (Photograph No. 8).

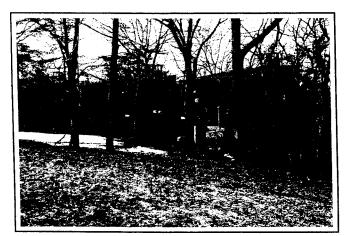


Photograph No. 7 – A circa 1965 hotel with a gold dome, looking south.



Photograph No. 8 – Circa 1975 southern façade of the main lodge, looking northeast.

Similarly, at Strickland's Mountain Inn, modern cottages form the outer of three concentric circles of construction (Photograph No. 9). Near the center of Strickland's Mountain Inn, a modern recreational complex stands across a path from the original Inn (Photograph No. 10). In addition, as noted above, many of the historic ones are virtually unrecognizable as historic buildings because of the many alterations. As a result, historic districts do not exist at Mount Airy Lodge or Strickland's Mountain Inn.



**Photograph No. 9** – Circa 1975 resort buildings at Strickland's Mountain Resort, looking west. Modern buildings are scattered among older ones.



**Photograph No. 10** – Modern recreation buildings, circa, 1980, looking southeast. The dome in the foreground encloses a swimming pool.

#### Consideration of Designed Landscapes

Designed landscapes are another type of property recognized by the National Park Service as potentially eligible for the National Register. A portion of Mount Airy Lodge around the main building is a designed landscape, anchored by the Mount Airy Golf Club. In addition to the golf club, a 46-acre lake, statuary, and trails fill a valley in which Forest Hills Run flows (Photograph Nos. 11 and 12). However, most of this designed landscape, including the golf club and the lake, dates from the 1972 construction of the golf course.



**Photograph No. 11 –** The Hal Purdy-designed golf course, looking north.



Photograph No. 12 – A circa 1960 building with lights and statuary in front, looking northeast.

Noted golf course architect Hal Purdy designed the Mount Airy Golf Club. However, its 1972 date means that it post-dates the 1955 cutoff for historic consideration by 17 years. Although properties younger than the 50-year-old cutoff can be considered to be eligible for inclusion in the National Register, the property must be shown to be exceptional. Although picturesque, the designed landscape adjacent to the main building of Mount Airy Lodge is not exceptional and should not be considered to be significant or eligible for inclusion in the National Register.

#### SUMMARY OF HISTORIC RESOURCE EVALUATION

In summary, the Mount Airy Lodge and Strickland's Mountain Inn, which include the buildings within the APE, have approximately 56 buildings at least 50 years old or older. These buildings have either been extensively altered or they do not possess enough significance to qualify them as eligible for inclusion in the National Register. There is no National Registereligible historic district or designed landscape within the Mount Airy project area.

A 1996 Monroe County Historical Association survey did not include any Mount Airy Lodge or Strickland's Mountain Inn buildings. Skelly and Loy recommends that no additional cultural resource work be performed within the Area of Potential Effects.

Ms. Jean Cutler Page 8 June 14, 2005

Please do not hesitate to contact me if you have any questions.

Sincerely yours,

SKELLY and LOY, Inc.

Douglas Dinsmore, Ph.D. Cultural Resource Specialist

cc:

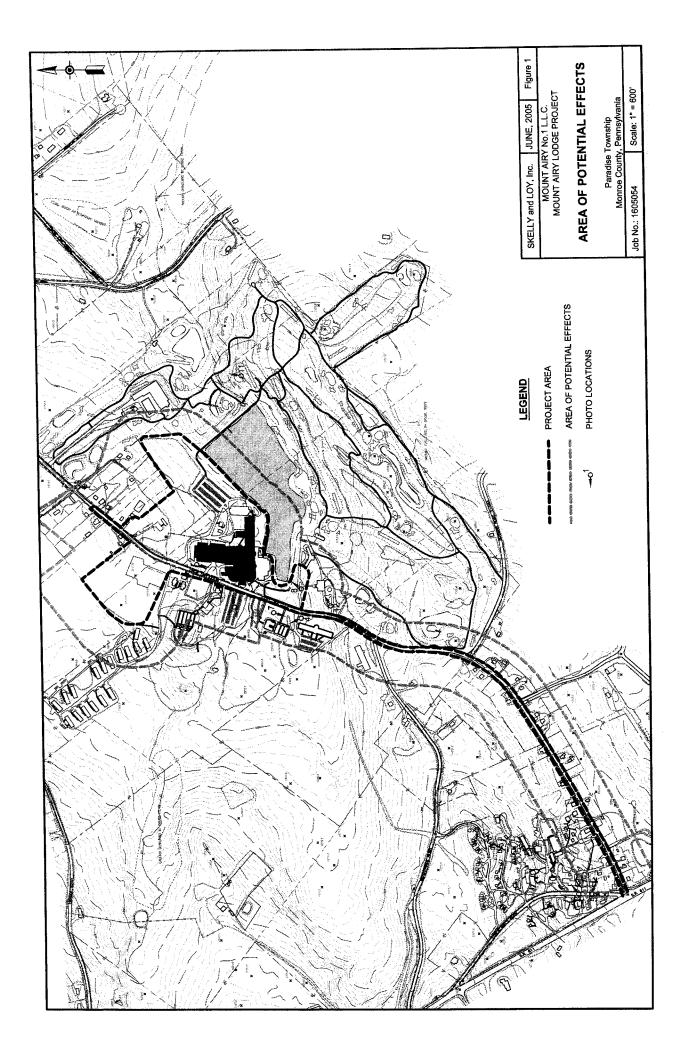
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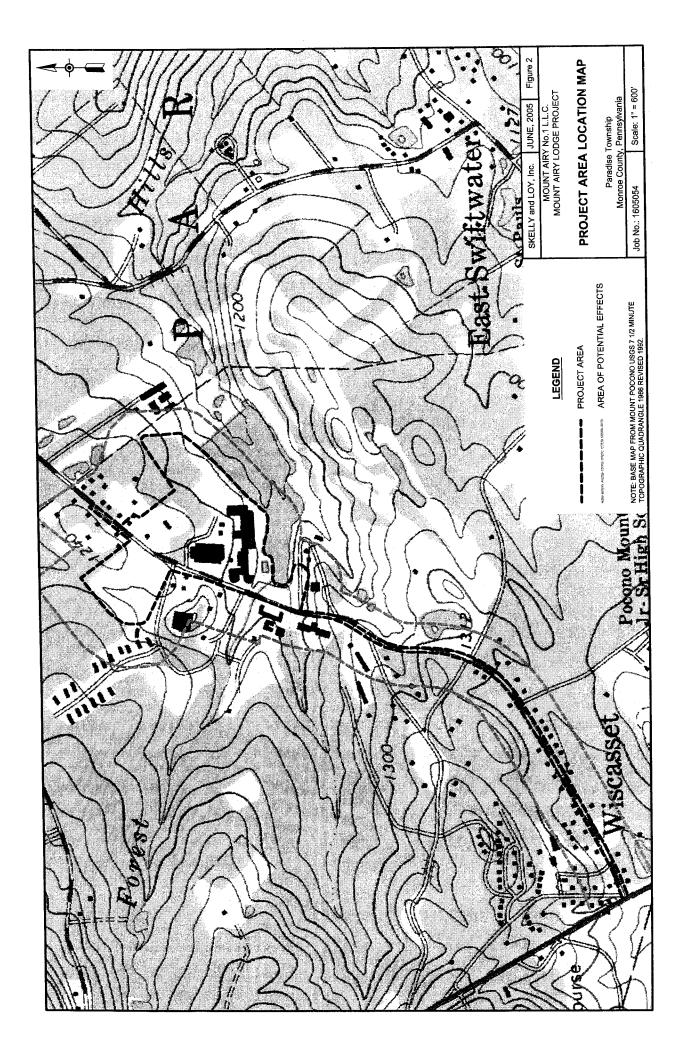
Albert Magnotta, P.E. CECO

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Mount Airy PHMC Letter.doc





APPENDIX E -THREATENED AND ENDANGERED SPECIES COORDINATION LETTERS



### United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

Pennsylvania Field Office 315 South Allen Street, Suite 322 State College, Pennsylvania 16801-4850

July 6, 2005

Andy Brookens Skelly and Loy 18028 Maugans Avenue Hagerstown, MD 21740

Re: USFWS Project #2005-0380

Dear Mr. Brookens:

This responds to your letter of June 17, 2005, which provided the Fish and Wildlife Service with information regarding the Mount Airy Lodge project in Paradise Township, Monroe County, Pennsylvania. The proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species.

A Phase 1 bog turtle habitat assessment was conducted on April 12 and May 11, 2005. According to the Phase 1 report, none of the wetlands occurring within the property boundaries has the combination of hydrology, soils, and vegetation characteristic of suitable bog turtle habitat. Therefore, based on our review of this report, we conclude that implementation of the proposed project will not affect the bog turtle.

This determination is valid for two years from the date of this letter. If the proposed project has not been fully implemented prior to this, an additional review by this office is recommended. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

If the Phase 1 habitat assessment did not include all wetlands in all areas that will be directly or indirectly affected by the proposed project and project-associated features (e.g., roads, water and sewer lines, utility lines, stormwater and sedimentation basins, buildings and other structures, driveways, parking lots, yards/lawns, wells), the scope of the Phase 1 survey should be expanded to include these areas. If any wetlands are located, the results of the expanded wetland and Phase 1 investigation should be submitted to our office for review so that we can confirm whether the above determination is still valid.

This response relates only to endangered and threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Duni /

Please contact Bonnie Dershem of my staff at 814-234-4090 if you have any questions or require further assistance regarding this matter.

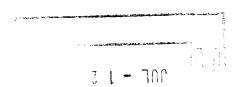
Sincerely,

David Densmore

Supervisor



## Pennsylvania Fish & Boat Commission



Division of Environmental Services Natural Diversity Section

450 Robinson Lane Bellefonte, PA 16823-9620 (814) 359-5237 Fax: (814) 359-5175

June 30, 2005

IN REPLY REFER TO SIR# 18068

SKELLY AND LOY KAREN JOHNSTON 2601 N FRONT STREET HARRISBURG, PA 17110-1185

RE: Secondary Species Impact Review (SIR) #18068

MOUNT AIRY LODGE IMPROVEMENT PROJECT

**Bog Turtle Habitat Survey** 

PARADISE Township/Borough, MONROE County, Pennsylvania

Dear Ms. JOHNSTON:

The staff of the Natural Diversity Section reviewed your recent correspondence regarding the above-referenced project and its potential to impact the bog turtle (*Clemmys muhlenbergii*, state endangered, federal threatened).

You conducted a bog turtle habitat evaluation at the project site and concluded that suitable habitat for bog turtles did not occur on-site. According to your report, the vegetation, hydrology, and soils are not consistent with wetlands known to support bog turtles. I concur with the conclusions of the Phase I habitat assessment; the habitat is not suitable for bog turtles. Therefore, I do not foresee the proposed project resulting in adverse impacts to the bog turtle or any other rare or protected species under Pennsylvania Fish and Boat Commission jurisdiction.

Please contact Kathy Derge of my staff at (814) 359-5186 if you have any additional concerns regarding this response. Thank you for your cooperation and attention to this matter of threatened and endangered species conservation.

Sincerely.

Christopher A. Urban, Chief

Natural Diversity Section

KLD/ma

cc:

B. Dershem, USFWS

Our Mission:

www.fish.state.pa.us



## Pennsylvania Natural Diversity Inventory

Scientific Information and expertise for the conservation of Pennsylvania's native biological diversity

DCNR, Bureau of Forestry

March 4, 2005

Karen Johnston Skelly and Loy 2601 North Front Street Harrisburg, PA 17110

Re:

Pennsylvania Natural Diversity Inventory Review, PER NO: 17301

Mount Airy Lodge Improvement Project

Paradise Twp, Monroe County

#### Dear Ms. Johnston:

In response to the request received January 20, 2005 to perform a PNDI Database Search of the above-mentioned project, we have reviewed the area using the Pennsylvania Natural Diversity Inventory (PNDI) information system.

PNDI records indicate that no occurrences of species of special concern are known to exist within the project area referenced above, therefore we do not anticipate any impact on endangered, threatened, or rare species at this location.

PNDI attempts to be a complete information resource on species of special concern located within the Commonwealth. However, it may not contain all location information for species within the jurisdiction of other agencies. Please contact the Fish and Boat Commission, the Game Commission and US Fish and Wildlife Service for more information on species within their purview.

PNDI is the environmental review function of the Pennsylvania Natural Heritage Program, and uses a site-specific information system that describes significant natural resources within the Commonwealth. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the Department of Conservation and Natural Resources, The Nature Conservancy and the Western Pennsylvania Conservancy. This response represents the most up-to-date summary of the PNDI data files and is good for one year. An absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations.

Feel free to phone our office if you have questions concerning this response or the PNDI system, and please refer to the P.E.R. Reference Number at the top of the letter in future correspondence concerning this project.

Sincerely,

Ellen M. Shultzabarger

**Environmental Review Specialist** 

P: 717-772-0258 F: 717-772-0271



## United States Department of the Interior

#### FISH AND WILDLIFE SERVICE

Pennsylvania Field Office 315 South Allen Street, Suite 322 State College, Pennsylvania 16801-4850

February 18, 2005

Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110-1185

Re: USFWS Project #20050380

Dear Ms. Johnston:

This responds to your letter of January 19, 2005, requesting information about federally listed and proposed endangered and threatened species within the area affected by the proposed Mount Airy Lodge Improvements Project located in Paradise Township, Monroe County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

The proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

To determine the potential effects of the proposed project on bog turtles and their habitat, begin by identifying all wetlands in, and within 300 feet of, the project area. The project area includes all areas that will be permanently or temporarily affected by any and all project features, including building, roads, staging areas, utility lines, outfall and intake structures, wells, stormwater retention or detention basins, parking lots, driveways, lawns, etc. The area of investigation should be expanded when project effects might extend more than 300 feet from the project footprint. For example, the hydrological effects of some projects (e.g., large residential or commercial developments; golf courses; community water supply wells) might extend well beyond the project footprint due to the effects that impervious surfaces or groundwater pumping may have on the hydrology of nearby groundwater-dependent wetlands. Wetlands should be included on a map showing existing as well as proposed project features.



FEB 2 2 2005

If someone qualified to identify and delineate wetlands has, through a field investigation, determined that no wetlands are located in or within 300 feet of the project area (or within the expanded investigation area, as described above), it is not likely that your project will adversely affect the bog turtle. If this is the case, no further consultation with the Fish and Wildlife Service is necessary, although we would appreciate receiving a courtesy copy of the wetland investigator's findings for our files.

If wetlands have been identified in or within 300 feet of the project area (or in an expanded investigation area, as described above), their potential suitability as bog turtle habitat should be assessed, as described under "Bog Turtle Habitat Survey" (Phase 1 survey) of the enclosed Guidelines for Bog Turtle Surveys. A list of qualified bog turtle surveyors is enclosed, although the habitat survey could also be conducted by someone not on this list (e.g., a biologist or wetland scientist with training in bog turtle habitat identification). A Phase 1 field form and report template are enclosed for your convenience and use. Survey results should be submitted to the Service for review and concurrence.

If potential bog turtle habitat is found in or near the project area, efforts should be made to avoid any direct or indirect impacts to those wetlands (see enclosed *Bog Turtle Conservation Zones*). Avoidance of direct and indirect effects means no disturbance to or encroachment into the wetlands (e.g., filling, ditching or draining) for any project-associated features or activities. Adverse effects may also be anticipated to occur when lot lines include portions of the wetland; when an adequate upland buffer is not retained around the wetland (see *Bog Turtle Conservation Zones*); or when roads, stormwater/sedimentation basins, impervious surfaces, or wells affect the hydrology of the wetland.

We recommend that if potential habitat is found, you submit (along with your Phase 1 survey results) a detailed project description and detailed project plans documenting how direct and indirect impacts to the wetlands will be avoided. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey should be done, as described under "Bog Turtle Survey" (Phase 2 survey) of the Guidelines. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors), and survey results should be submitted to the Service for review and concurrence.

In cases where adverse effects to federally listed species cannot be avoided, further consultation with the Service would be necessary to avoid potential violations of section 9 (prohibiting "take" of listed species) and/or section 7 (requiring federal agencies to consult) of the Endangered Species Act. Information about the section 7 and section 10 consultation processes (for federal and non-federal actions, respectively) can be obtained by contacting this office or accessing the Service's Endangered Species Home Page (http://endangered.fws.gov).

This response relates only to endangered and threatened species under our jurisdiction based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Jennifer Dombroskie of my staff at 814-234-4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

David Densmore

Supervisor

**Enclosures** 



www.fish.state.pa.us



established 1866

## Pennsylvania Fish & Boat Commission

JAN 2 8 2005

Division of Environmental Services Natural Diversity Section 450 Robinson Lane Bellefonte, PA 16823-9620 (814) 359-5237 Fax: (814) 359-5175

January 25, 2005

IN REPLY REFER TO SIR # 18068

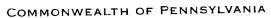
Our Mission:

SKELLY AND LOY KAREN JOHNSTON 2601 N FRONT STREET HARRISBURG, PA 17110-1185

RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species MOUNT AIRY LODGE IMPROVEMENT PROJECT PARADISE Township/Borough, MONROE County, Pennsylvania

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code. The absence of recorded information from our files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A Species Impact Review is valid for one year only.

#### NO ADVERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation regarding rare species is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern. If you have any questions regarding this review, please contact the biologist indicated below: J.R. Holtsmaster 814-359-5194 Jeff Schmid 814-359-5236 Kathy Derge 814-359-5186 I am enclosing a copy of our "SIR Request Form", which is to be used for all future species impact review requests. Please make copies of the attached form and use with all future project reviews. Thank you in advance for your cooperation and attention to this important matter of species conservation and habitat protection. DATE: January 25, 2005 SIGNATURE: Christopher A. Urban Chief, Natural Diversity Section





## PENNSYLVANIA GAME COMMISSION

2001 ELMERTON AVENUE, HARRISBURG, PA 17110-9797

February 16, 2005

Ms. Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110

Re: Mount Airy Lodge Improvement Project

456-Acre Site

Paradise Township, Monroe County, PA

Dear Ms. Johnston:

This is in response to your letter dated January 19, 2005, requesting information concerning endangered and threatened species of birds and mammals and impacts to State Game Lands as related to the proposed project.

Our office review has determined that no state listed endangered or threatened species of birds or mammals are known to occur within the proposed project area. Except for occasional transient individuals, this project should not impact any endangered or threatened species of birds or mammals recognized by the Pennsylvania Game Commission. Also, no State Game Lands are located close enough that any impacts to them are anticipated by the proposed project. However, should project plans change or if additional information on endangered or threatened species or State Game Lands becomes available, this determination may be reconsidered.

The proposed project may impact wetlands which this agency considers as critical and unique habitat. You should be aware that any impacts to wetlands or other bodies of water will require permits from the Department of Environmental Protection under Chapter 105 and the U.S Army Corps of Engineers under Section 404 of the Clean Water Act.

-2-

If you have any questions, please contact me at (717) 783-5957.

Very truly yours, Largery

Yames R. Leigey

Wildlife Impact Review Coordinator Division of Environmental Planning

And Habitat Protection

Bureau of Land Management

JRL/pfb

Attachment

Cc:

File

Schweitzer Zindell

## APPENDIX F -PHASE I BOG TURTLE HABITAT ASSESSMENT REPORT

## MOUNT AIRY LODGE PROJECT PARADISE TOWNSHIP MONROE COUNTY, PENNSYLVANIA

# BOG TURTLE (Clemmys muhlenbergii) PHASE I HABITAT ASSESSMENT REPORT

PREPARED FOR

MOUNT AIRY NO. 1, LLC AND CECO ASSOCIATES, INC.

PREPARED BY

SKELLY AND LOY, INC.
ENGINEERING-ENVIRONMENTAL CONSULTANTS

**JUNE 2005** 

# MOUNT AIRY LODGE PROJECT PARADISE TOWNSHIP MONROE COUNTY, PENNSYLVANIA

## BOG TURTLE (Clemmys muhlenbergii) PHASE I HABITAT ASSESSMENT REPORT

#### PREPARED FOR

MOUNT AIRY NO. 1, LLC
42 WOODLAND ROAD
MOUNT POCONO, PENNSYLVANIA 18344
AND
CECO ASSOCIATES, INC.
SUITE 200, SCRANTON ELECTRIC BUILDING
SCRANTON, PENNSYLVANIA 18501

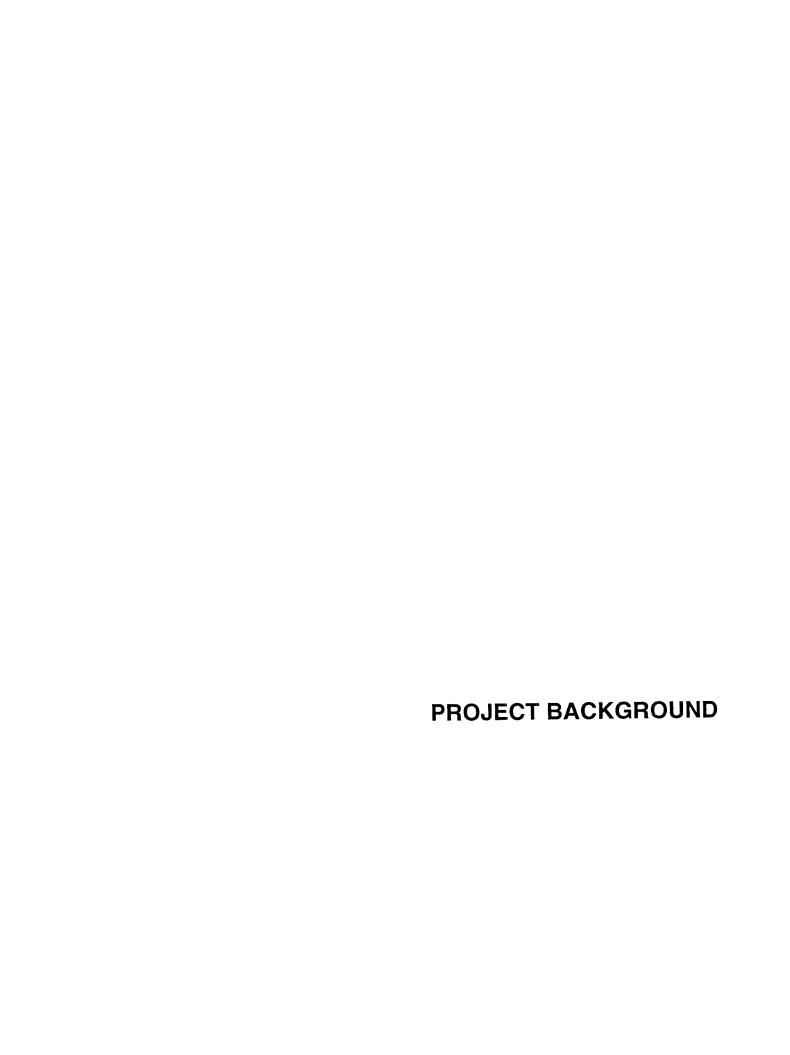
#### PREPARED BY

SKELLY AND LOY, INC.
ENGINEERING-ENVIRONMENTAL CONSULTANTS
2601 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA 17110

**JUNE 17, 2005** 

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#### PROJECT BACKGROUND

Mount Airy No. 1, LLC is proposing to demolish the existing Mount Airy Lodge main building complex and, in its place, construct a seven-story hotel and casino. The roadway (S.R. 1013, Woodland Road) leading from S.R. 0611 to the new hotel and casino will also be improved. The proposed project is located approximately 30 miles southeast of Scranton, near the town of Mount Pocono in Paradise Township, Monroe County. Also, the proposed project is located in both the Forest Hills Run and the Indian Run Creek Watersheds. The existing land use in and adjacent to the project study area includes golf course, lawn areas, forest, wetlands, ponds/lakes, macadam roads and parking lots, commercial buildings, resort property, and single-family residences.

The engineering and environmental studies completed to date for the project included agency coordination with the Pennsylvania Department of Conservation and Natural Resources' (DCNR) Pennsylvania Natural Diversity Inventory (PNDI), Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), and the United States Fish and Wildlife Service (USFWS) in an effort to achieve project clearance for threatened and endangered species. As such, the PFBC and USFWS indicated that the project (because it is in Monroe County) is located within the extant range of the northern population of the bog turtle (Clemmys muhlenbergii). The northern population of the species is formally listed as threatened under the Federal Endangered Species Act and endangered under the Pennsylvania Fish and Boat Code. Both agencies requested a Phase I bog turtle habitat survey be completed to determine if the potential habitat occurs within the proposed project area and a 300-foot buffer zone around that area.

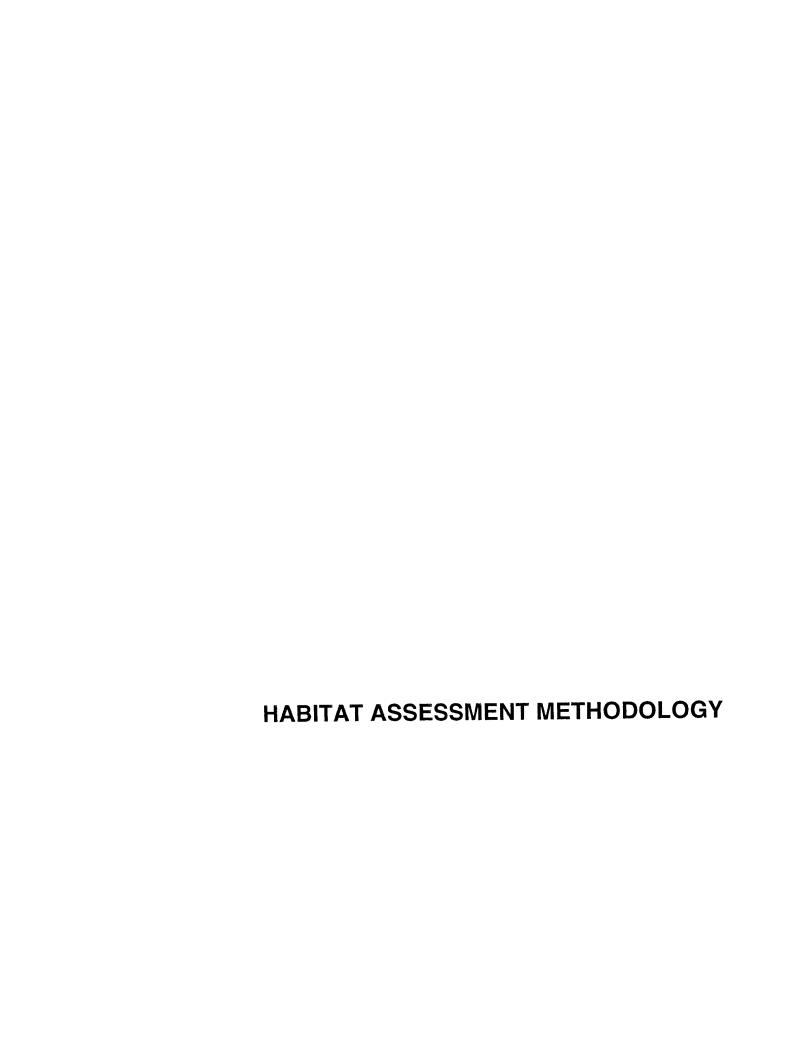
Bog turtles typically inhabit emergent wetland in meadows and pastures with a persistent source of groundwater springs and seeps which induce the development of thick, organic, mucky soil conditions. Potential habitat for the species is typically recognized by the presence of three criteria: suitable hydrology, suitable soil conditions, and suitable vegetative characteristics. Suitable hydrology, soils, and vegetation are necessary to provide critical thermoregulation and wintering sites for hibernation (soft muck, peat, burrows, root systems of woody vegetation), escape cover from predators, and nesting habitats (open areas with tussock-forming vegetation) for this species. It is important to note that one or more of these criteria may be absent from portions of a wetland supporting bog turtles. The species has also been documented in some locations to become acclimated to disturbed wetland complexes with semi-closed forest

canopies. Bog turtles have been observed to be transients in forested habitat associated with springs and small streams leading to more open marshes. These forested habitat areas may be utilized as dispersal corridors to other wetlands.

The Mount Airy Lodge Project is proposed within an 891-acre property owned by Mount Airy No. 1, LLC. The development project area encompasses approximately 50 acres, and the mapping in Appendix A demarcates the limits of disturbance associated with the proposed demolition/construction, and the improvements to Woodland Road and its intersection with S.R. 0611. The Area of Potential Effects (APE, see mapping in Appendix A) consists of a buffer area created around the development project area in order to account for secondary or incidental impacts (utilizing an approximate 300-foot buffer). This Phase I Habitat Assessment covered all wetlands and watercourses within the APE (184-acres).

The Mount Airy Lodge project as currently proposed will require the filing of a Pennsylvania Department of Environmental Protection (PA DEP)/U.S. Army Corps of Engineers (USACE) Joint Permit Application for authorization for the crossing/filling of jurisdictional wetlands and watercourses within the 184-acre APE. Impacts proposed for this project will be relatively minimal. The proposed activities discussed in the Joint Permit Application will impact wetland habitat in one of the 15 Pennsylvania counties which support extant populations of the bog turtle. These activities require the proposed project to be screened for potential impacts to species habitat prior to the issuance of a Joint Permit. In response to this requirement, a Phase I species habitat assessment was conducted to determine the presence/absence of conditions suitable for species support. All of the wetlands and watercourses located within the 184-acre APE were evaluated. This report provides the findings of the Phase I species habitat assessment conducted on these wetland and watercourse areas.

The environmental studies conducted for the project involved the completion of the wetland delineation investigation, which was performed by Skelly and Loy in April 2005. There are 21 wetlands and 6 watercourse channels located within the development project area and APE. Wetland delineation data forms for these wetlands are provided in Appendix E. All of these areas were assessed in the Phase I habitat survey. The entire area of each of these wetlands was evaluated. The wetlands and channels are located within the drainage basins of Forest Hills Run and Indian Run Creek.



#### HABITAT ASSESSMENT METHODOLOGY

Skelly and Loy conducted a Phase I bog turtle habitat assessment of wetland and watercourse habitats located in the 184-acre APE associated with the Mount Airy Lodge project on April 12 and May 11, 2005. Initial evaluations of all delineated wetlands were also made during the April wetland delineation investigation. The habitat assessment was conducted by Mr. Ben Berra, a USFWS/PFBC-Recognized Qualified Bog Turtle Surveyor. Conditions during the April 12 survey were mild (50-60 degrees Fahrenheit), clear (< 5% cloud cover), approximately 40% humidity, with a 1 mph average wind speed. During the May 11 survey, conditions were warm (65-80 degrees Fahrenheit), with minimal cloud cover (15%), 50% humidity, and 1 mph average wind speed. The habitat assessment was conducted using the *Guidelines for Bog Turtle Surveys*, *Bog Turtle Northern Population Recovery Plan, May 15, 2001*. Three criteria were assessed along the project alignment for the potential occurrence of the species.

- 1) <u>Suitable Hydrology</u> typically spring-fed with shallow surface water or saturated soils present year-round, although in summer the wet area(s) may be restricted to near spring head(s)
- 2) <u>Suitable Soils</u> a bottom substrate of at least three inches of soft muck, although in summers of dry years mucky soils may be limited to near spring head(s)
- 3) <u>Suitable Vegetation</u> dominant vegetation of low grasses, sedges, and forbs (emergent wetland), often with a scrub-shrub component, or possibly adjacent forested groundwater seeps

Additional information evaluated relevant to species habitat included the physical condition and disturbance of the wetland habitat, potential disturbances resulting from the proposed project, and metapopulation concepts.

Metapopulations are defined as collections of populations that exist within a landscape matrix and are separated by areas of different or unsuitable habitat. In order for these populations to persist, an exchange of individuals must occur within the metapopulation. This exchange occurs by using travel corridors as links between the discrete populations. Knowledge of bog turtle movement patterns and utilization of diverse habitat types is still limited within the scientific community. However, wetland habitats dispersed throughout riparian stream corridors may provide travel corridors that facilitate movement within metapopulations between patches of

unfavorable habitat. The Standardized Bog Turtle Site-Quality Analysis (Klemens, 1993) defines metapopulation concepts for the species by the following factors:

- no major impediments to turtle movements between populations (impediments are defined as conditions which significantly reduce the chance of successful movement between wetland sites, such as steeply graded streams, roads with inadequate crossing design, dams, and large water-courses over third order);
- continuous corridor of stream/wetland habitat connecting populations; and
- individual populations that are separated by no more than one mile of unfragmented stream habitat.

In recognition of this concept, an evaluation of watercourses and riparian corridors associated with the identified wetland areas was completed. Additionally, a limited cursory habitat assessment was undertaken for any adjacent wetlands beyond the 184-acre APE.

MOUNT AIRY LODGE PROJECT HABITAT EVALUATION

#### MOUNT AIRY LODGE PROJECT HABITAT EVALUATION

Wetland/watercourse habitats associated with the Mount Airy Lodge project are located throughout the 184-acre APE. Wetland delineation data forms (Appendix E) and Bog Turtle Habitat Evaluation Field Forms (Appendix B), along with color photographs (Appendix C), are included to accurately depict the characteristics of each evaluated wetland. In general, these wetlands did not possess the requisite hydrology, soils, or vegetation to be considered bog turtle habitat.

During the wetland delineation and Phase I investigation, mucky soils, suitable hydrology (spring-fed, rivulets, subsurface flow, etc.), and suitable vegetation were not observed in any of the wetlands with the exception of Wetland 4 and 33. Also, the wetlands that were delineated outside of the APE on the 891-acre Mount Airy No. 1, LLC property were briefly evaluated during their delineation. No potential bog turtle habitats were identified during this brief evaluation either. Appendices B, C, and E provide additional specific data for each wetland and justification for concluding that the wetlands were not bog turtle habitat.

Wetland 4 is a man-made pond with a groundwater seep drainage pattern hydrologic contribution at its upper end. The "seep" actually originates from a pipe (a drain tile) and then flows via a drainage pattern/ditch into the pond. The fringe of the pond is vegetated with emergent vegetation and so is the drainage pattern. Also, a shallow portion of the pond has "mucky" soils that are in excess of six inches deep. The deeper water portions of the pond contain a soft (mucky) substrate as well. Although this man-made pond/seep area wetland does contain mucky soils, these were not considered to be suitable for bog turtle habitat given their location in a man-made pond. Likewise, the spring hydrology appears to originate from a drain tile and does not develop the typical characteristics of hydrology suitable for the species. Also, the emergent vegetation observed in the drainage pattern (connecting the drain tile outlet to the pond) and around the pond was not considered suitable vegetation when coupled with the inadequate hydrology and pond habitat.

Wetland 33 also contained characteristics typical of bog turtle habitat, specifically the hydrology criterion. The hydrology in portions of Wetland 33 is associated with springs/seeps and does appear to have a perennial hydrologic regime. The soils in Wetland 33 are mostly saturated and inundated, but the majority of the wetland does not contain mucky soils. The mucky soils (three to five inches) that are located in a small, limited area have more characteristics of substrate (associated with a channel) than characteristics of soil. Also, the mucky soils areas,

like the rest of the wetland, were underlain with impenetrable rock. The other factor that contributed to the opinion that Wetland 33 was not potential bog turtle habitat was the fact that it is a forested wetland with no true, separate emergent components. The dense canopy and mature trees present in this wetland strongly contribute to the exclusion of Wetland 33 as potential bog turtle habitat. Also contributing to this opinion is the fact that Wetland 33 is located in a headwater position and there are no additional wetlands located above this system, in particular, no potential bog turtle wetlands above or adjacent to this system.

The watercourse habitats within the Mount Airy Lodge APE were also evaluated. These watercourses included Channel 1, 4, 21, 22, 23, and 30. With the exception of Channel 21 and 30, all of these channels appear to have perennial flow regimes. Channel 21 is an ephemeral channel, and Channel 30 is intermittent. These channels within the APE do not contain sufficient hydrological, vegetative, or soil characteristics to be considered suitable bog turtle habitat. Likewise, these channels are not associated with wetlands, within the confines of the Mount Airy No. 1, LLC property, that are suitable bog turtle habitat. These channels were therefore not considered travel corridors for the species.

CONCLUSION

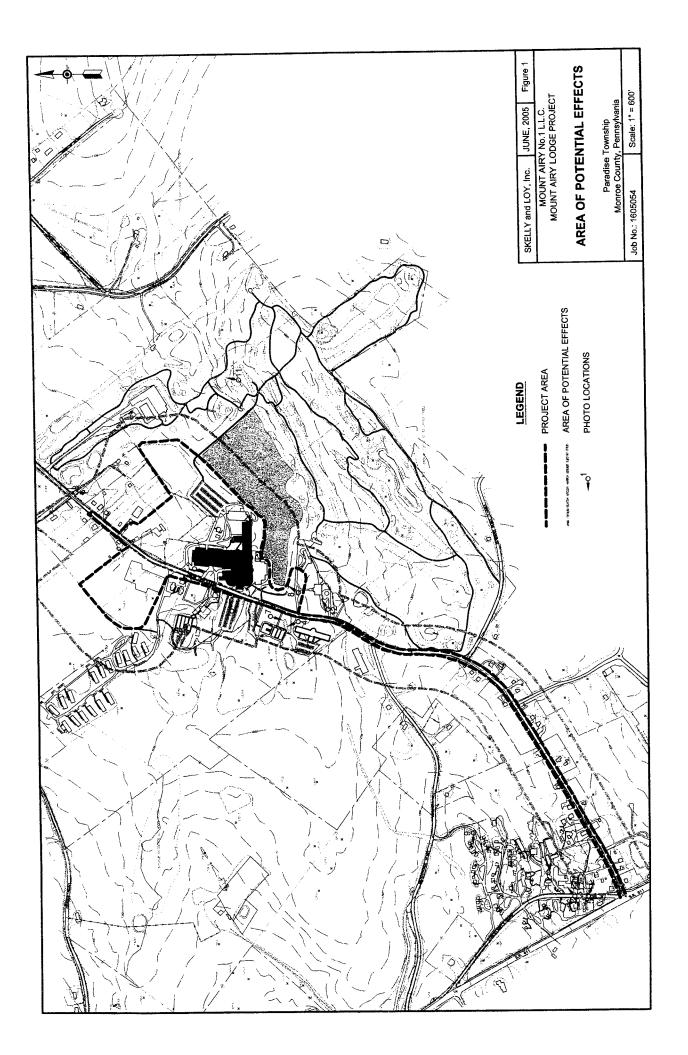
#### CONCLUSION

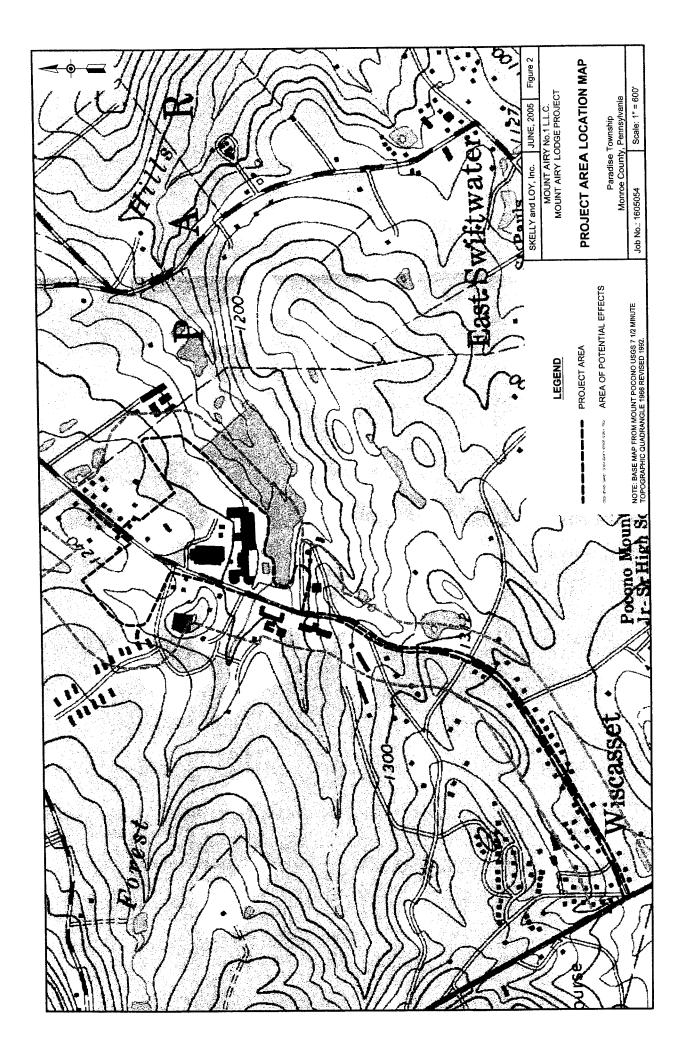
The Mount Airy Lodge project has an APE that is approximately 184-acre and is located in Paradise Township, Monroe County. A total of 21 palustrine wetlands, along with 6 water-courses, are located within the APE for the project. All of these wetlands and watercourses were evaluated for this Phase I Habitat Evaluation.

Based on observations made during the wetland delineation (April 2005) and during the April and May 2005 Phase I Habitat Evaluation, it is Skelly and Loy's assessment that potential species habitat for the bog turtle is not present on the subject property. During the wetland delineation and Phase I investigation, mucky soils, suitable hydrology (spring-fed, rivulets, subsurface flow, etc.), and suitable vegetation were not observed in any of the wetlands with the exception of Wetlands 4 and 33. Wetlands 4 and 33 were also dismissed (for the various reasons discussed in the previous sections) as suitable habitat primarily because Wetland 4 is mostly a man-made pond and Wetland 33 is a forested complex. Also, the wetlands that were delineated outside of the APE on the 891-acre Mount Airy No. 1, LLC property were, following a brief evaluation, considered to not be suitable habitat for the species as well. The channels and adjacent corridors also did not appear to possess or connect to bog turtle habitat. During the habitat evaluation no bog turtles were observed, and limited other herptiles (green frogs/bullfrogs) were observed.

**APPENDICES** 

APPENDIX A - PROJECT/PHOTOGRAPH LOCATION MAPPING





APPENDIX B -BOG TURTLE HABITAT EVALUATION FIELD FORMS

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono & Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly & Loy - Consultant WETLAND ID: WL: PHOTOS TAKEN: DYes No WETLAND SIZE: O.OZ acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square$ < 0.1 acre $\square$ 0.1-0.5 acre $\square$ >0.5 to <1 acre $\square$ 1-2 acres $\square$ 2-4 acres $\square$ 5+ acres $\square$ 10+ acres Lat 41° 06.983 Long 75° 19.417 GPS Datum (check one): NAD 27 NAD 83 WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: $\frac{4/12/05}{\text{Air temp. } 50}$ Time In: 10:00 Time Out: 10:20 Air temp. 10:00 °F. Last precipitation: 1<24 hours 10:20 Time Out: 10:20 Unknown Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? ≠ none of it – the entire wetland is within the property boundaries (skip next 2 questions). some of it - \_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least \_\_\_\_ acres) none of it Are there any adjacent wetlands located off-site? YES YNO Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): torest and athletic fields WETLAND CHARACTERISTICS Wetland type(s) present and % cover: YPEM 100 = PSS = PFO = POW = POW = POW $XY \subseteq N$ Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe adjacent Mowed athletic field <u>Hydrology</u> Springs or seeps <u>visible</u> or <u>likely</u>? Watercress present? <u>Yes</u> No Spring houses in or adjacent to wetland? Saturated soils present? If yes, year-round? Likely Unlikely Unknown Water visible on surface? Check all that apply: X small puddles/depressions (5" deep)

\_\_ rivulets (\_\_\_" deep) \_\_ larger pools/ponds (\_\_\_" deep)

Evidence of flooding? If yes, describe indicators

 $\equiv Y \chi_N$ 

Project Name	Mt. A	Jry		Wetland We- (con't)
Soils Mapping U Field observation	nit: Mort s confirm mapped	type? I YES	NO <b>X</b> Unknow	n
Soils - PEM Po	rtion of Wetland			
Mucky/Muddy¹? □ YES 🔀 NO	How much of it (P) = <10% = 10-2 = 50-70% = >70	EM) is <b>mucky</b> ?	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ? XYES INO	How much of it (P. 2 <10% 210-2 250-70% 2>70	29% <del>= 30-4</del> 9%	?	
Soils - PSS and	d/or PFO Portion	s of Wetland Gf	wetland is 100% PEO and	l/or PSS, omit this section)
Mucky/Muddy¹? □ YES □ NO	How much of it is $3 < 10\%$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 20$ $3 < 10 < 10$ $3 < 10 < 10$ $3 < 10 < 10$ $3 < 10 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < 10$ $3 < $	mucky? 29%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog to	urtles observed?	∃ YES⁴ <b>X</b> NO	If yes how many?	s species, wool grass
Additional Cor Wetlaw ditch	nments/Observat	ions: (use addition to be adjacent to		y) a man-made  created to promot  draina
TYES XNOTYES XNOTYES XNOTYES XNOTYES	UNSURE UNSURE UNSURE UNSURE UNSURE	The soils criteri The vegetation This wetland is	potential bog turtle ha	itat is met. e habitat is metMosfly spars abitat.
Field Investi	the best of my know	owledge, all of the	information provided	herein is accurate and complete
1 6-11	gater 3 Signature		•	Date*

Soils are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ".

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours. See attached "BOG TURTLE HABITAT CRITERIA"

## USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: W↓- 2 PHOTOS TAKEN: ☐ Yes ¥No WETLAND SIZE: O.O4 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres WETLAND LOCATION: Lat 41° 06.950′ Long 75° 19.467′ (approximate center of wetland) GPS Datum (check one): NAD 27 NAD 83 © WGS 84 **SURVEY CONDITIONS & LIMITATIONS** Date of survey: $\frac{4/12/05}{\text{O}}$ Time In: 10:22 Time Out: 10:39Air temp. 51 ° F. Last precipitation: 1<24 hours 11-7 days 1>1 week 12 unknown Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? mone of it - the entire wetland is within the property boundaries (skip next 2 questions) some of it - \_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? □ all of it □ part of it (at least \_\_\_\_ acres) □ none of it Are there any adjacent wetlands located off-site? YES YNO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): forest & athletic field WETLAND CHARACTERISTICS Wetland type(s) present and % cover: X PEM 100 = PSS = PFO = POW = POW XY IN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Ditch at toe of Hillside XY IN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe historical clearing + Mowing Springs or seeps visible or X likely? Watercress present? I Yes X No Hydrology XYIN IY XN Spring houses in or adjacent to wetland? $\Sigma Y \subseteq N$ Saturated soils present? If yes, year-round? I Likely I Unlikely Unknown XYIN Water visible on surface? Check all that apply: \( \subseteq \text{small puddles/depressions } \( (\frac{1}{2}\) deep) \)

= rivulets (\_\_\_" deep) = larger pools/ponds (\_\_\_" deep)

Evidence of flooding? If yes, describe indicators

I Y X N

Project Name	Mt. A		Wetland $WL-2$ (con't)	
Soils Mapping U	nit: _ Mor	ris (Mo	B)	
field observations	s confirm mapped	type? TYES	NO <b>X</b> Unknow	n
Soils - PEM Po	ortion of Wetland	1		
Mucky/Muddy <sup>1</sup> ?	How much of it (I	PEM) is <b>mucky</b> ?	Mucky soils range in depth from:	Most of the mucky part(s) of
□ YES X NO	= 50-70% = 10. = 50-70% =>7	-29%	to"	the wetland can be probed <sup>2</sup> : $\square 3-5" \square 6-8" \square 9-11" \subseteq \ge 12"$
Firm/Hard <sup>3</sup> ?	Į	PEM) is <b>firm/hard</b> ?		233 200 23-11 2212
XYES INO	□ <10% □ 10 □ 50-70% □>7	-29% = 30.49% 0% (100%)		
Soils - PSS and	Vor PFO Portion	ns of Wetland (if w	etland is 100% DEO	l/or PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?		s mucky?	Mucky soils range	Most of the mucky part(s) of
☐ YES ☐ NO	□ <10% □10-	29% 🗆 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
U I LO U INO	□ 50-70% □>7		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog tu	artles observed?	□ YES⁴ <b>X</b> 'NO I	f yes, how many?	
Additional Con-	mments/Observa	The hydrology cr The soils criterion The vegetation cr This wetland is p	ping hillside  the hill (  iterion <sup>5</sup> for bog turtle  n <sup>5</sup> for bog turtle habiterion <sup>5</sup> for bog turtle  otential bog turtle hab	the seep hydrologous Subsurface is the habitat is met. the habitat is met. the habitat is met. The habitat is met. The seep hydrologous substates the habitat is met.
I certify that to	the best of my kn	owledge, all of the i	nformation provided	herein is accurate and complete
Meta Investi	gater's Signature		/	Date
1 Soile	• • • • • • • • • • • • • • • • • •			

Soils are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ".

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

111 1:00

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: WL-3 PHOTOS TAKEN: DYes No WETLAND SIZE: 0.06 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square$ < 0.1 acre $\square$ 0.1-0.5 acre $\square$ >0.5 to <1 acre $\square$ 1-2 acres $\square$ 2-4 acres $\square$ 5+ acres $\square$ 10+ acres Lat 41° 06.917′ Long 75° 19.483 GPS Datum (check one): □ NAD 27 XNAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: 4/12/05 Time In: 10:45 Time Out: 11:05 Air temp. 51 °F. Last precipitation: 1<24 hours 1>1 week 1 unknown Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? **∠** none of it – the entire wetland is within the property boundaries (skip next 2 questions). □ some of it – acres or \_\_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? □ none of it □ all of it □ part of it (\_\_\_\_\_% or \_\_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? □ all of it □ part of it (at least \_\_\_\_ acres) □ none of it Are there any adjacent wetlands located off-site? YES YNO Unknown If yes, could they be potential bog turtle habitat? ☐ YES ☐ NO ☐ Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): forest + athletic fields WETLAND CHARACTERISTICS

wettand type(	s) present and % cover: X PEM <u>100</u> = PSS = PFO = POW
YY IN Andescribe	re there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes,
$\triangle Y = N A$	re there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes,
describe	Jeasonal Mowing
	9
Hydrology	
$\equiv Y \times N$	Springs or seeps $\square$ visible or $\square$ likely? Watercress present? $\square$ Yes $\nearrow$ No
I Y X N	Spring houses in or adjacent to wetland?
XY IN	Saturated soils present? If yes, year-round?   Likely   Unlikely   Unknown
XYIN	Water visible on surface? Check all that apply: X small puddles/depressions (Z "deep)
	_ rivulets (" deep) _ larger pools/ponds (" deep)
$\exists Y X N$	Evidence of flooding? If yes, describe indicators

<sup>o</sup> roject Name	Mt. A	iry		Wetland WL·3 (con't)
Soils Manning I	nit: Mor	ois (M		
ield observation	s confirm mapped	d type? 🗀 YES	S E NO <b>X</b> Unknow	n
Soils - PEM Po	ortion of Wetland	d		
Mucky/Muddy¹?  ☐ YES ※NO	How much of it (1 = <10% = 10 = 50-70% = >7	-29% = 30-49%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> : $\square$ 3-5" $\square$ 6-8" $\square$ 9-11" $\square$ $\ge$ 12"
Firm/Hard <sup>3</sup> ? XYES 🗆 NO	1	PEM) is <b>firm/har</b> 1-29% = 30-49% 10% (100%		2 3-3 2 0-6 2 3-11 2 212
Soils – PSS and	d/or PFO Portion	ns of Wetland	if wetland is 100% PFO and	Mar DCC amit this section)
Mucky/Muddy¹? □ YES □ NO	How much of it i	s mucky? -29%  ② 30-49%	Mucky soils range	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
⊠ sedges ⊠ru □ sensitive fern □ alder □ dog	shes 🗆 skunk ca 🗇 rice cutgrass wood 🗇 red mag	bbage ≯cattail □ tearthumb □ ble □ willow □	l reed canary grass 🔲	elweed $\square$ sphagnum moss  Phragmites $\square$ purple loosestrife  iflora rose $\square$
Were any bog to	urtles observed?  Observed Op	☐ YES⁴ <b>X</b> NO previously observ	If yes, how many? red: <b>NoNE</b>	
System a bon	that is the low are OR'S OPINION  UNSURE  UNSURE  UNSURE  UNSURE  UNSURE	Season ally nostly fuelo La adjacen The hydrolog The soils crite The vegetatio	ed by surfacew	adow-like field-like cater Collection in ic fields,  e habitat is met. itat is met. le habitat is met.
I certify that to		nowledge, all of t		herein is accurate and complete //2/05 Date

Soils are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ".

2 Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

4 Report observations of bog turtles to the USFWS and PFBC within 48 hours.

5 See attached "BOG TURTLE HABITAT CRITERIA"

### USFWS/PFBC Bog Turtle Habitat Evaluation - Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe County: Monroe Quad: Mount Pocono & Buck Hill Falls Township/Municipality: Paradise Tup. Investigator: Ben Berra Affiliation: Skelly & Loy - Consultant WETLAND ID: WL-4 PHOTOS TAKEN: ☐ Yes XNo WETLAND SIZE: O.09 acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat 41° 06.883 Long 75°19.500 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: $\frac{4/12/05}{\text{Air temp. } 52}$ °F. Last precipitation: $\square < 24 \text{ hours } 1-7 \text{ days } \square > 1 \text{ week } \square \text{ unknown}$ Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? ≥ none of it – the entire wetland is within the property boundaries (skip next 2 questions) □ some of it - \_\_\_\_\_ acres or \_\_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? □ none of it □ all of it □ part of it (\_\_\_\_\_% or \_\_\_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? $\Box$ all of it $\Box$ part of it (at least \_\_\_\_ acres) $\Box$ none of it Are there any adjacent wetlands located off-site? TYES YNO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Macadan road, grass fields (Mowed) WETLAND CHARACTERISTICS Wetland type(s) present and % cover: XPEM 30 = PSS = PFO PFO POW 70 $XY \subseteq N$ Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe drain tile outlets into ditch portion of wetland, Pond XY = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Seasonal mowing Hydrology drain tile outlet Created XYIN Springs or seeps X visible or I likely? Watercress present? I Yes X No $\exists Y \not X N$ Spring houses in or adjacent to wetland?

Saturated soils present? If yes, year-round? \( \sum\_{\text{Likely}} \) \( \sum\_{\text{Unlikely}} \) \( \sum\_{\text{Unknown}} \)

→X rivulets (2" deep) X larger pools/ponds (20" deep)

Evidence of flooding? If yes, describe indicators\_

Water visible on surface? Check all that apply: 

small puddles/depressions (\_\_\_" deep)

 $XY \supseteq N$ 

 $\mathbb{Z} \mathbb{A} \subseteq \mathbb{N}$ 

Ditch \_\_\_\_

roject Name	Mt. A	)ry		Wetland $\underline{WL-4}$ (con't)
oils Mapping U	nit: Mor	ris (Mo	B)	
eld observations	confirm mapped	type? 🖸 YES	NO <b>X</b> Unknown	1
oils – <b>MANA</b> Po	rtion of Wetland	PEM /	POW	
	How much of it (P		Mucky soils range	Most of the mucky part(s) of
lucky/Muddy <sup>1</sup> ?	= <10% X10-3		in depth from:	the wetland can be probed <sup>2</sup> :
YES INO	= 50-70%		3 to <b>8</b> "	3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³?	How much of it (P	EM) is firm/hard?		7,00 200 2317 2212
YES D NO	□ <10% □ 10- □ 50-70% ★>70	29% = 30-49% 0%		
oils - PSS and	Nor PEO Partia	a of Wadland ()		
			Mucky soils range	/or PSS, omit this section)
Mucky/Muddy\?		•	in depth from:	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :
□ YES □ NO	□ <10% □ 10 □ 50-70% □>70	29% 🗀 30-49% 0%	to"	The wetland can be probed :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
alder U dog	wood 🛛 red map	le willow pour	oison sumac 🛚 mult	Phragmites  purple loosestrife
Were any bog to	urtles observed?  — observed. — p	☐ YES⁴ <b>X</b> NO reviously observed	If yes, how many? : NoNE	
Additional Co	mments/Observa	tions: (use additio	nal sheets if necessar	у)
INVESTIGAT	OR'S OPINION	90	riginates from c	drain tile t is ditched to p
YES XNO	UNSURE	The hideeless o	misomio militari bara il 1	1 1
TYES ≵NO TYES ₹NO				
TYES XNO		The <u>vegetation</u> of This wetland is	criterion for bog turtle har potential bog turtle har	le habitat is met.
I certify that to	the best of my kn	owledge, all of the	information provided	d herein is accurate and complete
	1//1		4	112/00
Field Invest	tigator's Signature			7 1 4 0 5
•				Date .
l Soils are	considered "mucky/r	nuddy" if one can prob	e them to a depth of $\geq 3$ ".	

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle). Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

## USFWS/PFBC Bog Turtle Habitat Evaluation - Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: W → 7 PHOTOS TAKEN: □ Yes YNo WETLAND SIZE: Q. Q3 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat <u>41°06.867</u> Long <u>75°19.533</u> GPS Datum (check one): □ NAD 27 NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: $\frac{4/12/05}{\text{Air temp. } 52}$ Time In: 1:25 Time Out: 1:50Air temp. 52 °F. Last precipitation: 1<24 hours 1:25 Time Out: 1:50Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? ≠ none of it – the entire wetland is within the property boundaries (skip next 2 questions). some of it - acres or \_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_\_ or \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least \_\_\_\_ acres) none of it Are there any adjacent wetlands located off-site? YES YNO Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): WETLAND CHARACTERISTICS Wetland type(s) present and % cover: XPEM 40 = PSS \_\_\_\_ XPFO 60 = POW \_\_\_\_ $\Sigma Y \subseteq N$ Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Upslope Roadway TYXN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Seasonals Hydrology Springs or seeps = visible or Vlikely? Watercress present? = Yes \( \times \) No $\times$ Y $\subseteq$ N IY XN Spring houses in or adjacent to wetland? ZY IN Saturated soils present? If yes, year-round? XLikely \( \subseteq \text{Unlikely} \) \( \subseteq \text{Unknown} \) Water visible on surface? Check all that apply: \( \Sigma \) small puddles/depressions (\( \frac{1-3}{3} \)" deep)

\_ rivulets (\_\_\_" deep) \_ larger pools/ponds (\_\_\_" deep)

Evidence of flooding? If yes, describe indicators <u>Sediment Deposits</u>,

debris lines

XY = N

Project Name	Mt. A	iry		Wetland $WL^{-7}$ (con't)
oils Mapping U	Init: Morres confurm mapped	is (Mo	B NO X Unknown	n
Soils - PEM Po	ortion of Wetland			
Mucky/Muddy¹?  ☐ YES XNO	How much of it (PF = <10% = 10-2 = 50-70% = >70	29% = 30-49%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³? XYES □ NO	How much of it (PI = 10.4 = 10	29% <del>Z 30-49</del> %	?	
Soils - PSS and	d/or PFO Portions	s of Wetland (if	wetland is 100% DEO and	/or PSS, omit this section)
Mucky/Muddy¹? □ YES 🕱 NO	1	mucky? 29% □ 30-49%	Mucky soils range in depth from: to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :
🗆 sensitive tem 🗓 alder 📋 dog	☐ rice cutgrass ☐ wood ※red maple	□ tearthumb □ r e □ willow □ 1	reed canary grass 🔲 I	elweed X sphagnum moss  Phragmites  purple loosestrife  iflora rose   L
Additional Con  Wetland  Chany  and oth	mments/Observations   S   locates   S   locates   S   locates   S   locates   S   S   S   S   S   S   S   S   S	ions: (use additional in fore experience of ware called growing)  The hydrology of The soils criteria regetation	oriterion for bog turtle	y)  no adjacent to  rees in it (PFO area  no trees were actua  itat. There is a dense cave  e habitat is met.—most hydro fra  itat is met.  e habitat is met.—Mostly A
				herein is accurate and complete  12/05
•		~		

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle). Soils are considered "firm/hard" if one can probe them to a depth of < 3".

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Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

OSF WS/FFDC BOg TUFUE Habitat Evaluation - Fleid Form (revised 1/12/2005)
Project/Property Name: Mt. Airy
Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise Two.
Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy-Consultant
WETLAND ID: W.13 PHOTOS TAKEN: Yes \( \text{No} \) WETLAND SIZE: \( \text{O.03} \) acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: \( \text{C} < 0.1 \) acre \( \text{D} \) 0.1-0.5 acre \( \text{D} < 0.5 \) to <1 acre \( \text{D} \) 1-2 acres \( \text{D} \) 2-4 acres \( \text{D} \) 5+ acres \( \text{D} \) 10+ acres
WETLAND LOCATION: Lat 41° 06.752 Long 75° 19.530′ (approximate center of wetland) GPS Datum (check one): INAD 27 NAD 83 I WGS 84
SURVEY CONDITIONS & LIMITATIONS
Date of survey: $5/11/05$ Time In: $9:50$ Time Out: $9:55$ Air temp. $66$ °F. Last precipitation: $3<24$ hours $3-7$ days $3>1$ week $3$ unknown Drought conditions? $3>1$ YES $3>0$ $3>1$ Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  hone of it – the entire wetland is within the property boundaries (skip next 2 questions)  some of it – acres or % of the wetland appears to be located off-site
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES NO  Unknown  If yes, could they be potential bog turtle habitat?  YES NO  Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Mowed lam area adjacent to driving range, floodplain
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: PEM (DO = PSS = PFO = POW = P
TY N Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe
TYN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe but adjacent area is mowed
Hydrology  TYXN Springs or seeps Tyisible or Tlikely? Watercress present? Tyes No  YNN Spring houses in or adjacent to wetland?  XYTN Saturated soils present? If yes, year-round? Thikely Tunknown  Water visible on surface? Check all that apply: Ysmall puddles/depressions (1" deep)  Trivulets (1" deep) Targer pools/ponds (1" deep)  Evidence of flooding? If yes, describe indicators Debris lines, Sediment deposits.

Project Name	Mt. Air	У		Wetland $M-13$ (con't)
oils Mapping U	nit: Philo sil	t loam		
field observation	s confirm mapped type?	I YES	NO <b>Unknow</b>	n
Soils - PEM Po	rtion of Wetland			
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is	mucky?	Mucky soils range	Most of the mucky part(s) of
□ YES XNO	I <10% I 10-29%	30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
- 120 X 110	<u>-</u> 50-70% <u>-</u> >70%		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³?	How much of it (PEM) is			
YES INO		100%		
Soils – PSS and	Vor PFO Portions of W	etland (if w	etland is 100% PFO and	/or PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky		Mucky soils range	Most of the mucky part(s) of
☐ YES ☐ NO		□ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70%		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
zadruonai domi	nant species: bed s	Traw,	grass, thist	iflora rose $\Box$
Herptiles Were any bog to Other herptiles	urtles observed? □ YES □ observed □ previous	⁴ <b>X</b> NO I ly observed:	f yes, how many?  NONE	
Additional Cor	nments/Observations:	(use addition	al sheets if necessar	v) .
Linga blayn	bench wetlar	nd syste	m with back	water channel
Compone	nt that con	tains s	stagnant inv	ndation
INVESTIGAT	OR'S OPINION			
TYES XNO	1	<u>hydrology</u> cr	iterion <sup>5</sup> for bog turtle	e habitat is met.
IYES XNO IYES XYNO		soils criterio	n <sup>5</sup> for bog turtle habi	tat is met.
I YES XNO	= 41.001(25 110)	wetland is n	iterion <sup>5</sup> for bog turtl otential bog turtle ha	e habitat is met.
///				herein is accurate and comple
1 Soils are	considered "mucky/muddy" if	f one can probe	them to a depth of $\geq 3$ ".	

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

### USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: WL-14 PHOTOS TAKEN: Yes | No WETLAND SIZE: 0.02 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat 41° 06.751′ Long 75° 19. 517′ GPS Datum (check one): □ NAD 27 × NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: 5/11/05 Time In: 9:38 Time Out: 9:47 Air temp. 66 ° F. Last precipitation: 3 < 24 hours 1 < 7 to 3 < 1 week 3 < 1 unknown Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? None of it – the entire wetland is within the property boundaries (skip next 2 questions). some of it - acres or \_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it □ part of it (at least \_\_\_\_ acres) □ none of it Are there any adjacent wetlands located off-site? YES YNO Unknown If yes, could they be potential bog turtle habitat? ☐ YES ☐ NO ☐ Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Floodplain of Forest Hills Run, Mowed lawn, Parking lot WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM 100 = PSS = PFO = POW = P TY XN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe. TYN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe <u>Hydrology</u> Springs or seeps \( \text{\text{visible}} \) or \( \text{\text{likely}} \)? Watercress present? \( \text{\text{Yes}} \) No Y N Y I N I Y N Spring houses in or adjacent to wetland? Saturated soils present? If yes, year-round? Likely Unlikely Unknown Water visible on surface? Check all that apply: \_\_ small puddles/depressions (\_\_\_" deep)

= rivulets (\_\_\_" deep) = larger pools/ponds (\_\_" deep)

Evidence of flooding? If yes, describe indicators 5 ed. deposits, debris lines

roject Name	Mt. Airy		Wetland WL-14(con't)
oils Mapping U	nit: Philo silt La	 DOI <b>M</b>	
ield observation	s confirm mapped type? ZYES	□ NO XUnknow	n
Soils DEM D	-Ai	-	
Sous - PEW Po	rtion of Wetland	N/ 1 ''	
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is <b>mucky</b> ?	Mucky soils range	Most of the mucky part(s) of
□ YES 🖈 NO	□ <10% □ 10-29% □ 30-49% □ 50-70% □>70%	in depth from:	the wetland can be probed <sup>2</sup> :
		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
Firm/Hard³?	How much of it (PEM) is firm/hard? $\Box < 10\%$ $\Box 10-29\%$ $\Box 30-49\%$	·	
YES D NO	= 50-70% =>70% (100%)		
C 1 755			
Soils - PSS and	Nor PFO Portions of Wetland (if	wetland is 100% PFO and	l/or PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky?	Mucky soils range	Most of the mucky part(s) of
☐ YES ☐ NO	□ <10% □10-29% □ 30-49% □ 50.70% □ 57.70%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
Herptiles Were any bog tı	ortles observed? 🗆 YES <sup>4</sup> 💆 NO	If yes how many?	
Other herptiles	observed previously observed	1: <u>\\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \</u>	
Additional Cor Flood plain Seep/sp	nments/Observations: (use addition bench welland sy hydrology. Hydr	onal sheets if necessar stem with r	y) no evidence of p be seasonal floo
INVESTIGAT	OR'S OPINION	•	
TYES XNC	UNSURE The hydrology	criterion <sup>5</sup> for bog turtle	e habitat is met.
I YES XNO	UNSURE The soils criteri	on5 for bog turtle habi	itat is met.
TYES KNO		criterion <sup>5</sup> for bog turtl	e habitat is met.
\	This worlding is	potential bog turtle ha	
I certify that to	the best of my knowledge, all of the	information provided	herein is accurate and comple
-		5	111/05
Field Investi	igator's Signature		Date
			• • • • • • • • • • • • • • • • • • • •

Soils are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ".

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

5 See attached "BOG TURTLE HABITAT CRITERIA"

USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005)
Project/Property Name: Mt. Ary County: Monroe Quad: Mount Pocono + Buck Hill Falls
County: Monroe Quad: Mount Pocono + Rick Hill Falls
Township/Municipality: Paradise Township
Township/Municipality: Paradise Township Investigator: Ben Benra Affiliation: Skelly + Loy-Consultant
WETLAND ID: <u>WL-15</u> PHOTOS TAKEN: Yes □ No WETLAND SIZE: <u>Q.Q.Q.</u> acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: □ < 0.1 acre □ 0.1-0.5 acre □ >0.5 to <1 acre □ 1-2 acres □ 2-4 acres □ 5+ acres □ 10+ acres
WETLAND LOCATION: Lat $\frac{41^{\circ} 06.763'}{\text{GPS Datum (check one):}} = \frac{75^{\circ} 19.493'}{\text{ENAD 83}} = 1000000000000000000000000000000000000$
SURVEY CONDITIONS & LIMITATIONS
Date of survey: $5/11/05$ Time In: $9!05$ Time Out: $9!13$ Air temp. $65$ °F. Last precipitation: $\square < 24$ hours $1-7$ days $\square > 1$ week $\square$ unknown Drought conditions? $\square$ YES $1$ YES $1$ YES $1$ Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  I none of it – the entire wetland is within the property boundaries (skip next 2 questions) some of it – acres or % of the wetland appears to be located off-site
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ all of it □ part of it (% or acres of the off-site portion)
How much of the <i>off-site portion</i> of this wetland is visible (e.g., from the subject property or from a public road)? $\Box$ all of it $\Box$ part of it (at least acres) $\Box$ none of it
Are there any <i>adjacent</i> wetlands located <i>off-site</i> ?   If yes, <i>could</i> they be potential bog turtle habitat?   YES NO  Unknown Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Mowed 91055 Open Space Parkey In t
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: YEM 100 = PSS = PFO = POW = POW = POW
TYXN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe
XY = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe
Springs or seeps = visible or X likely? Watercress present?   Yes X No

Project Name	M	, /	lry		Wetland $M-15$ (con't)
Soils Mapping U Field observation	Init: PL	ر <mark>مان</mark> apped t	ilt logm ype? = YES	□ NO <b>∦</b> Unknow	n
Soils - PEM Po	ortion of W	etland			
Mucky/Muddy¹?  ☐ YES XNO		of it (PE	M) is <b>mucky</b> ? 9% = 30-49%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³?  ▼YES □ NO	□ <10%	□10-29	EM) is <b>firm/hard</b> ?		
Soils - PSS and	d/or PFO P	ortions	of Wetland (if w	vetland is 100% PEO and	d/or PSS, omit this section)
Mucky/Muddy¹? ☐ YES ☐ NO	How much	of it is n  □10-29	nucky? 9% □ 30-49%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
Check (X) if pre  ✓ sedges 🗶 rus  □ sensitive ferm  □ alder □ dog	sent (≥ 5% a shes □ skur □ rice cutg wood □ rec	areal co nk cabb rass	age 🗆 cattail 🗈 tearthumb 🗀 re	circle if dominant (≥  sweet flag □ jewered canary grass □ i	≥ 20% coverage).  elweed □ sphagnum moss  Phragmites □ purple loosestrife  iflora rose □
Additional Con	□ observed	□ pre servatio	viously observed:  ons: (use addition	If yes, how many?  NONE  nal sheets if necessar  ort adjacent	y) to parking lot.
INVESTIGAT  YES XNO YES XNO YES XNO YES XNO	OR'S OPINO UNSI UNSI UNSI UNSI UNSI	NION JRE JRE JRE JRE	The <u>hydrology</u> con The <u>soils</u> criterion The <u>vegetation</u> con This wetland is p	riterion <sup>5</sup> for bog turtle n <sup>5</sup> for bog turtle habi riterion <sup>5</sup> for bog turtl potential bog turtle ha	e habitat is met. Throughout entire
Field Investi	igator's Sign	nature ucky/muc	ddy" if one can probe	them to a depth of > 3"	/11/05 Date
3 Soils are 4 Report of	considered "fill oservations of "	rm/hard" bog turtle	if one can probe then	PFBC within 48 hours	ooden broom handle).

## USFWS/PFBC Bog Turtle Habitat Evaluation - Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy Quad: Mount Pocono + Buck Hill Falls County: Monroe Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy-Consultant WETLAND ID: WL-3 | PHOTOS TAKEN: Yes | No WETLAND SIZE: 0.17 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat 41° 06.080′ Long 75° 20.037′ GPS Datum (check one): □ NAD 27 × NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS 05 Time In: 11:44 Time Out: 1 ° F. Last precipitation: $\square$ < 24 hours 2 - 7 days $\square$ > 1 week $\square$ unknown Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? ✓ none of it – the entire wetland is within the property boundaries (skip next 2 questions). some of it - \_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? □ all of it □ part of it (at least \_\_\_\_ acres) □ none of it Are there any adjacent wetlands located off-site? YES NO Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Adjacent to Route 6/1 in semi-forested area w/cleared vacant WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM \_\_\_ PSS \_\_ PFO 100 \_ POW \_\_\_ describe <u>Hvdrology</u> IY XN Springs or seeps <u>visible</u> or <u>likely</u>? Watercress present? <u>Yes</u> No Spring houses in or adjacent to wetland?

Saturated soils present? If yes, year-round? 

Likely 

Unlikely 

Unknown Water visible on surface? Check all that apply: \_\_ small puddles/depressions (\_\_\_\_" deep) = rivulets (\_\_\_" deep) = larger pools/ponds (\_\_\_" deep) ΞΥ**≼**Ν Evidence of flooding? If yes, describe indicators\_\_\_

roject Name	Mt. Airy		Wetland WL-31 (con't)
	nit: Wellsboro		
	s confirm mapped type?   YES	NO <b>Z</b> Unknow	n
Soils - PEM Po	ortion of Wetland		
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
□ YES □ NO	□ <10% □ 10-29% □ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
Firm/Hard <sup>3</sup> ?	How much of it (PEM) is <b>firm/hard</b> ?  = <10% = 10-29% = 30-49%		
□ YES □ NO	10%		
			· ·
Soils – PSS and	or PFO Portions of Wetland (if w	etland is 100% PFO and	d/or PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky?	Mucky soils range	Most of the mucky part(s) of
□ YES NO	□ <10% □10-29% □ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
•	inant species: 91055, W		
<u>Herptiles</u>		•	
Were any bog n	urtles observed? ☐ YES4 XNO I	f yes, how many?	
odici nerpules	☐ observed ☐ previously observed:	NONE	
Additional Cor	mments/Observations: (use addition	al sheets if necessar	y) .
3 easonal	ly saturated PFO We	Hand Compl	ex with primary
Wide are	ainage pattern/Low ar	ea with sed	7
INVESTIGAT	OR'S OPINION		leaves.
□ YES ZNO □ YES ZNO	= 01:001cm The <u>mydrology</u> Cl	iterion <sup>5</sup> for bog turtl	e habitat is met.
IYES ≯NO IYES <b>≯</b> NO	UNSURE The soils criterio	n° for bog turtle hab	itat is met.
E YES XNO	The Topetation C	riterion <sup>5</sup> for bog turtl otential bog turtle ha	le nabitat is met.
*			
I certify that to	the best of my knowledge, all of the i	nformation provided	l hereign is accyrate and comple
	1/1/1/10		-/11/05
Field Invest	igator's Signature		Date
			Date
1 Soils are	Considered "mucha/muddy" if and any	-t	

are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ".

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle). Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA" 2

#### USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: WL-32 PHOTOS TAKEN: XYes \( \text{No} \) WETLAND SIZE: \( \lambda \frac{39}{9} \) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat 41° 06.127 Long 75° 20.018° GPS Datum (check one): NAD 27 NAD 83 WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS 5/11/05 Time In: 1:55 Time Out: 17:05 °F. Last precipitation: $\square < 24$ hours $\nearrow 1-7$ days $\square > 1$ week $\square$ unknown Air temp. 75 Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? none of it – the entire wetland is within the property boundaries (skip next 2 questions). Some of it – \_\_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it (\_\_\_\_\_% or \_\_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? Vall of it = part of it (at least \_\_\_\_ acres) = none of it Are there any adjacent wetlands located off-site? XYES INO II Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Wooded area, Route 61, Vacant lots WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM \_\_\_ PSS \_\_ XPFO 40 YPOW 60 Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Pond C. reated in what was likely a PFO Y XN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe POW/PFO areas are located on Channel-22 Hydrology — Springs or seeps $\equiv \underline{\text{visible}}$ or $\equiv \underline{\text{likely}}$ ? Watercress present? $\equiv \underline{\text{Yes}} \equiv \underline{\text{No}}$ $Y \times N$ $= Y \times N$ Spring houses in or adjacent to wetland? XY IN Saturated soils present? If yes, year-round? Likely Unlikely Unknown Water visible on surface? Check all that apply: small puddles/depressions (\_\_\_" deep) ∃Y**⋌**N Evidence of flooding? If yes, describe indicators\_\_\_\_

Project Name	Mt. Airy		Wetland WL37con't)
Soils Mapping U	nit: Wellsboro		
field observation	s confirm mapped type? $\supseteq$ YES	□ NO <b>Unknow</b>	n
Soils DELED	DAM.		
Sons — Po	ortion of Wetland	Musley soils rozza	
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is mucky?	Mucky soils range in depth from:	Most of the mucky part(s) of
□ YES NO	□ <10% □ 10-29% □ 30-49% □ 50-70% □>70%	to"	the wetland can be probed <sup>2</sup> : $\square 3-5" \square 6-8" \square 9-11" \subseteq \ge 12"$
Firm/Hard <sup>3</sup> ?	How much of it (PEM) is firm/hard?		
XYES INO	□ <10% □10-29% <del>□ 30-49%</del> □ 50-70% □>70% <b>□ 00%</b>		
C. 3 PCC		<u> </u>	,
30115 - PSS and	d/or PFO Portions of Wetland (if	wetland is 100% PFO and	d/or PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?		Mucky soils range	Most of the mucky part(s) of
□ YES X NO	☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	in depth from: to"	the wetland can be probed <sup>2</sup> :
	2 30-10% 2>10%		□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles	inant species: White fine		,
Other herptiles	urtles observed? ☐ YES4 X NO  considerated ☐ previously observed	If yes, how many?	frogs
	mments/Observations: (use addition	onal sheets if necessar	ry)
INVESTIGAT	COR'S OPINION		
YES Z'NO	UNSURE The hydrology of	criterion <sup>5</sup> for bog turtl	
TYES XNO	- or or or or or or or or or or or or or	on <sup>5</sup> for bog turtle hab	itat is met.
TYES XNO		criterion <sup>5</sup> for bog turt potential bog turtle h	le habitat is met. abitat.
I certify that to	the best of my knowledge, all of the	information provided	d hereign is accurate and comple
	///////////////////////////////////////	5	111/05
Field Invest	tigator's Signature		Date
. 1 0-11			•

Soils are considered "mucky/muddy" if one can probe them to a depth of  $\geq 3$ ". Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle). 3

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

Project Name .	$\mathcal{M}^{\dagger}$	Airy		Wetland $\sqrt{1-33}$ (con't)
oils Mapping U	nit: Wells	boro		
eld observation	s confirm mapped	I type? $\Box$ YES	NO X Unknowi	n
oils – PEM Po	rtion of Wetland	1		
Aucky/Muddy <sup>1</sup> ?	How much of it (F	PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
□ YES □ NO		-29% = 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³?	t ·	PEM) is firm/hard?		
YES ONO	☐ <10% ☐ 10· ☐ 50-70% ☐>7	-29%		
$\rightarrow N$	Nucky Areas	underlain	v/rock-Mor	elike Soft Sediment.
oils – PSS and	Vor PFO Portion	ns of Wetland (if w	etland is 100% PFO and	for PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is	s mucky?	Mucky soils range	Most of the mucky part(s) of
YES INO	<b>X</b> <10% □10-	29% 🗆 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70	U% 	3 to <u>5</u> "	<b>≱</b> 3-5" ☐ 6-8" □ 9-11" □ ≥12"
				iflora rose []  K, High bush  blue berry
Herptiles Were any bog to	umlos observedo	mayme4 Avior i		
Other herptiles	Sobserved Sobserved	☐ YES <sup>4</sup> <b>X</b> NO I	1 yes, how many? $\frac{VONE}{}$	
		**	•	
Inis PFO	nments/Observa	tions: (use addition	nal sheets if necessar	y)
VI DEUXIM	ITY TO SPEAK	itsprings. 7 hi	t threeted ha	sited areas, especially adwaters to channel
Contains <1	"MUCKY"	JOILS MY LUCK IN	dernath also	there is not an open
			Cann	oied emergent can
YES ZNO		The <u>hydrology</u> cr	iterion <sup>5</sup> for bog turtle	pied emergent Componer habitat is met. to this We
YES XNC YES XNC		The soils criterio	n' for bog turtle habi	tat is met.
YES Z'NO		This wetland is n	nterion for bog turtle	e habitat is met - Forest
- 1LO X 140	ONSURE	This wetland is p	otential bog turtle ha	bitat.
certify that to	the best of my kn	owledge, all of the i	nformation provided	herein is accurate and complete
	1/11	7 10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- / /
Field Invest	igator's Signature	all-	5	611/05
	-Cor o Dignature			Date /
1 Soils are	considered "mucky/r	muddy" if one can probe	them to a depth of $\geq 3$ ".	

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle). Soils are considered "firm/hard" if one can probe them to a depth of < 3".

4 Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

### USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: WL 37 PHOTOS TAKEN: Yes | No WETLAND SIZE: O.O. acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acre $\square 0.1$ -0.5 acre $\square > 0.5$ to < 1 acre $\square 1$ -2 acres $\square 2$ -4 acres $\square 5$ + acres $\square 10$ + acres Lat <u>U/° 06.669</u> Long <u>75° 19.495</u> GPS Datum (check one): □ NAD 27 NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: 5/11/05 Time In: 11:19 Time Out: 1:31 Air temp. 74 °F. Last precipitation: 3<24 hours 3<24 Time Out: 3<24 Last precipitation: 3<24 hours 3<24 Last precipitation: 3<24 hours 3<24 Last precipitation: 3<24 hours 3<24 hours 3<24 Last precipitation: 3<24 hours 3<24 hours 3<24 Last precipitation: 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours 3<24 hours Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? I none of it - the entire wetland is within the property boundaries (skip next 2 questions) ☐ some of it – \_\_\_\_\_ acres or \_\_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ % or \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it □ part of it (at least \_\_\_\_ acres) □ none of it Are there any adjacent wetlands located off-site? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Floodplain of Channel 23 + Mowed Lawn area WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM OD = PSS = PFO = POW = POW = POW XY IN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Drain tile outlet into we tland. Y N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Draintile Pipe > Hydro for WL-37 is mostly associated to Hydrology/ Springs or seeps Dvisible or I likely? Watercress present? Tyes No in adj. XY IN ZY ZN Spring houses in or adjacent to wetland? Saturated soils present? If yes, year-round? ZLikely Unlikely Unknown Water visible on surface? Check all that apply: **X** small puddles/depressions (**0.5**" deep) rivulets (1.5" deep) = larger pools/ponds (\_\_" deep)

Evidence of flooding? If yes, describe indicators Sed. deposits, drift lines

	MIT	Airy		Wetland $VL-37$ (con't)
Soils Mapping U	nit: PL	ilo		
Field observations	confirm mapp	ped type? I YES	NO <b>X</b> Unknown	n
Soils - PEM Po	rtion of Wetla	nd		
Mucky/Muddy <sup>1</sup> ?	How much of it	t (PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
¥YES □ NO	<b>X</b> <10%	10-29% = 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
ATES ENO	□ 50-70% □:	>70%	3 to 5 "	<b>¾</b> 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ?		t (PEM) is firm/hard?		
XYES ONO	□ <10% □ □ 50-70% <b>&gt;</b>	10-29% = 30-49% \$70% <b>( 95%)</b>		
Soils - PSS and	Vor PEO Port	ions of Watland (is		/or PSS, omit this section)
1	l		Mucky soils range	· · · · · · · · · · · · · · · · · · ·
Mucky/Muddy <sup>1</sup> ?		it is <b>mucky</b> ? 10-29% □ 30-49%	in depth from:	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :
☐ YES ☐ NO	□ 50-70% □:		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
□ anger □ gog/	vood 📙 red m	s i tearthumb	ed canary grass 🗇 I	Phragmites  purple loosestrife
Additional domi	nant species:	grass spe	Cies mult	iflora rose 🗆
Herptiles Were any bog to	nant species:	grass special yes ≤ NO 1 previously observed:	f ves. how many?	iflora rose 🗆
Herptiles Were any bog to Other herptiles  Additional Cor	ortles observed	YES <sup>4</sup> ≥NO I previously observed:  vations: (use addition triangle shape of the fanning of the	f yes, how many?  NONE  nal sheets if necessared in undated towards continueds	y) ed area originating reek see sketch
Herptiles Were any bog to Other herptiles  Additional Cor	nant species:  ortiles observed  observed  naments/Obser  Ly area is  ortile outle  OR'S OPINIC  UNSUR  UNSUR  UNSUR	PYES <sup>4</sup> NO I previously observed:  vations: (use addition triangle shape of the fanning of the fanning of the hydrology criterion of the soils criterion of the vegetation criterion of the vegetation criterion of the soils criterion of the vegetation criterion of the soils of the vegetation of the soils of the vegetation of the vegetation of the vegetation of the soils of the vegetation o	f yes, how many?  NONE  nal sheets if necessared in undate out towards continued of the plant of	ed area originating reek see sketch  n beach system  et habitat is met. Insufficient source tat is met. Limited/marginal e habitat is met.

#### USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt, Airv County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Township Investigator: Ben Berra Affiliation: Skelly thay-Consultant WETLAND ID: WI-45 PHOTOS TAKEN: Yes | No WETLAND SIZE: Q.04 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square$ < 0.1 acre $\square$ 0.1-0.5 acre $\square$ >0.5 to <1 acre $\square$ 1-2 acres $\square$ 2-4 acres $\square$ 5+ acres $\square$ 10+ acres Lat <u>4/° 06.760′</u> Long <u>75°/9.433′</u> GPS Datum (check one): □ NAD 27 X NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? Knone of it - the entire wetland is within the property boundaries (skip next 2 questions) Some of it - acres or \_\_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least \_\_\_\_ acres) none of it Are there any adjacent wetlands located off-site? YES XNO Unknown If yes, could they be potential bog turtle habitat? YES INO I Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Mowed Lawn, roadway, Parking Lat WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM \_\_\_\_\_ PES \_\_\_\_ PFO \_\_\_\_ POW \_\_\_\_ TY XN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe XY = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Mowed Hydrology Springs or seeps = visible or Xikely? Watercress present? = Yes No Y X/N Spring houses in or adjacent to wetland? XY IN XY IN Saturated soils present? If yes, year-round? Likely Unlikely Unknown Water visible on surface? Check all that apply: \(\sigma\)small puddles/depressions (\(\frac{1}{2}\)" deep) = rivulets (\_\_\_" deep) = larger pools/ponds (\_\_\_" deep) $- Y X_i N$ Evidence of flooding? If yes, describe indicators

	Mt. Ary		Wetland $\sqrt{L-45}(con't)$
oils Mapping U	Jnit: Philosilt 1	vam	
eld observation	ns confirm mapped type?   ZYES	□ NO <b>X</b> Unknowr	]
Soils - PEM P	ortion of Wetland		
Mucky/Muddy¹? □ YES <b>X</b> NO	How much of it (PEM) is <b>mucky</b> ?  = <10% = 10-29% = 30-49% = 50-70% =>70%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> : $\square$ 3-5" $\square$ 6-8" $\square$ 9-11" $\square$ $\ge$ 12"
Firm/Hard³? YES □ NO	How much of it (PEM) is <b>firm/hard?</b> = <10% = 10-29% = 30.49% = 50-70% = >70%   100%		233 200 2541 2212
Soils – PSS an	d/or PFO Portions of Wetland (if w	votland is 100% DEO and	/ DCC
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky?	Mucky soils range in depth from: to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
alder 🗀 dog	shes $\square$ skunk cabbage $\square$ cattail $\square$ rice cutgrass $\square$ tearthumb $\square$ regwood $\square$ red maple $\square$ willow $\square$ poinant species:	ed canary grass 🗀 I	Phragmites  purple loosestrife
	urtles observed? ☐ YES <sup>4</sup> NO I ☐ observed ☐ previously observed:	If yes, how many?	DNE
Additional Co			· · ·
Mow	mments/Observations: (use additioned Lawn on Res	ort prope	

# USFWS/PFBC Bog Turtle Habitat Evaluation - Field Form (revised 1/12/2005)

Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant  WETLAND ID: WL-55 PHOTOS TAKEN: Yes   No WETLAND SIZE: 0.03 acres	Project/Property Name: Mt. Airy
Investigator:   Rend   Step   Affiliation:   Skelly + Loy - Cansultant	County: Monroe Quad: Mount Pocono + Buck Hill Falls
WETLAND ID: WL-55 PHOTOS TAKEN: Yes \( \text{ No WETLAND SIZE: 0.03} \) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: \( \text{ < 0.1} \) acre \( \text{ = 0.1-0.5} \) acre \( \text{ = 0.5} \) to <   acre \( \text{ = 1-2} \) acres \( \text{ = 2-4} \) acres \( \text{ = 10+acres} \) \( \text{ = 10+acres} \) \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 2-4} \) acres \( \text{ = 2-4} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) Acres \(  = 10	Township/Municipality: Paradise wp.
WETLAND ID: WL-55 PHOTOS TAKEN: Yes \( \text{ No WETLAND SIZE: 0.03} \) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: \( \text{ < 0.1} \) acre \( \text{ = 0.1-0.5} \) acre \( \text{ = 0.5} \) to <   acre \( \text{ = 1-2} \) acres \( \text{ = 2-4} \) acres \( \text{ = 10+acres} \) \( \text{ = 10+acres} \) \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 2-4} \) acres \( \text{ = 2-4} \) acres \( \text{ = 10-10.5} \) acres \( \text{ = 10-10.5} \) Acres \(  = 10	Investigator: Ben Kerra Affiliation: Jkelly + Loy - Consultant
SURVEY CONDITIONS & LIMITATIONS  Date of survey: 5	WETLAND ID: $\sqrt{1.55}$ PHOTOS TAKEN: Yes $\square$ No WETLAND SIZE: $0.03$ acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acres $\square = 0.1-0.5$ acre $\square > 0.5$ to $< 1$ acres $\square = 1-2$ acres $\square = 2-4$ acres $\square = 5+$ acres $\square = 10+$ acres
Date of survey: 5	WETLAND LOCATION: Lat $\frac{9706.550}{\text{CPS Datum (check one):}} = \frac{7519.495}{\text{NAD 83}} = \frac{7509.495}{\text{WGS 84}}$
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?    none of it - the entire wetland is within the property boundaries (skip next 2 questions)   some of it - material acres or	SURVEY CONDITIONS & LIMITATIONS
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?    none of it - the entire wetland is within the property boundaries (skip next 2 questions)   some of it - material acres or	Date of survey: 5/11/05 Time In: 10:50 Time Out: 10:55
Some of it — the entire wetland is within the property boundaries (skip next 2 questions)	Air temp. 70° F. Last precipitation: □ < 24 hours 21-7 days □ > 1 week □ unknown Drought conditions? □ YES 2 NO □ Unknown
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?  all of it all of it part of it (at least acres) none of it  Are there any adjacent wetlands located off-site? YES NO Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown  Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Mowed laws of (rolf Course  WETLAND CHARACTERISTICS  Wetland type(s) present and % cover: YPEM LOO PSS PFO PPO POW  XY N Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Ditch Drainage Pattern connects WL-55 to lond-Y.  YY N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Mowed weed wacked  Hydrology  YY N Springs or eeps visible or X likely? Watercress present? Yes No Spring houses in or adjacent to wetland?  Saturated soils present? If yes, year-round? X Likely Unlikely Unknown Water visible on surface? Check all that apply: I small puddles/depressions ( "deep) I larger pools/ponds (_ "deep)  Trivulets (_ "deep) I larger pools/ponds (_ "deep)	none of it – the entire wetland is within the property boundaries (skip next 2 questions).
Are there any adjacent wetlands located off-site?  YES  NO  Unknown  If yes, could they be potential bog turtle habitat?  YES  NO  Unknown  Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Mowed	If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ all of it □ part of it (% or acres of the off-site portion)
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):    Mowed   Awn of (rolf Course	How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
WETLAND CHARACTERISTICS  Wetland type(s) present and % cover: XPEM \[ \begin{array}{ c c c c c c c c c c c c c c c c c c c	
Wetland type(s) present and % cover: XPEM \[ \begin{align*} DO \subseteq PSS  \text{PFO}  \text{PFO}  \text{POW}  \text{PFO}  \text{PFO}  \text{POW}  \text{PFO}  \text{PFO}  \text{PFO}  \text{POW}   \text{PFO}  \text{PFO}  \text{PFO}  \text{PFO}  \text{PFO}  \text{POW}  \text{PFO}  \text{PFO}  \text{PFO}  \text{PFO}  \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}   \text{PFO}    \text{PFO}    \text{PFO}  \qu	Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Mowed laws of Golf Course
Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe	WETLAND CHARACTERISTICS
Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe	Wetland type(s) present and % cover: YPEM 100 = PSS = PFO = POW =
Hydrology  Y I N  Springs or seeps I visible or X likely? Watercress present? I Yes No  Spring houses in or adjacent to wetland?  Y I N  Saturated soils present? If yes, year-round? X Likely I Unlikely I Unknown  Y N  Water visible on surface? Check all that apply: I small puddles/depressions (" deep)  I rivulets (" deep) I larger pools/ponds (" deep)	XY = N Are there any signs of disturbance to hydrology (ditching filling ponds roads etc.)? If yes
Springs or seeps _ visible or X likely? Watercress present? _ Yes X No  Spring houses in or adjacent to wetland?  Saturated soils present? If yes, year-round? X Likely _ Unlikely _ Unknown  Water visible on surface? Check all that apply: _ small puddles/depressions (" deep)  _ rivulets (" deep) larger pools/ponds (" deep)	describe Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe
	Hydrology  Y I N  Springs or seeps I visible or X likely? Watercress present? If Yes No  Spring houses in or adjacent to wetland?  Y I N  Saturated soils present? If yes, year-round? X Likely I Unknown  Water visible on surface? Check all that apply: I small puddles/depressions (" deep)  I rivulets (" deep) I larger pools/ponds (" deep)

roject Name	Mt. Airy		Wetland <u>WL-55</u> (con't)
oils Mapping United observations	nit: <u>Davaga - Lacka</u> s confirm mapped type? <u>TYES</u>	wanna E NO Xunknow	n
Soils - PEM Po	rtion of Wetland		
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
		in depth from:	the wetland can be probed <sup>2</sup> :
□ YES XNO	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ?	How much of it (PEM) is firm/hard?		
XYES INO	□ <10% □ 10-29% □ 30-49% □ 50-70% □>70% (100%)		
	2 30-10 10 2 210 10 (1887a)	1	
Soils - PSS and	Vor PFO Portions of Wetland (if w	etland is 100% PFO and	Vor PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?		Mucky soils range	Most of the mucky part(s) of
□ YES □ NO	□ <10% □10-29% □ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
- TES - NO	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog ti	urtles observed?   YES4 TO 1	If yes, how many?	
	nments/Observations: (use addition fed area on Golf Cou		
INVESTIGAT  YES YNC YES YNC YES YNC YES YNC	O = UNSURE The <u>soils</u> criterion c	riterion <sup>5</sup> for bog turtl on <sup>5</sup> for bog turtle hab riterion <sup>5</sup> for bog turtl potential bog turtle ha	le habitat is met.
	the best of my knowledge, all of the tigator's Signature	information provided	herein is accurate and complete
Frobing Soils are Report of	considered "mucky/muddy" if one can probe is done with an approximately 1" diameter, b considered "firm/hard" if one can probe then observations of bog turtles to the USFWS and ched "BOG TURTLE HABITAT CRITERIA	lunt-ended pole (e.g., a w n to a depth of < 3". PFBC within 48 hours	rooden broom handle).

# 

Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls
County: Ninroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise wp.
Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy-Consultant
WETLAND ID: $\sqrt{-7}$ PHOTOS TAKEN: Yes $\square$ No WETLAND SIZE: $0.08$ acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square < 0.1$ acres $\square 0.1-0.5$ acre $\square >0.5$ to $< 1$ acres $\square 1-2$ acres $\square 2-4$ acres $\square 5+$ acres $\square 10+$ acres
WETLAND LOCATION: Lat 41° 06.777′ Long 75° 19.053′ (approximate center of wetland) GPS Datum (check one): □ NAD 27 X NAD 83 □ WGS 84
SURVEY CONDITIONS & LIMITATIONS
Date of survey: 5/11/05 Time In: 10:25 Time Out: 10:32
Date of survey: 5 / 11 / 05 Time In: 10:25 Time Out: 0:32  Air temp. 70 ° F. Last precipitation: 0 < 24 hours 21-7 days 0 > 1 week 0 unknown  Drought conditions? 0 YES 2000 Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  In none of it — the entire wetland is within the property boundaries (skip next 2 questions).  I some of it — acres or % of the wetland appears to be located off-site.
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES YNO  Unknown  If yes, could they be potential bog turtle habitat?  YES  NO  Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):  Low Se Heldyndh toe of lake berm
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: YPEM OO = PSS = PFO = POW =
XY = N Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe hydro appears to be from seep at the toe of lake berm.  XY = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes,
Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe / weed wacked veg.
Hydrology  XY = N  Springs or seeps X visible or = likely? Watercress present? = Yes X No  Spring houses in or adjacent to wetland?  XY = N  Saturated soils present? If yes, year-round? X Likely = Unlikely = Unknown  Water visible on surface? Check all that apply: X small puddles/depressions (" deep)  invulets (" deep) = larger pools/ponds (" deep)  Evidence of flooding? If yes, describe indicators

Project Name	Mt. Airy		Wetland WL-7 (con't)
Soils Mapping U	nit: Braceville		
Field observation	s confirm mapped type?   ZYES	□ NO <b>X</b> Unknow	n
Soils - PEM Po	ortion of Wetland		
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
	= <10% = 10-29% = 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
□ YES XNO	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12'
Firm/Hard <sup>3</sup> ?	How much of it (PEM) is firm/hard?		
YES INO	□ <10% □10-29% <del>□ 30-49</del> %		
X 120 2 10	2 50-70% 2>70% (100%)		
Soils - PSS and	d/or PEO Portions of Watland (6)	1 1 100% PDO	
	d/or PFO Portions of Wetland (if	Mucky soils range	i
Mucky/Muddy <sup>1</sup> ?		in depth from:	Most of the mucky part(s) of
☐ YES ☐ NO	☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐>70%	<u>-</u>	the wetland can be probed <sup>2</sup> :
	2 30-70% 2>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Additional dom	wood $\square$ red maple $\square$ willow $\square$ pinant species: $\underline{\qquad}$	wn)	
Herptiles Were any bog to	urtles observed? ☐ YES <sup>4</sup> × NO ☐ observed ☐ previously observed	If yes, how many?	: .
	mments/Observations: (use additional of the control		y) t toe of
- + 4 1 5	berm.		
INVESTIGAT	TOR'S OPINION		
L YES XNO	O UNSURE The hydrology of	criterion <sup>5</sup> for bog turtl	e habitat is met.
TYES XNO	O I UNSURE The soils criteri	on <sup>5</sup> for bog turtle hab	itat is met.
TYES YNG	- 2 Oribords The Vegetation	criterion <sup>5</sup> for bog turtl	e habitat is met.
TYES X NO	O D UNSURE This wetland is	potential bog turtle ha	abitat.
I certify that to	the best of my knowledge, all of the	information provided	herein is accurate and comple
	//100-1	provide	
		5	/11/05
Field Invest	tigator's Signature		Date
1 Soile are	considered "		•
· Jons are	considered "mucky/muddy" if one can prob	be them to a depth of $\geq 3$ ".	

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Tup. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: W-73 PHOTOS TAKEN: Yes | No WETLAND SIZE: O.O. acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square$ < 0.1 acre $\square$ 0.1-0.5 acre $\square$ >0.5 to <1 acre $\square$ 1-2 acres $\square$ 2-4 acres $\square$ 5+ acres $\square$ 10+ acres Lat <u>41° 06.733′</u> Long <u>75° 19.469′</u> GPS Datum (check one): □ NAD 27 × NAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: 5/11/05 Time In: 9:26 Time Out: 9:35 Air temp. 66 ° F. Last precipitation: $\square < 24$ hours $\nearrow 1-7$ days $\square > 1$ week $\square$ unknown Drought conditions? $\square$ YES $\nearrow$ NO $\square$ Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? None of it - the entire wetland is within the property boundaries (skip next 2 questions). some of it - \_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? □ none of it □ all of it □ part of it (\_\_\_\_\_% or \_\_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least \_\_\_\_ acres) none of it Are there any adjacent wetlands located off-site? YES YNO Unknown If yes, could they be potential bog turtle habitat? YES NO Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Forest Hills Run floodplain, Mowed Lawn, Parking lot WETLAND CHARACTERISTICS Wetland type(s) present and % cover: PEM 100 = PSS = PFO = POW = POW TY XN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe \_\_ XY = N Are there any signs of disturbance to vegetation (moving, pasturing, burning, etc.)? If yes, describe Minor Moving on northern side - nearest parking lot Seasonal Springs or Seeps Visible or I likely? Watercress present? I Yes No **Hydrology** Spring houses in or adjacent to wetland? Saturated soils present? If yes, year-round? Likely Unlikely Unknown Water visible on surface? Check all that apply: small puddles/depressions (\_\_\_" deep) Zrivulets (<u>0.4</u>" deep) = larger pools/ponds (\_ " deep) Evidence of flooding? If yes, describe indicators Sediment deposits, debris lines

oject Name	Mt. A	riry	<del></del>	Wetland <u>WL-73</u> (con't)
oils Mapping U	nit: Philo 5 s confirm mapped typ	ilt logn be? = YES	<b>1</b> NO <b>X</b> Unknowi	n
	ortion of Wetland			
	How much of it (PEM	is mucky?	Mucky soils range	Most of the mucky part(s) of
Mucky/Muddy <sup>1</sup> ?	= <10% $= 10-29%$	•	in depth from:	the wetland can be probed <sup>2</sup> :
□ YES X NO	= 50-70% =>70%	2 30-4270	to'	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ?	How much of it (PEM	l) is <b>firm/hard</b> ?		
YES INO	☐ <10% ☐ 10-29% ☐ 50-70% ☐ >70%			
Soils – PSS and	Vor PFO Portions of	f Wetland (if w	retland is 100% PFO and	Nor PSS, omit this section)
		1	Mucky soils range	Most of the mucky part(s) of
Mucky/Muddy <sup>1</sup> ?	□ <10% □ 10-29%	- i	in depth from:	the wetland can be probed <sup>2</sup> :
□ YES □ NO	□ 50-70% □>70%	, 230 1,710	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Theck (X) if present sedges	ill rice cutgrass 📋 te	erage), and also ge	circle if dominant (≥ sweet flag ☐ jewe ed canary grass ☐ noison sumac ☐ mult	elweed
Check (X) if pre sedges rus sensitive fern alder dog Additional dom	sent (≥ 5% areal cove shes □ skunk cabbag □ rice cutgrass □ to wood □ red maple inant species:K_	erage), and also ge = cattail = carthumb = re = cattail = powered = g	circle if dominant (  sweet flag	elweed $\square$ sphagnum moss  Phragmites $\square$ purple loosestrife  iflora rose $\square$
Check (X) if prescriptions of sedges rust rust rust rust rust rust rust rus	sent (≥ 5% areal covershes □ skunk cabbag □ rice cutgrass □ to wood □ red maple inant species:	erage), and also ge = cattail = cattail = re earthumb = re earthumb = powered;  YES <sup>4</sup> > NO I iously observed:	circle if dominant (  sweet flag	elweed $\Box$ sphagnum moss  Phragmites $\Box$ purple loosestrife  iflora rose $\Box$
Check (X) if predictions of the control of the cont	sent (≥ 5% areal covershes □ skunk cabbag □ rice cutgrass □ to wood □ red maple inant species:	erage), and also  ge = cattail = re earthumb = re in willow = po in weed = g  YES4 > NO I  iously observed:	circle if dominant (  sweet flag	elweed
Check (X) if predictions of sedges rust rust rust rust rust rust rust rus	sent (≥ 5% areal covershes □ skunk cabbag □ rice cutgrass □ to wood □ red maple inant species:	erage), and also  ge = cattail = re earthumb = re in willow = po in weed = g  YES4 > NO I  iously observed:	circle if dominant (  sweet flag	elweed
Eheck (X) if present sedges rust sensitive ferm alder dog deditional dominates were any bog to their herptiles Additional Confidence of lain down slope	sent (≥ 5% areal coverses coverses coverses coverses covers cove	erage), and also  ge = cattail = re earthumb = re in willow = po in weed = g  YES4 > NO I  iously observed:	circle if dominant (  sweet flag	elweed
Eheck (X) if present the control of	sent (≥ 5% areal coverses cov	erage), and also  ge = cattail = earthumb = re willow = po of weed = g  YES <sup>4</sup> × NO I iously observed:  Ins: (use addition ind system  Type Inf. Sma	is sweet flag   jewered canary grass   led canary grass   led strains, bed strains   l	elweed sphagnum moss  Phragmites purple loosestrife  iflora rose   y)  creek post  sconnected to creek  via drainage pattern
Eheck (X) if present the control of	sent (≥ 5% areal coverses of skunk cabbage of skunk cabbage of rice cutgrass of the wood of red maple inant species:	erage), and also  ge = cattail = earthumb = re willow = po of weed = g  YES <sup>4</sup> > NO I iously observed:  Ins. (use addition and system  The hydrology cr	is sweet flag   jewer ed canary grass   multiple frass   bedstrager    If yes, how many?  If yes, how many?  If yes, how many?  If al sheets if necessar adjacent to the control of the co	elweed sphagnum moss  Phragmites purple loosestrife  iflora rose  y)  creek + just  s connected to creek  via drainage pattern  e habitat is met. Small seep, d
Sedges Trust sedges Trust sensitive ferm alder dog dditional dominated by the control of the con	sent (≥ 5% areal coverses coverses covers skunk cabbage covers c	erage), and also  ge = cattail = earthumb = re willow = po weed = g  YES <sup>4</sup> > NO I iously observed:  Is: (use addition and system The hydrology cr The soils criterio	is sweet flag   jewed canary grass   multiple of sumac   multiple	elweed sphagnum moss  Phragmites purple loosestrift  iflora rose  y)  creek + just  s connected to creek  via drainage pattern  e habitat is met. Small seep, d  itat is met.
Check (X) if predictions of the control of the cont	sent (≥ 5% areal covershes □ skunk cabbag □ rice cutgrass □ to wood □ red maple inant species: Κω  urtles observed? □ Y □ observed □ previous bewch We la e of park; COR'S OPINION □ UNSURE □ □ UNSURE □ □ UNSURE □ □ UNSURE □	erage), and also  ge = cattail = earthumb = re willow = po of weed = g  YES <sup>4</sup> × NO I iously observed:  Ins: (use addition ind system The hydrology cr The soils criterio The vegetation cr	is sweet flag   jewer ed canary grass   multiple frass   bedstrager    If yes, how many?  If yes, how many?  If yes, how many?  If al sheets if necessar adjacent to the control of the co	y)  Scenected to creek  via drainage pattern  e habitat is met.  le habitat is met.  Creek.
Eheck (X) if present the control of	sent (≥ 5% areal coverses coverses coverses covers	rage), and also  ge cattail carthumb cre earthumb cre willow cre willow color weed great and system  The hydrology cre The soils criterio The vegetation cre This wetland is present and system  The vegetation cre This wetland is present and system  The soils criterio	is sweet flag   jewed canary grass   multiple of canary grass   multiple of cass, bedstraged of cass, bedstraged of cass, bedstraged of cass   multiple of cass   mul	elweed sphagnum moss  Phragmites purple loosestrift  iflora rose  y)  creek + just  s connected to creek  via drainage pattern  e habitat is met.  clischange to  le habitat is met.  le habitat is met.  creek.
Eheck (X) if present the control of	sent (≥ 5% areal coverses coverses coverses covers	rage), and also  ge cattail carthumb cre earthumb cre willow cre willow color weed great and system  The hydrology cre The soils criterio The vegetation cre This wetland is present and system  The vegetation cre This wetland is present and system  The soils criterio	is sweet flag   jewed canary grass   multiple of canary grass   multiple of cass, bedstraged of cass, bedstraged of cass, bedstraged of cass   multiple of cass   mul	y)  Scenected to creek  via drainage pattern  e habitat is met.  le habitat is met.  Creek.
Eheck (X) if present the control of	sent (≥ 5% areal coverses coverses coverses covers	rage), and also  ge cattail carthumb cre earthumb cre willow cre willow color weed great and system  The hydrology cre The soils criterio The vegetation cre This wetland is present and system  The vegetation cre This wetland is present and system  The soils criterio	is sweet flag   jewed canary grass   multiple of canary grass   multiple of cass, bedstraged of cass, bedstraged of cass, bedstraged of cass   multiple of cass   mul	elweed sphagnum moss  Phragmites purple loosestrift  iflora rose  y)  creek + just  s connected to creek  via drainage pattern  e habitat is met.  clischange to  le habitat is met.  le habitat is met.  creek.

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

Report observations of bog turtles to the USFWS and PFBC within 48 hours.

See attached "BOG TURTLE HABITAT CRITERIA"

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005)

Project/Property Name: Mt. Airy  County: Monroe Quad: Mount Pocono + Buck Hill Falls  Township/Municipality: Paradise Twp.  Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant
County: Monroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise Twp.
Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant
WETLAND ID: Ord 4 PHOTOS TAKEN: XYes \( \text{No}\) WETLAND SIZE: \( \text{O.47}\) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: \( \text{C \cdot 0.1 acre } \text{D \cdot 0.1 \cdot 0.5 to \cdot 1 acre } \text{D \cdot 1-2 acres } \text{D \cdot 2-4 acres } \text{D \cdot 5+ acres } \text{D \cdot 10+ acres} \) WETLAND LOCATION: \( \text{Lat } \frac{\text{U'' \cdot 06.548'}}{\text{GPS \cdot Datum (check one):}} \text{Long } \frac{75^{\cdot 19.471'}}{\text{NAD \cdot 83}} \text{D \cdot WGS \cdot 84}
SUDVEY CONDITIONS & LIMITATIONS
Date of surroun $5/11/05$ The $11/18$ The $11/18$
Date of survey: 5/11/05 Time In: 11:08 Time Out: 11:13  Air temp. 7/ °F. Last precipitation: 0 < 24 hours 0 -7 days 0 > 1 week 0 unknown  Drought conditions? 0 YES NO 0 Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  none of it — the entire wetland is within the property boundaries (skip next 2 questions)  some of it — acres or % of the wetland appears to be located off-site
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ all of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES NO  Unknown  If yes, could they be potential bog turtle habitat?  YES  NO  Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: XPEM = PSS = PFO XPOW _96
Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe fond Created, Ditch (CHN-30) Conveying hydro from WL-55  Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe
Hydrology — Channel-30 (Ditch from WL-55) + Outlet Pipe from Ford 5  Y XN Springs or seeps <u>visible</u> or <u>likely</u> ? Watercress present? <u>Yes</u> X No  Spring houses in or adjacent to wetland?  Y IN Saturated soils present? If yes, year-round? X Likely <u>Unlikely</u> Unknown  Water visible on surface? Check all that apply: <u>small puddles/depressions</u> ( <u>"deep)</u> Trivulets ( <u>"deep)</u> X larger pools/ponds ( <u>50</u> " deep)  Evidence of flooding? If yes, describe indicators

roject Name	Mt. Airy		Weiland lond. 4 (con't)
oils Mapping U	nit: Morris		·
ield observations	s confirm mapped type? ZYES	□ NO <b>X</b> Unknow	n
Soils - PEM Po	ortion of Wetland POW		
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM) is mucky?	Mucky soils range	Most of the mucky part(s) of
-	□ <10% □ 10-29% □ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
□ YES <b>X</b> NO	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ?	How much of it (PEM) is firm/hard?		
XYES □ NO	5 < 10% 510-29% 530-49%		
	3 50-70% 3>70% (100%)	)	
Soils – PSS and	d/or PFO Portions of Wetland (if v	wetland is 100% PFO and	Vor PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky?	Mucky soils range	Most of the mucky part(s) of
□ YES □ NO	□ <10% □10-29% □ 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
U IES UNO	□ 50-70% □>70%	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog to Other herptiles	urtles observed? ☐ YES <sup>4</sup> XNO Xobserved ☐ previously observed	If yes, how many?	greenfrog
	mments/Observations: (use addition		-
			, ·
INVESTICATI	Onic oppycer		
TYES ZNO	OR'S OPINION  UNSURE The hydrology c	riterion <sup>5</sup> for bog turtle	a habitat ia mast
I YES XNO	- GIRBOIGE THE HYDROIDEY C	on <sup>5</sup> for bog turtle habi	tat is met
I YES XNO	UNSURE The yegetation c	eriterion <sup>5</sup> for bog turtl	e habitat is met.
I YES NO	UNSURE This wetland is p	potential bog turtle ha	bitat.
I certify that to	the best of my knowledge, all of the	information provided	homin is a survey and a survey
		mormation provided	nercan is accurate and complete
Field Invest	igator's Signature	5	Date / 05
<ul><li>Soils are</li><li>Probing i</li><li>Soils are</li><li>Report of</li></ul>	considered "mucky/muddy" if one can probe is done with an approximately 1" diameter, b considered "firm/hard" if one can probe ther bservations of bog turtles to the USFWS and hed "BOG TURTLE HABITAT CRITERIA	lunt-ended pole (e.g., a won to a depth of < 3".  PERC within 48 hours	•

#### USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005) Project/Property Name: Mt. Airy Mount Pocono + Buck Hill Falls County: Monroe Quad:\_\_ Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant WETLAND ID: Pond-5 PHOTOS TAKEN: Ves | No WETLAND SIZE: 0.24 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: $\square$ < 0.1 acre $\square$ 0.1-0.5 acre $\square$ >0.5 to <1 acre $\square$ 1-2 acres $\square$ 2-4 acres $\square$ 5+ acres $\square$ 10+ acres Lat 41° 06.530′ Long 75° 19.491′ GPS Datum (check one): □ NAD 27 XNAD 83 □ WGS 84 WETLAND LOCATION: (approximate center of wetland) SURVEY CONDITIONS & LIMITATIONS Date of survey: $\frac{5}{11/05}$ Time In: $\frac{10.58}{1.7}$ Time Out: $\frac{1.05}{1.7}$ Air temp. $\frac{70}{1.7}$ ° F. Last precipitation: $\frac{1}{1.7}$ cays $\frac{1}{1.7}$ days $\frac{1}{1.7}$ last precipitation: Drought conditions? YES NO Unknown How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)? none of it - the entire wetland is within the property boundaries (skip next 2 questions) some of it - \_\_\_\_ acres or \_\_\_\_ % of the wetland appears to be located off-site If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)? none of it all of it part of it \_\_\_ % or \_\_\_ acres of the off-site portion) How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least \_\_\_\_ acres) one of it Are there any adjacent wetlands located off-site? YES ZNO Unknown If yes, could they be potential bog turtle habitat? ☐ YES ☐ NO ☐ Unknown Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.): Golf Course - Mowed Lawn WETLAND CHARACTERISTICS Wetland type(s) present and % cover: YPEM \_\_\_\_ XPSS \_\_\_ PFO \_\_\_\_ YPOW 16 Y = N Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Pond Created + drain tile outfall at top of Pond. BY IN Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe Mowed along adj. bern + weed wacked PEM area. Drain File <u>Hydrology</u> Eprings or seeps X visible or $\square$ likely? Watercress present? $\square$ Yes X No \_ Y **X**Ν Spring houses in or adjacent to wetland? $\mathbf{Z} \mathbf{A} \subseteq \mathbf{N}$ Saturated soils present? If yes, year-round? **\times**Likely \( \subseteq \text{Unlikely} \) Unknown XY IN Water visible on surface? Check all that apply: \_\_ small puddles/depressions (\_\_\_ " deep)

 $\mathbf{Z}'$  rivulets (<u>I-6</u>" deep)  $\mathbf{Z}'$  larger pools/ponds (<u>50</u>" deep)

Evidence of flooding? If yes, describe indicators

 $\exists Y X N$ 

Project Name	Mt. A	iry		Wetlandlord-5 (con't)
	nit: Morri			
Field observation	s confirm mapped ty	pe? I YES	□ NO 🌂 Unknow	n
Soils - PEM Po	rtion of Wetland	POW		
Mucky/Muddy <sup>1</sup> ?	How much of it (PEM	<del>-</del>	Mucky soils range	Most of the mucky part(s) of
□ YES X NO	= <10% = 10-299 = 50-70% =>70%	% ≡ 30-49 <i>%</i>	in depth from:to"	the wetland can be probed <sup>2</sup> : $\Box$ 3-5" $\Box$ 6-8" $\Box$ 9-11" $\Box$ $\geq$ 12
Firm/Hard <sup>3</sup> ?	How much of it (PEN	1) is firm/hard?		
XYES INO	□ <10% □ 10-299 □ 50-70% □>70%	70 - 30-49% (100%)		
Soils - PSS and	Vor PFO Portions o	of Wetland (if w	votland is 100% PEO and	or PSS, omit this section)
	How much of it is me		Mucky soils range	
Mucky/Muddy <sup>1</sup> ?	$\Box$ <10% $\Box$ 10-29%	-	in depth from:	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :
☐ YES ☐ NO	□ 50-70% □>70%		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12
	nant species:	7		
Herptiles				
Other herotiles	Irtles observed? 🗀	YES <sup>*</sup> XNO	If yes, how many?	
	a coserved _ prev	lously observed	Pulltrog	, greentrog
Additional Con	nments/Observation	ns: (use addition	nal sheets if necessar	y) ,
area (P	tlow into Po	and via r	ock-bottomed	ditch + wash-ou
,,,,,,				
INVESTIGAT	OR'S OPINION		_	
☐ YES \$\forall NO		The <u>hydrology</u> c	riterion <sup>5</sup> for bog turtle	e habitat is met.
E YES ZNO		The <u>soils</u> criterion	on <sup>5</sup> for bog turtle habi riterion <sup>5</sup> for bog turtl	tat is met.
TYES XNO		This wetland is r	ootential bog turtle ha	e naditat is met. abitat.
I certify that to				
recritivitiat to	the best of my know	ledge, all of the	information provided	herein is accurate and comple
		1 1/	5	111/05
Field Invest	igator's Signature			Date
1 Soils are	considered "mucky/mud	dy" if one can probe	e them to a depth of $\geq 3$ ".	

Probing is done with an approximately 1" diameter, blunt-ended pole (e.g., a wooden broom handle).

Soils are considered "firm/hard" if one can probe them to a depth of < 3".

4 Report observations of bog turtles to the USFWS and PFBC within 48 hours.
5 See attached "BOG TURTLE HABITAT CRITERIA"

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005)

Project/Property Name: Mt. Airy
County: Monroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise Twp.
Project/Property Name: Mt. Airy  County: Monroe Quad: Mount Pocono + Buck Hill Falls  Township/Municipality: Paradise Twp.  Investigator: Ben Rerra Affiliation: Skelly + Loy - Consultant
WETLAND ID: ond-6 PHOTOS TAKEN: Description Yes No WETLAND SIZE: 1.85 acres Wetland size estimation – If actual acreage is not known at time of investigation, check one: Description = 0.1-0.5 acre Description = 0.1-2 acres Description = 0.1-2 acres Description = 0.1-4 acres
WETLAND LOCATION: Lat 4/° O6.417 Long 75° 19.50′ (approximate center of wetland) GPS Datum (check one): ENAD 27 ENAD 83 E WGS 84
SURVEY CONDITIONS & LIMITATIONS
Date of survey: 5/11/05 Time In: 12:39 Time Out: 12:49  Air temp. 80 °F. Last precipitation: 0 < 24 hours 21-7 days 0 > 1 week 0 unknown  Drought conditions? 0 YES XNO 0 Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  I home of it – the entire wetland is within the property boundaries (skip next 2 questions)  I some of it – acres or % of the wetland appears to be located off-site
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ all of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES YNO  Unknown  If yes, could they be potential bog turtle habitat?  YES  NO  Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: PEM PSS PFO POW 100
XY = N Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe Pond Created
Y = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe
Hydrology  TYN  Springs or seeps Tyisible or Tlikely? Watercress present? Tyes No  Spring houses in or adjacent to wetland?  Saturated soils present? If yes, year-round? Likely Tunlikely Tunknown  Water visible on surface? Check all that apply: Tsmall puddles/depressions (" deep)  Trivulets (" deep) Y larger pools/ponds (50" deep)  Evidence of flooding? If yes, describe indicators

Project Name	Mt. A	tiry		Wetlandond 6 (con't)
Soils Mapping United Soils Mapping United Soils Mapping United Soils Soils Soils Soils Soils Soils Soils Soils Soils Soils Soils Soils Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Mapping United Soils Soi	nit: Oquag s confirm mapped	a-Lackau type? = YES	<b>/9∽n⁄a</b> □ NO <b>X</b> Unknow	n
Soils - PEM Po	rtion of Wetland		Pow	
Mucky/Muddy <sup>1</sup> ?	How much of it (PI	EM) is mucky?	Mucky soils range	Most of the mucky part(s) of
☐ YES XNO	= <10% = 10-2	29% = 30-49%	in depth from:	the wetland can be probed <sup>2</sup> :
	□ 50-70% □>70°		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard <sup>3</sup> ?	,	EM) is <b>firm/hard?</b> 29% <b>30.1</b> 9%		
YES NO	= \$10% = 10-2 = 50-70% =>70			
Soils - PSS and	Nor PEO Portion	s of Wotland (if	unting die 100% PEO	Vor PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is		Mucky soils range	Most of the mucky part(s) of
•	1 .		in depth from:	the wetland can be probed <sup>2</sup> :
□ YES □ NO	□ 50-70% □>70°		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog to	irtles observed?	∃ YES⁴ X NO	If ves. how many?	iflora rose ace amounts
Additional Cond Pond into	mments/Observat	ions: (use additions of have been been been been been been been be	nal sheets if necessar	v)
TYES ZNO	UNSURE	The <u>hydrology</u> c	riterion <sup>5</sup> for bog turtl	e habitat is met.
TYES ≯NO			on <sup>5</sup> for bog turtle habi riterion <sup>5</sup> for bog turtl	
I YES XNO		This wetland is p	potential bog turtle ha	e naditat is met. abitat.
	the best of my kno			herein is accurate and complet    11
3 Soils are 4 Report o	is done with an approx considered "firm/hard bservations of bog turt	timately 1" diameter, b I" if one can probe ther	PFBC within 48 hours	ooden broom handle).

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005)

Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls Township/Municipality: Paradise Two.
County: Monroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise Twp.
Township/Municipality: Paradise Twp. Investigator: Ben Rerra Affiliation: Skelly + Loy - Consultant
WETLAND ID: lord-13 PHOTOS TAKEN: X Yes \( \text{No}\) WETLAND SIZE: \( \text{O.6}\) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: \( \text{C} < 0.1\) acre \( \text{O} \) 0.1-0.5 acre \( \text{C} > 0.5\) to <1 acres \( \text{C} \) 1-2 acres \( \text{C} \) 2-4 acres \( \text{C} \) 5+ acres \( \text{C} \) 10+ acres \( \text{WETLAND LOCATION:} \) Lat \( \text{Lat} \( \text{L1} \) \( \text{O6.987} \) Long \( \text{T5} \) \( \text{NAD 83} \) \( \text{C} \) WGS 84
SURVEY CONDITIONS & LIMITATIONS
Date of survey: $5/11/05$ Time In: $10.04$ Time Out: $10.10$
Date of survey: 5/11/05 Time In: 10:04 Time Out: 10:10  Air temp. 68 ° F. Last precipitation: 1 < 24 hours \$\times\$1-7 days \$\times\$ > 1 week \$\times\$ unknown  Drought conditions? 1 YES \$\times\$NO \$\times\$ Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  X none of it – the entire wetland is within the property boundaries (skip next 2 questions)  some of it – acres or % of the wetland appears to be located off-site
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ all of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES YNO  Unknown  If yes, could they be potential bog turtle habitat?  YES NO  Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: PEM PSS PFO POW IOO
XY TN Are those one signs of the Language Lab Late (1911).
describe Pond Created  XY = N Are there any signs of disturbance to regetation (mowing, pasturing, burning, etc.)? If yes, describe
Hydrology  Y N Springs or seeps I visible or I likely? Watercress present? Yes No Spring houses in or adjacent to wetland?  Y N Saturated soils present? If yes, year-round? Likely I Unlikely Unknown Water visible on surface? Check all that apply: I small puddles/depressions (" deep) I rivulets (" deep) I larger pools/ponds (50" deep) Evidence of flooding? If yes, describe indicators

Project Name	Mt. Air	<del>/</del>		Wetland Pord-13(con't)
Soils Mapping Un	nit: Lackawang confirm mapped type?	YES	NO <b>U</b> nknow	n
	rtion of Wetland	_	·	
1	How much of it (PEM) is	PO mucky?	Mucky soils range	Most of the mucky part(s) of
Mucky/Muddy <sup>1</sup> ?	= <10% $= 10-29%$	•	in depth from:	the wetland can be probed <sup>2</sup> :
□ YES XNO	= 50-70% =>70%	_ 00 10 / 0	to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Firm/Hard³?	How much of it (PEM) is	firm/hard?		
YES INO		30-49%		
Soils - PSS and	Vor PFO Portions of W	etland (if w	etland is 100% PFO and	Vor PSS, omit this section)
Mucky/Muddy <sup>1</sup> ?	How much of it is mucky		Mucky soils range	Most of the mucky part(s) of
□ YES □ NO	□ <10% □10-29%		in depth from:	the wetland can be probed <sup>2</sup> :
2 125 2 100	□ 50-70% □>70%		to"	□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Herptiles Were any bog ti	urtles observed? ☐ YES X observed ☐ previous	⁴ <b>≭</b> NO 1	f ves how many?	iflora rose []
Additional Con Pond of taps INVESTIGAT TYES YNO TYES YNO TYES YNO	oments/Observations:  Appears to he into local gr  OR'S OPINION  UNSURE The UNSURE The UNSURE The	(use addition	nal sheets if necessar Len Creat ater. iterion <sup>5</sup> for bog turtl n <sup>5</sup> for bog turtle habitatierion <sup>5</sup> for bog turtle	e habitat is met.  le habitat is met.  le habitat is met.
I certify that to	UNSURE This	wetland is p	otential bog turtle ha	abitat.  I herein is accurate and complete
	igator's Signature		5	Date / 05
3 Soils are 4 Report of	considered "mucky/muddy" is done with an approximately considered "firm/hard" if one bservations of bog turtles to the hed "BOG TURTLE HABIT.	1" diameter, bl can probe then ne USFWS and	unt-ended pole (e.g., a w n to a depth of < 3". PFBC within 48 hours	ooden broom handle).

# USFWS/PFBC Bog Turtle Habitat Evaluation – Field Form (revised 1/12/2005)

Project/Property Name: Mt. Airy
Project/Property Name: Mt. Airy County: Monroe Quad: Mount Pocono + Buck Hill Falls
Township/Municipality: Paradise Twp.
Township/Municipality: Paradise Twp. Investigator: Ben Berra Affiliation: Skelly + Loy - Consultant
WETLAND ID: Pond-14 PHOTOS TAKEN: X Yes \( \text{No}\) WETLAND SIZE: \( \frac{0.47}{2}\) acres Wetland size estimation - If actual acreage is not known at time of investigation, check one: \( \text{< 0.1 acre } \text{\subseteq 0.1-0.5 acre } \text{\subseteq >0.5 to <1 acre } \text{\subseteq 1-2 acres } \text{\subseteq 2-4 acres } \text{\subseteq 5+ acres } \text{\subseteq 10+ acres} \)  WETLAND LOCATION: Lat \( \frac{41^{\circ} \text{06.980'}}{\text{Capproximate center of wetland}} \)  GPS Datum (check one): \( \text{\subseteq NAD 27} \)  WAD 83 \( \text{\subseteq WGS 84} \)
(approximate center of wetland) GPS Datum (check one):   NAD 27 NAD 83  WGS 84
SURVEY CONDITIONS & LIMITATIONS
Date of survey: 5/11/05 Time In: 10:11 Time Out: 10:16
Date of survey: 5 / 11 / 05 Time In: 10:11 Time Out: 10:16  Air temp. 68 ° F. Last precipitation: 0 < 24 hours 21-7 days 0 > 1 week 0 unknown  Drought conditions? 0 YES 2 NO 0 Unknown
How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?  In none of it – the entire wetland is within the property boundaries (skip next 2 questions).  In some of it – acres or % of the wetland appears to be located off-site.
If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?  □ none of it □ part of it (% or acres of the off-site portion)
How much of the off-site portion of this wetland is visible (e.g., from the subject property or from a public road)?   all of it   part of it (at least acres)   none of it
Are there any adjacent wetlands located off-site?   YES NO Unknown  If yes, could they be potential bog turtle habitat?   YES NO Unknown
Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
WETLAND CHARACTERISTICS
Wetland type(s) present and % cover: PEM PSS PFO POW 100
XY IN Are there any signs of disturbance to hydrology (ditching, filling, ponds, roads, etc.)? If yes, describe fond (reated excavated 10-15 below existing ground)
AY = N Are there any signs of disturbance to vegetation (mowing, pasturing, burning, etc.)? If yes, describe adj. area is owed
Hydrology  TYN  Springs or seeps Tyisible or Tlikely? Watercress present? TYESN  Spring houses in or adjacent to wetland?  YTN  Saturated soils present? If yes, year-round? XLikely Tunlikely Tunknown  Water visible on surface? Check all that apply: Tsmall puddles/depressions (" deep)  Trivulets (" deep) X larger pools/ponds (50" deep)  Evidence of flooding? If yes, describe indicators

Project Name	Mt. Airy		Wetland Pond-14(con't)
Soils Mapping U Field observation	Init: Lackawanna is confirm mapped type? TYES	□ NO <b>X</b> Unknow	n
Soils PEM Po	ortion of Wetland POW		
Mucky/Muddy¹? □ YES XNO	How much of it (PEM) is mucky?  = <10% = 10-29% = 30-49% = 50-70% =>70%	Mucky soils range in depth from:to"	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :
Firm/Hard³?  YES □ NO	How much of it (PEM) is firm/hard?  = <10% = 10-29%		□ 3-5" □ 6-8" □ 9-11" □ ≥12"
Soils - PSS an	d/or PFO Portions of Wetland (if w	vetland is 100% PFO and	Vor PSS omit this section)
Mucky/Muddy¹? ☐ YES ☐ NO	How much of it is mucky?	Mucky soils range in depth from:	Most of the mucky part(s) of the wetland can be probed <sup>2</sup> :  □ 3-5" □ 6-8" □ 9-11" □ ≥12"
☐ alder ☐ dog Additional dom  Herptiles	ishes $\square$ skunk cabbage $\mathbb{Z}$ cattail $\square$ rice cutgrass $\square$ tearthumb $\square$ regwood $\square$ red maple $\square$ willow $\square$ puinant species: $All veg$ .	eed canary grass D. oison sumac D mult	Phragmites  purple loosestrife iflora rose
Other herptiles  Additional Co	writes observed? TYES XNO  Xobserved previously observed  comments/Observations: (use additionable of the comment)	nal sheets if necessar	<b>v</b> )
INVESTIGATION  YES ZN  YES ZN  YES ZN  YES ZN  YES ZN	O DUNSURE The <u>soils</u> criteric O DUNSURE The vegetation of	riterion <sup>5</sup> for bog turtl on <sup>5</sup> for bog turtle hab criterion <sup>5</sup> for bog turt potential bog turtle h	itat is met. le habitat is met.
	o the best of my knowledge, all of the stigator's Signature	information provided	herein is accurate and complete.  Date
2 Probing 3 Soils ar 4 Report	re considered "mucky/muddy" if one can probe g is done with an approximately 1" diameter, b re considered "firm/hard" if one can probe the observations of bog turtles to the USFWS and ached "BOG TURTLE HABITAT CRITERIA	plunt-ended pole (e.g., a w m to a depth of < 3". I PFBC within 48 hours.	vooden broom handle).

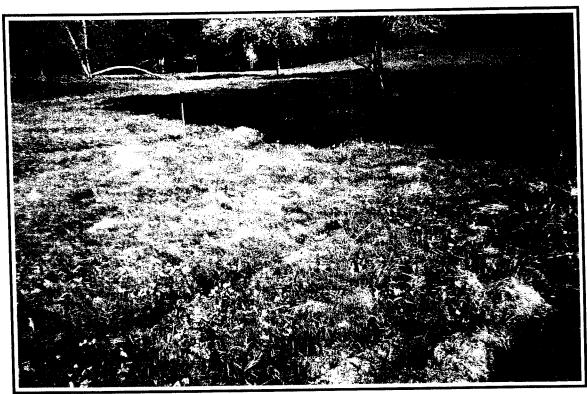
APPENDIX C - REPRESENTATIVE PHOTOGRAPHS



**Photograph No. 1:** Wetland 13 located in the floodplain immediately adjacent to Forest Hills Run.



**Photograph No. 2:** Wetland 14 also located on a low lying floodplain bench adjacent to Forest Hills Run.



Photograph No. 3: Palustrine emergent Wetland 15 in a mowed/maintained lawn area.



Photograph No. 4: Palustrine forested Wetland 31 near S.R. 611.



**Photograph No. 5:** Palustrine open-water portion of Wetland 32. A small portion of this wetland is forested and similar to WL-31.



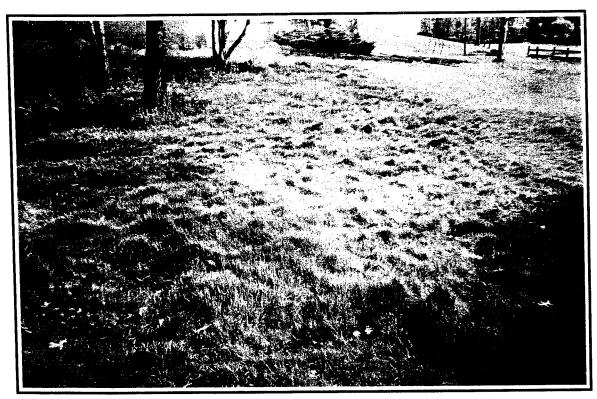
**Photograph No. 6:** Densely wooded palustrine forested Wetland 33.



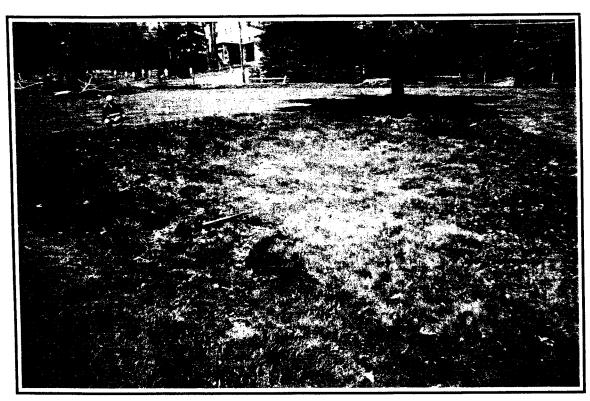
**Photograph No. 7:** Palustrine emergent floodplain bench wetland (WL-37) along Channel 23.



**Photograph No. 8:** Draintile outlet in Wetland 37 and drainage pattern into Channel 23 (bottom of picture).



**Photograph No. 9:** Wetland 45 is very similar to Wetland 15.



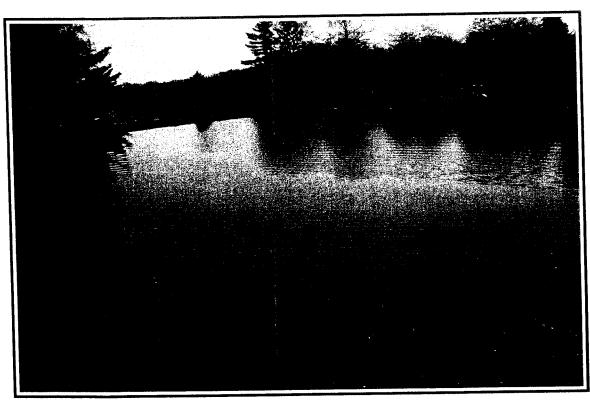
**Photograph No. 10:** Wetland 55 is similar to Wetlands 15 and 45.



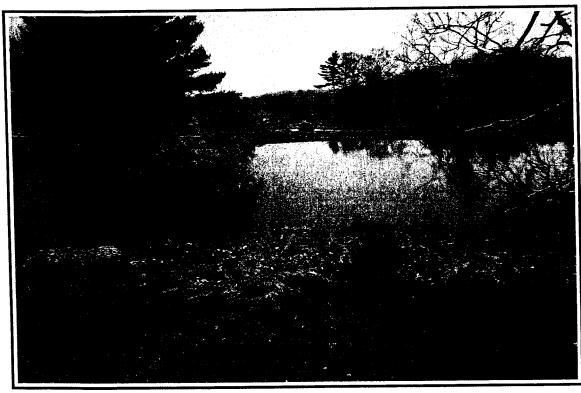
**Photograph No. 11:** Wetland 71 is similar to Wetlands 15, 45, and 71.



**Photograph No. 12**: Wetland 73 is similar to Wetlands 13 and 14, especially in its landscape position, hydrology and functions/values.



Photograph No. 13: Pond 4 is located on the golf course.



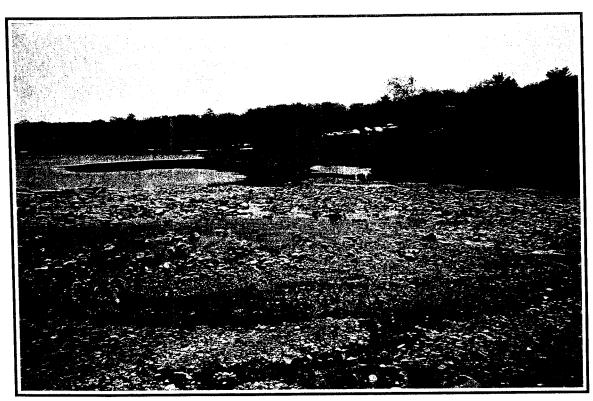
**Photograph No. 14:** Pond 5 is just upslope of Pond 4. Also, Pond 4 and 5 are similar to Pond 6 (not pictured).



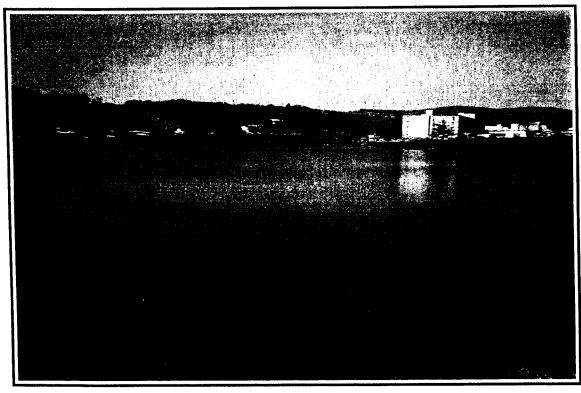
Photograph No. 15: Pond 13.



Photograph No. 16: Pond 14 (slightly downslope from Pond 13).



Photograph No. 17: Delta created by confluence of Forest Hills Run with Lake at Mt. Airy.



Photograph No. 18: Lake at Mt. Airy as viewed from dam.

# APPENDIX D - PNDI COORDINATION

PERCENT AT NEW YORK



# Pennsylvania Natural Diversity Inventory

Scientific Information and expertise for the conservation of Pennsylvania's native biological diversity

DCNR, Bureau of Forestry

March 4, 2005

Karen Johnston Skelly and Loy 2601 North Front Street Harrisburg, PA 17110

Re:

Pennsylvania Natural Diversity Inventory Review, PER NO: 17301

Mount Airy Lodge Improvement Project

Paradise Twp, Monroe County

#### Dear Ms. Johnston:

In response to the request received January 20, 2005 to perform a PNDI Database Search of the above-mentioned project, we have reviewed the area using the Pennsylvania Natural Diversity Inventory (PNDI) information system.

PNDI records indicate that no occurrences of species of special concern are known to exist within the project area referenced above, therefore we do not anticipate any impact on endangered, threatened, or rare species at this location.

PNDI attempts to be a complete information resource on species of special concern located within the Commonwealth. However, it may not contain all location information for species within the jurisdiction of other agencies. Please contact the Fish and Boat Commission, the Game Commission and US Fish and Wildlife Service for more information on species within their purview.

PNDI is the environmental review function of the Pennsylvania Natural Heritage Program, and uses a site-specific information system that describes significant natural resources within the Commonwealth. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the Department of Conservation and Natural Resources, The Nature Conservancy and the Western Pennsylvania Conservancy. This response represents the most up-to-date summary of the PNDI data files and is good for one year. An absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations.

Feel free to phone our office if you have questions concerning this response or the PNDI system, and please refer to the P.E.R. Reference Number at the top of the letter in future correspondence concerning this project.

Sincerely,

Ellen M. Shultzabarger

**Environmental Review Specialist** 

P: 717-772-0258 F: 717-772-0271



### United States Department of the Interior

#### FISH AND WILDLIFE SERVICE

Pennsylvania Field Office 315 South Allen Street, Suite 322 State College, Pennsylvania 16801-4850

February 18, 2005

Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110-1185

Re: USFWS Project #20050380

Dear Ms. Johnston:

This responds to your letter of January 19, 2005, requesting information about federally listed and proposed endangered and threatened species within the area affected by the proposed Mount Airy Lodge Improvements Project located in Paradise Township, Monroe County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species.

The proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

To determine the potential effects of the proposed project on bog turtles and their habitat, begin by identifying all wetlands in, and within 300 feet of, the project area. The project area includes all areas that will be permanently or temporarily affected by any and all project features, including building, roads, staging areas, utility lines, outfall and intake structures, wells, stormwater retention or detention basins, parking lots, driveways, lawns, etc. The area of investigation should be expanded when project effects might extend more than 300 feet from the project footprint. For example, the hydrological effects of some projects (e.g., large residential or commercial developments; golf courses; community water supply wells) might extend well beyond the project footprint due to the effects that impervious surfaces or groundwater pumping may have on the hydrology of nearby groundwater-dependent wetlands. Wetlands should be included on a map showing existing as well as proposed project features.



FEB 2 2 2005

If someone qualified to identify and delineate wetlands has, through a field investigation, determined that no wetlands are located in or within 300 feet of the project area (or within the expanded investigation area, as described above), it is not likely that your project will adversely affect the bog turtle. If this is the case, no further consultation with the Fish and Wildlife Service is necessary, although we would appreciate receiving a courtesy copy of the wetland investigator's findings for our files.

If wetlands have been identified in or within 300 feet of the project area (or in an expanded investigation area, as described above), their potential suitability as bog turtle habitat should be assessed, as described under "Bog Turtle Habitat Survey" (Phase 1 survey) of the enclosed Guidelines for Bog Turtle Surveys. A list of qualified bog turtle surveyors is enclosed, although the habitat survey could also be conducted by someone not on this list (e.g., a biologist or wetland scientist with training in bog turtle habitat identification). A Phase 1 field form and report template are enclosed for your convenience and use. Survey results should be submitted to the Service for review and concurrence.

If potential bog turtle habitat is found in or near the project area, efforts should be made to avoid any direct or indirect impacts to those wetlands (see enclosed *Bog Turtle Conservation Zones*). Avoidance of direct and indirect effects means no disturbance to or encroachment into the wetlands (e.g., filling, ditching or draining) for any project-associated features or activities. Adverse effects may also be anticipated to occur when lot lines include portions of the wetland; when an adequate upland buffer is not retained around the wetland (see *Bog Turtle Conservation Zones*); or when roads, stormwater/sedimentation basins, impervious surfaces, or wells affect the hydrology of the wetland.

We recommend that if potential habitat is found, you submit (along with your Phase 1 survey results) a detailed project description and detailed project plans documenting how direct and indirect impacts to the wetlands will be avoided. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey should be done, as described under "Bog Turtle Survey" (Phase 2 survey) of the Guidelines. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors), and survey results should be submitted to the Service for review and concurrence.

In cases where adverse effects to federally listed species cannot be avoided, further consultation with the Service would be necessary to avoid potential violations of section 9 (prohibiting "take" of listed species) and/or section 7 (requiring federal agencies to consult) of the Endangered Species Act. Information about the section 7 and section 10 consultation processes (for federal and non-federal actions, respectively) can be obtained by contacting this office or accessing the Service's Endangered Species Home Page (http://endangered.fws.gov).

This response relates only to endangered and threatened species under our jurisdiction based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Jennifer Dombroskie of my staff at 814-234-4090 if you have any questions or require further assistance regarding this matter.

Faria L

Sincerely,

David Densmore

Supervisor

**Enclosures** 





#### established 1866

### Pennsylvania Fish & Boat Commission

Division of Environmental Services Natural Diversity Section 450 Robinson Lane Bellefonte, PA 16823-9620 (814) 359-5237 Fax: (814) 359-5175

January 25, 2005

IN REPLY REFER TO SIR # 18068

SKELLY AND LOY KAREN JOHNSTON 2601 N FRONT STREET HARRISBURG, PA 17110-1185

RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species

MOUNT AIRY LODGE IMPROVEMENT PROJECT

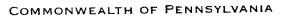
PARADISE Township/Borough, MONROE County, Pennsylvania

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code. The absence of recorded information from our files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A Species Impact Review is valid for one year only.

omy.		
<u>X</u> _	NO AD	VERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT
		Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation regarding rare species is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.
		An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.
If you	have any	questions regarding this review, please contact the biologist indicated below:
	Jeff Sc	
<u>X</u>	Kathy	Derge 814-359-5186
make attent	copies of	a copy of our "SIR Request Form", which is to be used for all future species impact review requests. Please the attached form and use with all future project reviews. Thank you in advance for your cooperation and important matter of species conservation and habitat protection.  DATE: January 25, 2005  Christopher A. Urban Chief, Natural Diversity Section

Our Mission:

www.fish.state.pa.us





# PENNSYLVANIA GAME COMMISSION

2001 ELMERTON AVENUE, HARRISBURG, PA 17110-9797

February 16, 2005

Ms. Karen M. Johnston Skelly and Loy, Inc. 2601 North Front Street Harrisburg, PA 17110

Re: Mount Airy Lodge Improvement Project

456-Acre Site

Paradise Township, Monroe County, PA

Dear Ms. Johnston:

This is in response to your letter dated January 19, 2005, requesting information concerning endangered and threatened species of birds and mammals and impacts to State Game Lands as related to the proposed project.

Our office review has determined that no state listed endangered or threatened species of birds or mammals are known to occur within the proposed project area. Except for occasional transient individuals, this project should not impact any endangered or threatened species of birds or mammals recognized by the Pennsylvania Game Commission. Also, no State Game Lands are located close enough that any impacts to them are anticipated by the proposed project. However, should project plans change or if additional information on endangered or threatened species or State Game Lands becomes available, this determination may be reconsidered.

The proposed project may impact wetlands which this agency considers as critical and unique habitat. You should be aware that any impacts to wetlands or other bodies of water will require permits from the Department of Environmental Protection under Chapter 105 and the U.S Army Corps of Engineers under Section 404 of the Clean Water Act.

If you have any questions, please contact me at (717) 783-5957.

-2-

Very truly yours,

James R. Leigey

Wildlife Impact Review Coordinator Division of Environmental Planning

And Habitat Protection

Bureau of Land Management

JRL/pfb

Attachment

Cc: File

Schweitzer Zindell

APPENDIX E - WETLAND DELINEATION DATA FORMS

						OTO VIC FOR	
WETLAND ID:	Wetland 1			EVALUATOR:		BTB, KJS, ERB	
DATE:	12-Apr-0	05		WEATHER: sunn	ny, clear, 50 degrees		
ormal circumstances	exist on the site?		Yes				
site significantly dis	turbed (Atypical Situa	ution)?	No				
e area a potential pro	blem area?		No			0.0066 Ha	
PROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.0162 Ac	0.0066 na	0% POW
GETATION			CLASSIFICATION:	100% PEM	0 % PSS		0.81.01
	WET	LAND			UPLAN	STRATUM	INDICATO
SPEC		STRATUM	INDICATOR	SPEC		T	FACU
Potenti	lla sp.	н	NS	Tsuga cana		н	NS
Scirpus c	yperinus	н	FACW+	Musci	•	н	NG(UP
Typha I	atifolia	н	OBL	Comptonia p	-	H	NS.
Juncus	effusus	н	FACW+	Poaceae or Gr		T	FAC
Care	x sp.	н	85% FAC-OBL	Acer rui	orum	•	,,,,
,							
rcent of Dominant Sp re OBL, FACW, and F			100%				
	s	OILS			HYDROL	OGY	
MAPPED	SOIL UNIT: N	forms extremely stony silt k	oam (MoB)	1		Surface water runoff	collection and sees
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDRO		Broni Granace water trajou	ndwater.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFACE	WATER:		1*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WATER IN SOIL PIT:			
0-10*	7.5YR3/3		sit toam	DEPTH TO SATURAT	ED SOIL:		
10-16" 2.5Y6/2		2.5Y4/4	sit loam	FIELD INDICATORS			
				PF	RIMARY INDICATORS	3	
	WETLAND FF	INGE SOIL SCORE		× In	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	xs	aturated in Upper 12 Ir	nches	
				w	later Marks		
				D	rift Lines		
					ediment Deposits		
	UPLANI	SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	CONDARY INDICATO	RS	
0-10°	10YR4/6		silt loam		xidized Root Channel	s in Upper 12 inche	s
10-18"	10YR4/4		s#u icam	×v	Vater Stained Leaves		
				F	AC-Neutral Test		
1	listosol		Hydric Soil	_	Concretions		
	listic Epipedon				ligh Organic Content in Su	rface Layers in Sandy	Soils
	Sulfidic Odor				Organic Streaking in Sandy	Soils	
	Aquic Moisture Regime			x	isted on Local Hydric Soils	List	
	Reducing Conditions				isted on National Hydric S		
	Gleyed or Low Chroma C	Colors			Other (Explain in Basis of D	Delineation)	
			Wetland De	stermination			
Hydrophytic Vegetation		Yes		Hydric Soil Present?			
		Yes		Wetland?	res		
Wetland Hydrology Pre	sent?	Yes Yes			Yes		· · · · · · · · · · · · · · · · · · ·

Wetland Hydrology F	resent?	Yes		Wetland?	Yes		
Hydrophytic Vegetati	on Present?	Yes		Hydric Soil Present?			
			Wetland De	etermination			
<del></del>	Gleyed or Low Chroma Cok	ors			Other (Explain in Basis of		
х	- Aquic Moisture Hegime - Reducing Conditions				isted on National Hydric S		
×	Sulfidic Odor  Aquic Moisture Regime				isted on Local Hydric Soil		
<del></del>	Histic Epipedon				Organic Streaking in Sand		
<del></del>	Histosol	•			figh Organic Content in Su	rface Layers in Sandy	Soils
	Lintagal		Hydric Soil		Concretions		
			Maria Call	Indicators			
					AC-Neutral Test		
2-18"	7.5YR4/8		silt loam		Vater Stained Leaves		
0-2"	10YR2/1		sit loam		xidized Root Channel	s in Upper 12 inch	es
DEPTH	MATRIX	MOTTLE	TEXTURE	1	CONDARY INDICATO		
	UPLAND S	SOIL SCORE			rainage Patterns	ne.	
					ediment Deposits		
					rift Lines		
					ater Marks		
DEPTH	MATRIX	MOTTLE	TEXTURE	xs	aturated in Upper 12 In	nches	
	WETLAND FRIN	IGE SOIL SCORE			undation		
				PF	IIMARY INDICATORS	3	
8-16*	10YR6/2	10YR6/8	sit toem	1	ELD INDICATORS		
0-8*	10YR2/1		silt loam	DEPTH TO SATURAT			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
	WETLAND COF	RE SOIL SCORE		DEPTH OF SURFACE			0-1*
HYDRI	C SOIL UNIT:	Norwich		SOURCE OF HYDRO		Seasonal gr	oundwater seep.
MAPPE	D SOIL UNIT: Morr	ris extremely stony silt loa	т (МоВ)				
	sol	LS			HYDROL	OGY	
e OBL, FACW, and	FAC		100%				
rcent of Dominant S	Species that						
				Allium	sp.	Н	NS
				Solidage	sp.	н	NS
	s amomum	SS	FACW	Poaceae or Gra	mineae sp.	н	NS
	ex sp. gnum sp.	н	NS	Alliaria pe		н	FACU-
	unda sp.	н	85% FAC-OBL	Quercus		Т	FACU-
	ECIES	STRATUM H	FAC - OBL	Tsuga cana		т	FACU
	WETLA		INDICATOR	SPECI		STRATUM	INDICATO
SETATION			CLASSIFICATION:	100% PEM	UPLAND		
	CLASSIFICATION:		01 400  704  704	SIZE:	0.0439 AC 0 % PSS	0 % PFO	0% POW
e area a potential p	roblem area?	•	No	0175.	0.0439 Ac	0.0178 Ha	
e site significantly d	isturbed (Atypical Situation	n)? h	No				
ormal circumstance	s exist on the site?	Y	/es				
DATE:	12-Apr-05			WEATHER: sunn	, clear, 50 degrees		
VETLAND ID:							

Delineation follows extent of hillside seep with osmunda fern and sedge community with low chroma and mottled soils. Hillside seeps go subsurface at toe of slope.

					VIC COD	
WETLAND ID:	Wetland 3		EVALUATOR:	PJD, BIE	B, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sunny,	, clear, 50 degrees		
Do normal circumstances e	xist on the site?	Yes				
Is the site significantly distu	ribed (Atypical Situation)?	No				
Is the area a potential prob	lem area?	No				
HYDROGEOMORPHIC CL	.ASSIFICATION:		SIZE:	0.0618 Ac	0.0250 Ha	

	CLASSIFICATION:			SIZE:	0.0618 Ac	0.0250 Ha		
EGETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW	
	WET	LAND	······································	UPLAND				
SPEC		STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR	
Juneus e		н	FACW+	Solidaç	o sp.	н	NS	
Carex		н	85% FAC-OBL	Poaceae or G	amineae sp.	н	NS	
Typha l		н	OBL	Alliaria p	etiolata	н	FACU-	
Epilobia		н	NS	Alliun	sp.	н	NS	
Solida	•	Н	NS	Solidago	altissima	н	FACU-	
·	9							
rcent of Dominant Sp	pecies that							
e OBL, FACW, and F			100%					
SOILS				HYDROL	.OGY			
MAPPED	SOIL UNIT: N	Aorris extremely storny silt to	am (MoB)					
	SOIL UNIT:	Norwich		SOURCE OF HYDRO	LOGY:	Surface water collection in It ditch and pip	ow area. Surface/storre e contribution.	
WETLAND CORE SOIL SCORE			DEPTH OF SURFAC			0-2*		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:			
0-8*	7.5YR3/3		silt loam	DEPTH TO SATURA	TED SOIL:			
8-16*	2.5Y6/2	7.5YR6/8	silt loam	,	IELD INDICATORS	;		
				P	RIMARY INDICATORS	S		
WETLAND FRINGE SOIL SCORE		RINGE SOIL SCORE		×	nundation			
DEPTH MATRIX		MOTTLE	TEXTURE	×	aturated in Upper 12 li	nches		
					Vater Marks			
		•		<u> </u>	Orift Lines			
					Sediment Deposits			
	UPLANI	D SOIL SCORE			Orainage Patterns			
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATO	RS		
0-14"	7.5YR3/3		sit loam		Oxidized Root Channel	ls in Upper 12 inches	3	
					Water Stained Leaves			
					FAC-Neutral Test			
			Hydric Soll	Indicators				
	Histosol				Concretions	wines I week in Sports S	oile.	
	Histic Epipedon				High Organic Content in St		OIG	
	Sulfidic Odor				Organic Streaking in Sandy Listed on Local Hydric Soli			
	Aquic Moisture Regime				Listed on National Hydric S			
	Reducing Conditions	a			Other (Explain in Basis of			
	Gleyed or Low Chroma (	JOIOIS			Other (Explain in basis of	Delineation		
			Wetland De	etermination		·····		
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Present?	Yes			
i -	sent?	Yes		Wetland?	Yes			

	EVALUATOR:	PJU	BTB, KJS, ERB	
	EVALUATOR.	. 50,	D10, 100, 2112	
	WEATHER: sunny	, clear, 50 degrees		
Yes				
No				
No				
	SIZE:	0.0876 Ac	0.0354 Ha	
CLASSIFICATION:	30% PEM	0 % PSS	0 % PFO	70% POW
	1	UPLAND	)	
INDICATOR	SPECIE	S	STRATUM	INDICATOR
85% FAC-OBL	Poaceae or Gran	nineae sp.	н	NS
OBL	Schizachyrium scopariu	m ssp. scoparium	н	FACU
FACW+	Pinus stro	bus	Т	FAC-*
OBL				
100%				
	<b>_</b>	HYDROL	DGY	
oam (MoB)			Groundweter sp	oring (yie pipe).
	SOURCE OF HYDROL		0,000,000	
	DEPTH OF SURFACE			
TEXTURE	DEPTH TO FREE WAT			
silt loam	DEPTH TO SATURATE			
sandy loam	l l	LD INDICATORS		
	┥	MARY INDICATORS	•	
		ndation		
TEXTURE		urated in Upper 12 In	ches	
		ter Marks		
		ft Lines		
		diment Deposits		
T-1		ainage Patterns	RS	
TEXTURE		ONDARY INDICATO		
siit loam		idized Root Channels	s in Upper 12 inches	
		ater Stained Leaves		
	F#	C-Neutral Test		
18.000.00	Undicators			
Hydric Sol	1 Indicators	ncretions		
		gh Organic Content in Su	rface Layers in Sandy S	oils
		ganic Streaking in Sandy		
		sted on Local Hydric Soils		
		sted on National Hydric S		
		ther (Explain in Basis of D		
Wetland D	etermination			
-	Hydric Soil Present? Y	BS		
	Wetland? Y	es		
	····			
ent frione and around	water seen drainage nati	ern to pond. Area	is saturated and i	nundated (>
eed, soft rush, sedge	, and cattail community.	on to point rive		
,	ent fringe and ground leed, soft rush, sedge	ent fringe and groundwater seep drainage patt eed, soft rush, sedge, and cattail community.	ent tringe and groundwater seep drainage pattem to pond. Area eed, soft rush, sedge, and cattail community.	ent tringe and groundwater seep drainage pattern to pond. Area is saturated and in eed, soft rush, sedge, and cattail community.

WETLAND ID:	Wetland 7		EVALUATOR:	PJD, BT	B, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees		
Do normal circumstance	s exist on the site?	Yes				
Is the site significantly di	sturbed (Atypical Situation)?	No				
is the area a potential pr	roblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.0686 Ac	0.0278 Ha	

ROGEOMORPHIC CL	ACCICIO ATION:			SIZE:	0.0686 Ac	0.0278 Ha	
SETATION	TOOM TOTAL	(	CLASSIFICATION:	50% PEM	0 % PSS	50 % PFO	0% POW
	WETLAN	D	UPLAND				
SPECIE	S	STRATUM	INDICATOR	SPECI	ES	STRATUM	INDICATOR
Carex s		н	85% FAC-OBL	Hamamelis v	irginiana	SS	FACU+
Sphagnur		н	NS	Acer rub	num	т	FAC
Acer rub	•	т	FAC	Quercus	alba	Т	FACU
				Poaceae or Gra	mineae sp.	н	NS
				Tsuga cana	adensis	Т	FACU
rcent of Dominant Spec	cies that						
e OBL, FACW, and FA	С		100%				
	SOIL	s			HYDROLO	OGY	
MAPPED S	OIL UNIT: Morris	extremely stony silt loar	n (MoB)				
HYDRIC S	OIL UNIT:	Norwich		SOURCE OF HYDROL	OGY:	Seasonal flooding and	i seasonel groundwater
	WETLAND CORE	SOIL SCORE		DEPTH OF SURFACE	WATER:		1-3*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WAT	TER IN SOIL PIT:		o.
0-10"	10YR3/2		silt loam	DEPTH TO SATURATI			
10-16*	10YR4/2	10YR4/4	silt foam		ELD INDICATORS		
				4	IMARY INDICATORS		
	WETLAND FRING	E SOIL SCORE			ındation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X Sa	turated in Upper 12 In	ches	
					ater Marks		
					ift Lines		
					ediment Deposits		
DEDTU	UPLAND SO		TEXTURE		ainage Patterns ONDARY INDICATOR	as	
DEPTH 0-6*	MATRIX 10YR2/2	MOTTLE	loam				_
6-14"	7.5YR5/4	7.5YR5/6	loam		xidized Root Channels	m Opper 12 lisone	5
0.14	7.5171574	7.511.00			ater Stained Leaves		
				F'	AC-Neutral Test		
			Hydric Soll				
	tosol				oncretions		
	tic Epipedon				igh Organic Content in Surf		ous
	fidic Odor				rganic Streaking in Sandy		
	uic Moisture Regime				sted on Local Hydric Soils :		
	ducing Conditions eyed or Low Chroma Colors				sted on National Hydric So ther (Explain in Basis of D		
G	eyed of Low Chroma Colors	•			THE CONDESS OF DESIGN OF	ONLICOLICATI)	
			Wetland De	termination			
Hydrophytic Vegetation Pa		Yes		Hydric Soil Present? Y			
Wetland Hydrology Prese	nt?	Yes		Wetland? Y	'es		

Delineation follows extent of floodplain bench palustrine forested wetland with low chroma and mottled soils in saturated low area adjacent to Channel 1.

WETLAND ID:	Wetland 13		EVALUATOR:	PJD, BTB,	AJL, KJS, ERB	
DATE:	14-Apr-05		WEATHER: sunny,	clear, cool		
Do normal circumstance	es exist on the site?	Yes				
Is the site significantly d	isturbed (Atypical Situation)?	No				
Is the area a potential p	roblem area?	No				
			CI7E:	വ വദവദ 🕰 🖰	0.0125 Ha	

		No				
PROGEOMORPHIC CLASSIFICATION	ON:		SIZE:	0.0308 Ac	0.0125 Ha	
GETATION		CLASSIFICATION:	50% PEM	50 % PSS	0 % PFO	0% POW
	WETLAND			UPLAND		
SPECIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
Solidago gigantea	н	FACW	Poaceae or G	Gramineae sp.	н	NS
Salix nigra	т	FACW+	Polygonum	cuspidatum	н	FACU-
Gallum sp.	н	NS	İ			
Carex sp.	н	85% FAC-OBL				
Phalaris arundinacea	н	FACW				
rcent of Dominant Species that						
e OBL, FACW, and FAC		100%			-0V	
	SOILS		<u> </u>	HYDROLO	GY	
MAPPED SOIL UNIT:	Philo silt loam (Ph)					
HYDRIC SOIL UNIT:	Holly		SOURCE OF HYDR		Surface water collection	n and seasonal flooding
WETLAN	ND CORE SOIL SCORE		DEPTH OF SURFAC			
<u>DEPTH</u> <u>MATRIX</u>	K MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-6" 10YR3/2	1	sandy loam	DEPTH TO SATURA			
6-14" 10YR2/2	2 10YP4/6	alluvium	1	FIELD INDICATORS		
>14" rock		rock	_ '	PRIMARY INDICATORS		
WETLAN	ID FRINGE SOIL SCORE			Inundation		
DEPTH MATRI	X MOTTLE	TEXTURE	×	Saturated in Upper 12 Inc	:hes	
				Water Marks		
			х	Drift Lines		
				Sediment Deposits		
<u>u</u> e	PLAND SOIL SCORE		X	Drainage Patterns		
DEPTH MATRI	IX MOTTLE	TEXTURE	s	ECONDARY INDICATOR	S	
0-14" 10YR3	12	sandy loam		Oxidized Root Channels	in Upper 12 inche	s
				Water Stained Leaves		
				FAC-Neutral Test		
		Hydric Soil	Indicators			
Histosol				Concretions		
Histic Epipedon				High Organic Content in Surfa	ace Layers in Sandy 9	Soils
Sulfidic Odor				Organic Streaking in Sandy S	Soils	
Aquic Moisture Re	gime		×	Listed on Local Hydric Soils L	ist	
X Reducing Condition	ns			Listed on National Hydric Soi	ls List	
Gleyed or Low Ch	roma Colors			Other (Explain in Basis of De 	elineation)	
		Wetland De	etermination			
	Yes		Hydric Soil Present?	Yes		
Hydrophytic Vegetation Present?			Wetland?	Yes		

					— المستقدية و <del>سين المستقد المستقد</del>	
WETLAND ID:	Wetland 14		EVALUATOR:	PJD, BTB,	AJL, KJS, ERB	
DATE:	14-Apr-05		WEATHER: sunny, o	lear, cool		
Do normal circumstances	exist on the site?	Yes				
Is the site significantly dist	urbed (Atypical Situation)?	No				
Is the area a potential prol	blem area?	No				
HYDROGEOMORPHIC C	CLASSIFICATION:		SIZE:	0.0215 Ac	0.0087 Ha	

DROGEOMORPHIC CLASSIFICATION:			SIZE:	0.0215 Ac	0.0087 Ha	
GETATION		CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
WE	TLAND	UPLAND				
SPECIES	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
Solidago gigantea	н	FACW	Poaceae or Gr	amineae sp.	н	NS
Poaceae or Gramineae sp.	Н	NS	Dactylis gl	omerata	н	FACU
Carex sp.	н	85% FAC-OBL	Taraxacum	officinale	н	FACU-
ercent of Dominant Species that					¥	
re OBL, FACW, and FAC		100%				
	SOILS			HYDROLO	OGY	
MAPPED SOIL UNIT:	Philo silt loam (Ph)					
HYDRIC SOIL UNIT:	Holly		SOURCE OF HYDRO		Stream flooding ar	d seasonal saturation.
	CORE SOIL SCORE		DEPTH OF SURFACE			
DEPTH MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA			
0-8* 10YR3/2		alluvial sand	DEPTH TO SATURAT			
8-12" 10YR5/2		alluvial sand	F	ELD INDICATORS		
12-18* 10YR5/2	10YR4/6	sit loam	PF	RIMARY INDICATORS		
	RINGE SOIL SCORE		h	undation		
DEPTH MATRIX	MOTTLE	TEXTURE	XS	aturated in Upper 12 Inc	ches	
			w	ater Marks		
			хр	rift Lines		
			s	ediment Deposits		
UPLAN	ID SOIL SCORE		D	rainage Patterns		
DEPTH MATRIX	MOTTLE	TEXTURE	SEC	ONDARY INDICATOR	s	
0-16" 10YR5/3		sit loam	0	xidized Root Channels	in Upper 12 inche	s
			w	ater Stained Leaves		
			F.	AC-Neutral Test		
	Y-10-2					
		Hydric Soil				
Histosol				oncretions		
Histic Epipedon			н	igh Organic Content in Surfa	ice Layers in Sandy S	Soils
X Sulfidic Odor			0	rganic Streaking in Sandy S	oils	
Aquic Moisture Regime			Xu	isted on Local Hydric Soils L	ist	
X Reducing Conditions			L	isted on National Hydric Soil	s List	
Gleyed or Low Chroma	Colors			ither (Explain in Basis of De	lineation)	
		Wetland Det	termination		······································	
Hydrophytic Vegetation Present?	Yes		Hydric Soil Present? Y	es		
Wetland Hydrology Present?	Yes		Wetland? Y	'es		
BASIS OF DELINEATION:				~		·

Delineation follows the extent of the sedge/grass floodplain bench with debris line following low chroma, mottled, and saturated soils with sulfidic odor.

### Mount Airy Lodge

		VYL	TLAND DA			212.5	D AH VIC EDD	
WETLAND ID:	Wetland 15			EVALUATOR:	_		B, AJL, KJS, ERB	
DATE:	14-Apr-05			WEATHER:	sunny, clear, co	Ol		
ormal circumstances	exist on the site?	Ye	s					
e site significantly dis	sturbed (Atypical Situation	on)? No	)					
e area a potential pro	oblem area?	No					0.0054 Ho	
PROGEOMORPHIC	CLASSIFICATION:			SIZE		.0629 Ac	0.0254 Ha	0% POW
GETATION		C	LASSIFICATION:	100% PEM	0 % PS		0 % PFO	02101
	WETL					UPLAND	STRATUM	INDICATO
SPE		STRATUM	INDICATOR	1	SPECIES		Н	NS
Juncus	effusus	н	FACW+	ì	or Gramineae sp	•	н	FACU
Poaceae or G	Gramineae sp.	н	ns Ns	Į.	acum officinale Malus sp.		т	NS
ercent of Dominant S re OBL, FACW, and			100%			- 14-15-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
	so	ILS				HYDROL	OGY	
MAPPED	SOIL UNIT:	Philo silt loam (Ph)					Groundwater seep a	and seasonal cature
HYDRIC	SOIL UNIT:	Holly		SOURCE OF H			CHORNOMERS 2000 (	AN OFFICE SERVICE
		RE SOIL SCORE		DEPTH OF SUR		u DIT		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SAT	E WATER IN SO	IL 711;		೯
0-6*	10YR4/2		sandy loam	DEPIH TO SAT	URATED SOIL: FIELD INDI	CATOBS		-
6-18*	10YR5/1	10YR3/6	sandy loam		PRIMARY IN		1	
	WET AND ER	NGE SOIL SCORE		-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
DEPIH	MATRIX	MOTTLE	TEXTURE	×	Inundation Saturated in	inner 12 in	urhes	
	MOLLINA	<u> Marias</u>	<del>15(11-211-2</del>	<b> </b>	Water Marks	5ppc: 72		
					Drift Lines			
					Sediment De	posits		
	UPLAND	SOIL SCORE		×	Drainage Pa			
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY	NDICATO	RS	
0-16"	10YR3/4		silt loam	×	Oxidized Ro	ot Channels	s in Upper 12 inch	es
				х	Water Staine	d Leaves		
					FAC-Neutral	Test		
			Hydric Soli	indicators	C			
	Histosol				Concretions  High Organic (	Justem in e	face Layers in Sandy	Soils
·····	Histic Epipedon				 Organic Streat			
	Sulfidic Odor			x	 Listed on Loca			
×	Aquic Moisture Regime Reducing Conditions				Listed on Loca			
<del></del>	Heaucing Conditions Gleyed or Low Chroma Co	lors			Other (Explain			
	.,	• •						
			Wetland De	etermination				
Hydrophytic Vegetation	Present?	Yes		Hydric Soil Pres	ent? Yes			
Wetland Hydrology Pro	esent?	Yes		Wetland?	Yes			
Wetland Hydrology Pn BASIS OF DELI	esent?	Yes		Hydric Soil Pres Wetland?				

		W	ETLAND DA	AFORM				
WETLAND ID:	Wetland 31			EVALUATOR:			O, ERB, GOO	
DATE:	20-Apr-05	5		WEATHER:	Partly cloudy an	d warm		
normal circumstance	es exist on the site?		Yes					
ne site significantly o	listurbed (Atypical Situat	on)?	No					
ne area a potential p	roblem area?		No					
DROGEOMORPHIC	CLASSIFICATION:			SIZE		1714 Ac	0.0693 Ha	0% POW
GETATION			CLASSIFICATION:	0% PEM	0 % PSS		100 % PFO	U% POW
	WETL	AND				UPLANI		INDICATO
SP	ECIES	STRATUM	INDICATOR		SPECIES		STRATUM SS	FACU
Juncu	s effusus	н	FACW+	1	sa multiflora			NS
Ca	rex sp.	н	85% FAC-OBL	]	or Gramineae sp.		H T	FAC-*
Acer	rubrum	т	FAC	1	nus strobus		T	FAC
Toxicoden	dron radicans	Н	FAC	1	ula populifolia inus serotina		Ť	FACU
ercent of Dominant:	Species that							
re OBL, FACW, and			100%			HYDROL	OGY	
AAA DOOR		HLS	- AttaD			TOROL	-	
		Asboro extremely stony lo	an (wpo)				Surface water runoff and s	easonal high groundy al saturation.
HTURI	C SOIL UNIT:	Norwich		SOURCE OF H	YDROLOGY: RFACE WATER:		300344	g Galleranovi.
DEPTH	-	RE SOIL SCORE MOTTLE	TEXTURE	1	E WATER IN SO	IL PIT:		
0-8.	MATRIX 10YB4/2	10YR4/6	sit toam	1	URATED SOIL:			
8-14"	10YR5/2	10YR5/6	silt loam		FIELD INDI	CATORS		
>14"	rock		rock	1	PRIMARY IN	CATORS	}	
		NGE SOIL SCORE		1	Inundation			
DEPTH	MATRIX	MOTTLE	TEXTURE	X Saturated in Upper 12 Inches				
					Water Marks			
					Drift Lines			
				×	Sediment De	posits		
	UPLAND	SOIL SCORE		х	Drainage Pa	tems		
DEPTH	MATRIX	MOTTLE	TEXTURE		SECONDARY	INDICATO	RS	
0-16*	10YR3/3		disturbed		Oxidized Ro	ot Channel	s in Upper 12 inche	<b>9</b> S
				×	Water Staine	d Leaves		
					FAC-Neutral	Test		
			Hydric Soil	Indicators				
	Histosol		, 3		Concretions			
	 Histic Epipedon				High Organic (	Content in Su	rtace Layers in Sandy	Soils
	- Sulfidic Odor				Organic Streat	cing in Sandy	Soils	
	Aquic Moisture Regime			х	Listed on Loca	l Hydric Soils	List	
х	Reducing Conditions				Listed on Natio	onal Hydric S	oils List	
	Gleyed or Low Chroma Co	olors			Other (Explain	n in Basis of I	Delineation)	
			Wetland De	etermination				
Hydrophytic Vegetati	on Present?	Yes		Hydric Soil Pre	sent? Yes			
Wetland Hydrology F	resent?	Yes		Wetland?	Yes .			
BASIS OF DEL	INEATION:							
Delineation folk drainage patter	ows the extent of sed ns, and sediment dep	ge, soft rush, and re posits.	d mpale community a	long topographic	low with low chr	oma mott	led soil and evide	ence of satura

		41 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E		The second secon	
WETLAND ID: Wetla	nd 32	E\	/ALUATOR:	PJD, ERB, G	G00
DATE:	20- <b>Ap</b> r-05	V	VEATHER:	Partly cloudy and warm	
Do normal circumstances exist on	the site?	Yes			
Is the site significantly disturbed (	Atypical Situation)?	No			
Is the area a potential problem are	ea?	No			
HYDROGEOMORPHIC CLASSIE	ICATION:		SIZE	: 1.3928 Ac 0	.5635 Ha

DROGEOMORPHIC CLAS							
GETATION			CLASSIFICATION:	0% PEM	0 % PSS	50 % PFO	50% POW
	WET	LAND			UPLAND		
SPECIES		STRATUM	INDICATOR	SPEC	XES.	STRATUM	INDICATOR
Acer rubrur	n	т	FAC	Acer ru	murd	т	FAC
Toxicodendron ra		н	FAC	Pinus si	trobus	T	FAC-*
Impatiens cap		н	FACW	Hemeroca	allis fulva	н	UPL
Carex sp		н	85% FAC-OBL	Carya	ovata	T	FACU-
Juncus effu		н	FACW+	1			
Poaceae or Gram		н	NS				
i subsect of Gram	mede op.						
ercent of Dominant Specie	s that						
re OBL, FACW, and FAC			100%				
	S	OILS			HYDROLO	OGY	
MAPPED SOI	L UNIT: V	Veilsboro extremely storry loa	m (WpB)				
HYDRIC SOI	UNIT:	Norwich		SOURCE OF HYDRO	DLOGY:	Stream flooding	and groundwater.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFAC	E WATER:		>2*
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	ATER IN SOIL PIT:		
inundated			inundated	DEPTH TO SATURA	TED SOIL:		
				, F	TELD INDICATORS		
				P	RIMARY INDICATORS		
	WETLAND F	RINGE SOIL SCORE		X h	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	X g	Saturated in Upper 12 In	ches	
				, v	Vater Marks		
				[	Orift Lines		
					Sediment Deposits		
	UPLAN	D SOIL SCORE		×	Orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATOR	RS	
0-4"	10YR3/3		silt loam	1 .	Oxidized Root Channels	in Upper 12 inche	\$
4-16*	10YR4/4		siit loam		Water Stained Leaves	• •	
					FAC-Neutral Test		
		P. VIIII VIII. VIIII. VIII. VIII. VIII. VIII. VIIII. VIIII. VIIII. VIII. VIII. VIIII. VIII. VIII. VIII. VIIII. VII	Hydric Soli	Indicators			
Histor	ol				Concretions		
Histic	Epipedon				High Organic Content in Surf	face Layers in Sandy 5	Soils
Sulfid	ic Odor				Organic Streaking in Sandy	Soils	
Aquic	Moisture Regime			×	Listed on Local Hydric Soils	List	
X Redu	cing Conditions			<del></del>	Listed on National Hydric So	ills List	
Gley	ed or Low Chroma (	Colors			Other (Explain in Basis of D	elineation)	
	·	·	Wetland De	etermination			
Hydrophytic Vegetation Pres	ent?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology Present	,	Yes		Wetland?	Yes		

Delineation follows the extent of red maple and sedge fringe with low chroma, mottled, and saturated soils with drainage patterns. Wetland is semipermanently inundated.

I	WETLAND ID:	Wetland 33		EVALUATOR:	PJI	D, BTB, ERB, GOO, KJS	
ı	DATE:	21-Apr-05		WEATHER: 0	Clear and cool		
	Do normal circumstances	exist on the site?	Yes				
	Is the site significantly dist	turbed (Atypical Situation)?	No				
	is the area a potential pro-	blem area?	No				
	HYDROGEOMORPHIC C	LASSIFICATION:		SIZE:	1.4497	Ac 0.5865 Ha	

PROGEOMORPHIC	CLASSIFICATION:			SIZE:	1.4497 Ac	0.5865 Ha	
GETATION		С	LASSIFICATION:	0% PEM	0 % PSS	100 % PFO	0% POW
	WE	TLAND			UPLAN	<b>I</b> D	
SPE	CIES	STRATUM	INDICATOR	SPEC	CIES	STRATUM	INDICATOR
	rubrum	Т	FAC	Berber	ris sp.	н	NS
Rhodode	endron sp.	SS	NS	Acer n	ubrum	т	FAC
Betula alle	eghaniensis	Т	FAC	Tsuga ca	nadensis	т	FACU
Impatien:	s capensis	н	FACW	Maianthemur	n canadense	Н	FAC-
Osmu	unda sp.	н	FAC - OBL				
Microstegi	ium vimineum	н	FAC	l			
Scirpus	cyperinus	н	FACW+				
rcent of Dominant S	Species that						
e OBL, FACW, and			100%				
	,	SOILS			HYDRO	LOGY	
MAPPEL	D SOIL UNIT:	Wellsboro extremely story loam	(WpB)				
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDRO	OLOGY:	Groundwater discharg	e and seasonal saturation
	WETLAND (	CORE SOIL SCORE		DEPTH OF SURFAC	E WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-6*	10YR3/2	10YR4/6	silt loam	DEPTH TO SATURA	TED SOIL:		
6-14 <b>"</b>	10YR5/1	10YR4/6	silt loam		FIELD INDICATORS	S	
				P	RIMARY INDICATOR	s	
	WETLAND F	RINGE SOIL SCORE		×	nundation		
DEPTH	MATRIX	MOTTLE	TEXTURE	×	Saturated in Upper 12	Inches	
0-6"	10YR2/2		organic/mineral		Water Marks		
6-12*	10YR5/2	10YR5/3 and 10YR4/6	silt loam		Drift Lines		
>12*	rock		rock		Sediment Deposits		
	UPLA	ND SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICAT	ORS	
0-4*	10YR3/3		silt loam		Oxidized Root Channe	els in Upper 12 inche	es
4-16"	7.5YR3/4		sit loam	×	Water Stained Leaves	i	
					FAC-Neutral Test		
	~		Hydric Soil	Indicators			
	Histosol				Concretions		
	Histic Epipedon			х	High Organic Content in S	urface Layers in Sandy	Soils
×	Sulfidic Odor				Organic Streaking in Sand	ly Soils	
· · · · · · · · · · · · · · · · · · ·	Aquic Moisture Regime	ı			Listed on Local Hydric Soi	ils List	
· · · · · · · · · · · · · · · · · · ·	Reducing Conditions				Listed on National Hydric	Soils List	
	Gleyed or Low Chroma	Colors			Other (Explain in Basis of	Delineation)	
	······································		Wetland De	termination			
Hydrophytic Vegetatio	n Present?	Yes		Hydric Soil Present?	Yes		
Wetland Hydrology Pr		Yes		Wettand?	Yes		

Delineation follows the extent of red maple community with evidence of saturation, drainage patterns, and water stained leaves with low chroma or sulfidic odor in soil.

WETLAND ID:	Wetland 37		EVALUATOR:		PJD, BTB, ERE	3, GOO, KJS	
DATE:	21-Apr-05		WEATHER: C	lear and cool			
Do normal circumstance	s exist on the site?	Yes					
Is the site significantly di	sturbed (Atypical Situation)?	No					
Is the area a potential pr	oblem area?	No					
	OL AGOUTIO ATION		SIZE:	0.01	189 Ac	0.0076 Ha	

	SSIFICATION:			SIZE:	0.0189 Ac	0.0076 Ha	
ETATION		1	CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETL	AND		UPLAND			
SPECIES	<u> </u>	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
Phalaris arundi	nacea	н	FACW	Taraxacum	officinale	н	FACU-
Juncus effu	sus	н	FACW+	Potentili	a sp.	н	NS
				Thuja occi	dentalis	т	FACW
rcent of Dominant Specie							
e OBL, FACW, and FAC			100%		HYDROI	OGY	. '///
		OILS (Ph)			11101101		
MAPPED SO		Philo silt loam (Ph)			100%	Seasonal flooding a	nd groundwater seeps.
HYDRIC SO		Holly		SOURCE OF HYDRO			
DEPTH		ORE SOIL SCORE	TEXTURE	DEPTH TO FREE WA			
0-10°	MATRIX 10YR3/2	10YR4/6	sit loam	DEPTH TO SATURA			
>10*		1017746	rock	l l	IELD INDICATORS	6	
210	rock		7001	į.	RIMARY INDICATOR		
	WETLAND FR	INGE SOIL SCORE		Ir	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	xs	aturated in Upper 12	Inches	
				v	Vater Marks		
					rift Lines		
					lediment Deposits		
	UPLAND	SOIL SCORE			Prainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SE	CONDARY INDICATO	ORS	
0-6*	10YR3/3		siit loam	(	Oxidized Root Channe	els in Upper 12 inche	us
6-12"	10YR3/6		siit loam		Water Stained Leaves		
					AC-Neutral Test		
<del></del>			Hydric Sol	Indicators			
Histo	sol				Concretions		
Histin	c Epipedon				High Organic Content in S	urface Layers in Sandy	Soils
Sulfi	dic Odor				Organic Streaking in Sand	y Soils	
Aqui	ic Moisture Regime			X	Listed on Local Hydric So	lis Liist	
X Red	ucing Conditions				Listed on National Hydric		
Gley	ed or Low Chroma C	olors			Other (Explain in Basis of	Delineation)	
			Wetland Do	etermination			
Hydrophytic Vegetation Pre	sent?	Yes		Hydric Soil Present?	Yes		
	17	Yes		Wetland?	Yes		

		***					
WETLAND ID:	Wetland 45		EVALUATOR:		PJD, BTB, ERB, GOO, KJS		
DATE:	21-Apr-05		WEATHER:	Clear and cool			
Do normal circumstance	es exist on the site?	Yes					
Is the site significantly d	fisturbed (Atypical Situation)?	No					
Is the area a potential p	roblem area?	No					
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE	Ξ: (	0.0382 Ac	0.0155 Ha	
		OL LOOKED LEICH	1000 DCM	0 % PS	s	0 % PFO	0% POW

PROGEOMORPHIC			No				
	CLASSIFICATION:			SIZE:	0.0382 Ac	0.0155 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETL	AND			UPLA	ND	
SPE	ECIES	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
	Gramineae sp.	Н	NS	Poaceae or Gr	amineae sp.	н	NS
				Taraxacum	officinale	н	FACU-
ercent of Dominant S	Species that						
re OBL, FACW, and	· · · · · · · · · · · · · · · · · · ·		#DIV/01	ļ			
	so	ILS			HYDRO	LOGY	
MAPPE	D SOIL UNIT:	Philo sill loam (Ph)		ļ			
HYDRK	C SOIL UNIT:	Holly		SOURCE OF HYDRO	LOGY:	Groundwater seep	and seasonal saturation.
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFACE	WATER:		
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
0-12"	10YR3/1	10YR4/3	silt loam	DEPTH TO SATURAT	TED SOIL:		
>12*	rock		rock	F	IELD INDICATOR	s	
				PI	RIMARY INDICATOR	RS	
	WETLAND FRI	NGE SOIL SCORE		In	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	× s	aturated in Upper 12	Inches	
					ater Marks		
					rift Lines		
					ediment Deposits		
	UPLAND	SOIL SCORE			rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICAT	ORS	
0-8"	10YR3/3	MOTTES.	silt loam				
8-16"	10YR3/4		sitt icam			els in Upper 12 inche	~
0-10	101134		SM KAZIII		Vater Stained Leave	s	
					FAC-Neutral Test		
			Hydric Soli		Concretions		
	Histosol					Surface Layers in Sandy	Soile
	Histic Epipedon						3015
	Sulfidic Odor				Organic Streaking in San		
	-				Listed on Local Hydric So		
	Aquic Moisture Regime			4	Listed on National Hydric		
×	Aquic Moisture Regime Reducing Conditions						
×	-	Nors			Other (Explain in Basis o		
×	Reducing Conditions	Nors	Wetland De				
X Hydrophytic Vegetatic	Reducing Conditions Gleyed or Low Chroma Co	Yes	Wetland De		Other (Explain in Basis o		

WETLAND ID:			VEILAND DA				
	Wetland 55			EVALUATOR:	PJD, BTB, AJI	L, RCL, ERB, GOO	, <b>KJ</b> S
DATE:	22-Ap	r-05		WEATHER: 50	% overcast and 50 degre	ees	
normal circumstance			Yes				
e site significantly di		uation)?	No				
e area a potential pr	, , , ,	•	No				
PROGEOMORPHIC				SIZE:	0.0320 Ac	0.0129 Ha	
GETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WF	TLAND			UPLAND	)	
SPE	CIES	STRATUM	INDICATOR	SPE	CIES	STRATUM	INDICATOR
	ex sp.	Н	85% FAC-OBL	Poaceae or G	Gramineae sp.	н	NS
	Gramineae sp.	н	NS	l	um sp.	н	NS
, 525525 67	э. а						
ercent of Dominant S	Species that						
re OBL, FACW, and	•		100%				
		SOILS			HYDROL	OGY	
MAPPEI	O SOIL UNIT: Oqua	ga-i.ackawanna extremely s	tony loams (OxC)				
	SOIL UNIT:			SOURCE OF HYDR	OLOGY:	Groundw	veter seep.
	WETLAND	CORE SOIL SCORE		DEPTH OF SURFAC			1"
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE W	ATER IN SOIL PIT:		
0-4*	10YR5/2	10YR5/4	silty clay loam	DEPTH TO SATURA	ATED SOIL:		
4-12"	10YR5/1	10YR5/4	silty clay loam		FIELD INDICATORS		
				} ,	PRIMARY INDICATORS		
	WETLAND	FRINGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12 In	ches	
					Water Marks		
					Drift Lines		
					Sediment Deposits		
	UPLA	ND SOIL SCORE		×	Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	Si	ECONDARY INDICATOR	RS	
0-4°	10YR4/4		silt loam		Oxidized Root Channels	in Upper 12 inche	s
4-12"	10YR5/4		silt loam		Water Stained Leaves		
>12*	rock		rock		FAC-Neutral Test		
			Hydric Soil				
	Histosol			x	Concretions	4 1 m/am :- 6 6	:olic
	Histic Epipedon			<u></u>	High Organic Content in Sur		AURO .
×	Sulfidic Odor				Organic Streaking in Sandy:		
	Aquic Moisture Regime	•			Listed on Local Hydric Soils		
	Reducing Conditions				Listed on National Hydric Sc		
	Gleyed or Low Chroma	a Colors			Other (Explain in Basis of D -	retineation)	
			Wetland De	termination	Voc		
Hadrook 4:- V	- D			Hydric Soil Present?	160		
Hydrophytic Vegetatio Wetland Hydrology Pr		Yes Yes		Wetland?	Yes		

WETLAND ID:	Wetland 71		EVALUATOR:	PJD, BT	B, RCL, ERB		
DATE:	28-Apr-05		WEATHER: 50 de	50 degrees with rain in past 24 hours			
Do normal circumstances	exist on the site?	Yes					
Is the site significantly dist	urbed (Atypical Situation)?	No					
Is the area a potential prol	blem area?	No					
HYDROGEOMORPHIC C	CLASSIFICATION:		SIZE:	0.0846 Ac	0.0342 Ha		

SETATION							ON DOM
SETATION			CLASSIFICATION:	100% PEM	0 % PSS	0 % PFO	0% POW
	WETLAND				UPLAND		
SPECIES	S	TRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
Poaceae or Gramineae	sp. H		NS	Poaceae or Gr	amineae sp.	н	NS
Trifolium sp.	н		NS	Trifoliur	n sp.	н	NS
rcent of Dominant Species tha	t						
e OBL, FACW, and FAC			#DIV/0!				
	SOILS				HYDROLO	)GY	
MAPPED SOIL UN	IT: Bracevil	le gravelly loam (f	BrA)				
HYDRIC SOIL UN	Π:	Restord		SOURCE OF HYDRO	LOGY:	Hiside seep discharge	and seasonal saturation.
W	ETLAND CORE SOI	LSCORE		DEPTH OF SURFACE	WATER:		
DEPTH M	ATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
0-12* 1	0YR4/2	10YR4/6	sit loam	DEPTH TO SATURAT	TED SOIL:		
>12'	rock		rock	F	IELD INDICATORS		
				PI	RIMARY INDICATORS		
W	TLAND FRINGE SC	DILSCORE		In	undation		
DEPTH N	IATRIX	MOTTLE	TEXTURE	xs	aturated in Upper 12 Inc	ches	
				v	later Marks		
					rift Lines		
				s	ediment Deposits		
	UPLAND SOIL SO	CORE		X E	rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	CONDARY INDICATOR	s	
0-8"	10YR4/3	10YR4/6	silt loam		xidized Root Channels	in Upper 12 inche	s
>8"	rock		rock		Vater Stained Leaves		
				F	AC-Neutral Test		
			Hydric Soil	Indicators			
Histosol				C	Concretions		
Histic Epipe	don			1	ligh Organic Content in Surf	ace Layers in Sandy S	Soils
Sulfidic Od	эг				Organic Streaking in Sandy S	iolis	
Aquic Mois	ure Regime			х і	isted on Local Hydric Soils I	ist	
X Reducing (	conditions			1	isted on National Hydric Soi	lis List	
Gleyed or i	ow Chroma Colors				Other (Explain in Basis of De	elineation)	
		<del>,</del> ,	Waland	torminatio -			
Hydrophytic Vegetation Present?	,	res	welland De	termination  Hydric Soil Present?	Yes		
		/es			Yes		
Wetland Hydrology Present?		65		AAGIRI O.	105		

**Mount Airy Lodge** WETLAND DATA FORM PJD, BTB, AJL EVALUATOR: WETLAND ID: Wetland 73 WEATHER: Sunny and hot DATE: 11-May-05 Yes Do normal circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? Νo is the area a potential problem area? 0.0092 Ac SIZE: HYDROGEOMORPHIC CLASSIFICATION: 0% POW 0 % PFO 100% PEM 0 % PSS CLASSIFICATION: VEGETATION UPLAND WETLAND STRATUM INDICATOR SPECIES INDICATOR **SPECIES** STRATUM FACU-Taraxacum officinale 85% FAC-OBL Carex sp. Poaceae or Gramineae sp. н NS Trifolium sp. н FACU Plantago major NS Veronica sp. Percent of Dominant Species that 100% are OBL, FACW, and FAC HYDROLOGY SOILS Philio silt loam (Ph) MAPPED SOIL UNIT: SOURCE OF HYDROLOGY: HYDRIC SOIL UNIT: Holly DEPTH OF SURFACE WATER: WETLAND CORE SOIL SCORE DEPTH TO FREE WATER IN SOIL PIT: DEPTH MOTTLE TEXTURE MATRIX DEPTH TO SATURATED SOIL: Organic

FIELD INDICATORS 2.5Y3/2 10YR4/4 4-16" PRIMARY INDICATORS WETLAND FRINGE SOIL SCORE Inundation DEPTH MATRIX MOTTLE TEXTURE Saturated in Upper 12 Inches 0-16" 10YR2/1, 10YR4/4 sit loam Water Marks x Drift Lines Sediment Deposits UPLAND SOIL SCORE Drainage Patterns SECONDARY INDICATORS DEPTH MATRIX TEXTURE Oxidized Root Channels in Upper 12 inches 10YR4/3 Water Stained Leaves 4-12 10YR4/4 rock >12" rock FAC-Neutral Test

Wetland?

## Wetland Hydrology Present? BASIS OF DELINEATION:

Delineation follows extent of sedge community with debris lines along floodplain bench with low chroma, mottled and saturated soils.

Yes

WETLAND ID:	POW 004		EVALUATOR:	PJD, BTB, KJS, ERB		
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees		
Do normal circumstances	s exist on the site?	Yes				
is the site significantly dis	sturbed (Atypical Situation)?	No				
Is the area a potential pr	oblem area?	No				
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.4700 Ac	0.1902 Ha	

	CLASSIFICATION:			SIZE:	0.4700 Ac	0.1902 Ha	
EGETATION CLASSIFICATION:				0% PEM	0%PSS	0 % PFO	100% POW
WETLAND					UPLA	ND	
SPE	CIES	STRATUM	INDICATOR	SPEC	ES	STRATUM	INDICATOR
				Poaceae or Gra	amineae sp.	н	NS
				Trifoliun	sp.	Н	NS
				1			
				ļ			
				ļ			
				1			
rcent of Dominant S	pecies that						
e OBL, FACW, and			#DIV/0!	ļ			
	S	OILS			HYDRO	LOGY	
MAPPE	SOIL UNIT: N	forms extremely storny silt loan	n (MoB)				
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDRO	LOGY:	Surface w	ater collection.
	WETLAND C	ORE SOIL SCORE		DEPTH OF SURFACE	WATER:		>2'
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
Inundated >2"				DEPTH TO SATURAT	TED SOIL:		
				F	IELD INDICATOR	s	
				PF	RIMARY INDICATOR	as	
	WETLAND FF	RINGE SOIL SCORE		XIn	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	aturated in Upper 12	Inches	
				w	ater Marks		
				D	rift Lines		
				s	ediment Deposits		
	UPLANI	SOIL SCORE		D	rainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	SEC	CONDARY INDICAT	ORS	
0-4"	10YR4/4		sit ioam	c	xidized Root Channe	els in Upper 12 inche	es .
4-12*	10YR5/4		sit loam	v	Vater Stained Leaves	5	
>12"	rock		rock	F	AC-Neutral Test		
	<del></del>						
			Hydric Soil	Indicators			
	Histosol				Concretions	Surface Laurencia Combu	Coile
<del></del>	Histic Epipedon			<del></del>		Surface Layers in Sandy	3013
	Sulfidic Odor				Organic Streaking in San		
	Aquic Moisture Regime				isted on Local Hydric So		
	Reducing Conditions  Gleyed or Low Chroma C	No. 10		<del></del>	isted on National Hydric Other (Explain in Basis o		
	Gleyed or Low Chroma C	CHOIS			энег (ежрынгы вазы о	Обивация	
	-		W-N	etermination			
	-		Wetiand LX				
Hydrophytic Vegetatio	n Present?	No	Wetiand De	Hydric Soil Present?	Yes		
Hydrophytic Vegetatio Wetland Hydrology Pr		No Yes	Wetland De	Hydric Soil Present? \ Wetland?	Yes No		

				NAME OF TAXABLE PARTY OF TAXABLE PARTY.	
WETLAND ID:	POW 005		EVALUATOR:	PJD, BTE	3, KJS, ERB
DATE:	12-Apr-05		WEATHER:	sunny, clear, 50 degrees	
Do normal circumstances	s exist on the site?	Yes			
ls the site significantly dis	sturbed (Atypical Situation)?	No			
is the area a potential pro	oblem area?	No			
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.2400 Ac	0.0971 Ha

ETATION	***************************************		CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
	WETL	AND		[	UPLA	ND	
SPE	CIES	STRATUM	INDICATOR	SPECIES STRATUM INDICA			
	<del></del>			Poaceae or Gra	amineae sp.	н	NS
				Trifoliun	n sp.	н	NS
				1			
				İ			
				1			
cent of Dominant S	pecies that						
OBL, FACW, and	FAC		#DIV/0!				
	so	HLS			HYDRO	DLOGY	
MAPPED	SOIL UNIT: Mo	rris extremely storny silt to	em (MoB)				
HYDRIC	SOIL UNIT:	Norwich		SOURCE OF HYDRO	LOGY:	Surface w	ater collection.
	WETLAND CO	RE SOIL SCORE		DEPTH OF SURFACE	WATER:		>2'
<u>DEPTH</u>	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
Inundated >2"				DEPTH TO SATURAT			
				F	IELD INDICATOR	RS	
				PF	RIMARY INDICATO	RS	
	WETLAND FRI	NGE SOIL SCORE		XIn	undation		
DEPTH MATRIX		MOTTLE	TEXTURE	s	aturated in Upper 12	2 Inches	
				w	ater Marks		
				□	rift Lines		
				s	ediment Deposits		
		SOIL SCORE			rainage Patterns	rome	
DEPTH	MATRIX	MOTTLE	TEXTURE	i '	CONDARY INDICAT		
0-4"	10YR4/4		siit loam			nels in Upper 12 inche	×S
4-12*	10YR5/4		sit ioam		Vater Stained Leave	es .	
>12*	rock		rock	F	AC-Neutral Test		
			Hydric Sol	Indicators			
1	Histosol		11,4110 00.		Concretions		
	Histic Epipedon				ligh Organic Content in	Surface Layers in Sandy	Soils
····	Sulfidic Odor				Organic Streaking in Sar	ndy Soils	
	Aquic Moisture Regime			L	isted on Local Hydric S	oils List	
	Reducing Conditions				isted on National Hydric	: Soils List	
	Gleyed or Low Chroma Co	lors			Other (Explain in Basis	of Delineation)	
			Wetland De	etermination			
				Hydric Soil Present?	Yes		
Hydrophytic Vegetation	Present?	No					

			Mount Ains	Lodge			
		v	Mount Airy VETLAND DA				
WETLAND ID:	POW 006			EVALUATOR:	PJD,	BTB, KJS, ERB	
DATE:	12-Apr-05			WEATHER: sunn	y, clear, 50 degrees		
o normal circumstances	exist on the site?		Yes				
the site significantly dis	sturbed (Atypical Situation)?		No				
the area a potential pro	obiem area?		No				
YDROGEOMORPHIC	CLASSIFICATION:			SIZE:	1.8500 Ac	0.7485 Ha	
EGETATION			CLASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POV
	WETLAND				UPLAND	)	
SPE	CIES	STRATUM	INDICATOR	SPECIES		STRATUM	INDICATO
				Poaceae or Gra	amineae sp.	н	NS
				Trifoliun	n sp.	н	NS
Percent of Dominant Sp	•						
are OBL, FACW, and			#DIV/0!		HYDROL		
<del></del>	SOILS				HYDHOL		·····
	SOIL UNIT: Oquaga-Lacka	wanna extremely s	stony loams (OxB)	1		Surface w	ater collection.
HYDRIC	SOIL UNIT:		<u> </u>	SOURCE OF HYDRO DEPTH OF SURFACE			>2
	WETLAND CORES		****	DEPTH OF SORFACE			
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO SATURAT			
Inundated >2'				DEFINIO SATURAL	LD JOIL		
					IEI D INDICATORS		
				1	IELD INDICATORS		
	WETLAND FRINGE	SOIL SCOPE		PI	IELD INDICATORS RIMARY INDICATORS undation		

	WETLAND FRING	GE SOIL SCORE		FIELD INDICATORS  PRIMARY INDICATORS  X Inundation
<u> ДЕРТН</u>	MATRIX	MOTTLE	TEXTURE	Saturated in Upper 12 InchesWater MarksDrift Lines
DEPTH	UPLAND S MATRIX	OIL SCORE MOTTLE	TEXTURE	Sediment Deposits  Drainage Patterns  SECONDARY INDICATORS
0-4" 4-12" >12"	10YR4/4 10YR5/4 rock		sät loam sät loam rock	Oxidized Root Channels in Upper 12 inches Water Stained Leaves FAC-Neutral Test
	<del></del>	4	Undala Call I	

#### Hydric Soll Indicators Concretions Histosol -High Organic Content in Surface Layers in Sandy Soils Histic Epipedon Organic Streaking in Sandy Soils Sulfidic Odor Listed on Local Hydric Soils List Aquic Moisture Regime Listed on National Hydric Soils List Reducing Conditions Other (Explain in Basis of Delineation) Gleyed or Low Chroma Colors Wetland Determination Hydric Soil Present? Yes Hydrophytic Vegetation Present? No

Wetland? No

# Wetland Hydrology Present? BASIS OF DELINEATION:

Delineation follows extent of topographic low and follows waters edge.

Yes

WETLAND ID:	POW 013		EVALUATOR:	PJD, BT	TB, KJS, ERB
DATE:	12-Apr-05		WEATHER: sunny,	clear, 50 degrees	
Do normal circumstances	s exist on the site?	Yes			
Is the site significantly dis	sturbed (Atypical Situation)?	No			
Is the area a potential pr	oblem area?	No			
HYDROGEOMORPHIC	CLASSIFICATION:		SIZE:	0.6000 Ac	0.2428 Ha

ROGEOMORPHIC							
	CLASSIFICATION:			SIZE:	0.6000 Ac		100% POW
SETATION		С	LASSIFICATION:	0% PEM	0 % PSS	0 % PFO	100% POW
	WETLAN	(D			UPLA		"IDIOATOR
SPI	ECIES	STRATUM	INDICATOR	SPEC	IES	STRATUM	INDICATOR
				Poaceae or Gr	amineae sp.	н	NS
				Trifolius	n sp.	н	NS
				ľ			
				Ì			
				1			
rcent of Dominant S	Species that						
e OBL, FACW, and	FAC		#DiV/01				
	SOIL	.s			HYDRO	LOGY	
MAPPE	D SOIL UNIT: Lackan	wanna extremely stony loa	m (LbB)				
HYDRIC	C SOIL UNIT:			SOURCE OF HYDRO	LOGY:	Surface w	ater collection.
	WETLAND COR	E SOIL SCORE		DEPTH OF SURFACE	E WATER:		>2'
DEPTH	MATRIX	MOTTLE	TEXTURE	DEPTH TO FREE WA	TER IN SOIL PIT:		
inundated >2'				DEPTH TO SATURA	FED SOIL:		
				F	IELD INDICATOR	s	
				PI	RIMARY INDICATO	RS	
	WETLAND FRING	GE SOIL SCORE		1 × 1	undation		
DEPTH	MATRIX	MOTTLE	TEXTURE		aturated in Upper 12	2 Inches	
	GHATTAG				Vater Marks		
					orift Lines		
					Sediment Deposits		
	LIPLAND S	OIL SCORE			Orainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE		CONDARY INDICAT	ORS	
0-8"	10YR4/3	10YR4/6	siit loam		Outdined Seet Chang	ole in Unner 12 inch	96
>8"	rock	7077700	rock	Oxidized Root Channels in Upper 12 inches			
~	<b></b>				Water Stained Leave		
					FAC-Neutral Test		
			thirdula Cal	Lindicators	<u></u>		
	15.		nyuric soi	Indicators	Concretions		
	Histosol —					Surface Layers in Sandy	Soils
	Histic Epipedon —						-
	Sulfidic Odor				Organic Streaking in Sar		
	Aquic Moisture Regime				Listed on Local Hydric S		
	Reducing Conditions				Listed on National Hydric		
	Gleyed or Low Chroma Colo	rs .			Other (Explain in Basis	of Delineation)	
			Wetland D	etermination			
Hydrophytic Vegetation	on Present?	No		Hydric Soil Present?	Yes		
<b>L</b>	resent?	Yes		Wetland?	No		
Wetland Hydrology P	INEATION:						
BASIS OF DEL							
BASIS OF DEL		in law and faller	mbara ade-				
BASIS OF DEL	ows extent of topograph	iic low and follows w	raters edge.				
BASIS OF DEL	ows extent of topograph	iic low and follows w	raters edge.				

WETLAND ID:	POW 014		EVALUATOR:	PJD, BT	B, KJS, ERB	
DATE:	12-Apr-05		WEATHER: sunny	, clear, 50 degrees		
Do normal circumstances e	xist on the site?	Yes				
ls the site significantly distu	rbed (Atypical Situation)?	No				
Is the area a potential prob	lem area?	No				
HYDROGEOMORPHIC CI	ASSIFICATION:		SIZE:	0.4700 Ac	0.1902 Ha	

ROGEOMORPHIC	CLASSIFICATION:			SIZE:	0.4700 Ac	0.1 <del>9</del> 02 Ha	
EGETATION CLASSIFICATION:			0% PEM	0 % PSS	0 % PFO	100% POW	
	WETLA	ND			UPLA	ND .	
SPI	COLES	STRATUM	INDICATOR	Poaceae or G	CIES Gramineae sp. um sp.	<u>STRATUM</u> H H	INDICATOR NS NS
					<b></b>		
rcent of Dominant (	Species that						
e OBL, FACW, and			#DIV/0!		UVDDO	OCY	
	SOI		(1 b.D)	-	HYDRO	LOGY	
		awanna extremely storry los	am (LDB)			Surface w	ater collection.
HYUHI	SOIL UNIT:	RE SOIL SCORE		SOURCE OF HYDR DEPTH OF SURFACE			>2
DEPTH	MATRIX	MOTTLE	TEXTURE	ı	VATER IN SOIL PIT:		
inundated >2"	HISTORY	1115,1		DEPTH TO SATURA			
				-	FIELD INDICATORS	5	
				1	PRIMARY INDICATOR	ıs	
	WETLAND FRIN	NGE SOIL SCORE		×	Inundation		
DEPTH	MATRIX	MOTTLE	TEXTURE		Saturated in Upper 12	inches	
					Water Marks		
					Drift Lines		
				_	Sediment Deposits		
		SOIL SCORE			Drainage Patterns		
DEPTH	MATRIX	MOTTLE	TEXTURE	s	ECONDARY INDICAT		
>8* 0-8*	10YR4/3	10YR4/6	silt loam rock		Oxidized Root Channe		es
26	rock		iocx		_Water Stained Leaves _FAC-Neutral Test	<b>.</b>	
<del>- 4-11</del>			Hydric Sol	Indicators			
	Histosol		nyano co.	Moloutoro	Concretions		
	- Histic Epipedon				 High Organic Content in S	iurtace Layers in Sandy	Soils
	- Sulfidic Odor				<ul> <li>Organic Streaking in Sand</li> </ul>	ty Soils	
	 Aquic Moisture Regime				Listed on Local Hydric So	ils List	
	Reducing Conditions				Listed on National Hydric	Soils List	
	Gleyed or Low Chroma Col	ors			Other (Explain in Basis of	Pelineation)	
		<del>***</del>	Wetland D	etermination			
Hydrophytic Vegetati		No		Hydric Soil Present?			
Wetland Hydrology P		Yes		Wetland?	No		
BASIS OF DEL	INEATION:						
Delineation folk	ows extent of topograp	hic low and follows v	vaters edge.				

APPENDIX F - RESUME

# **BENJAMIN T. BERRA Environmental Scientist**



#### **EDUCATION:**

M.S., Geoenvironmental Studies, 1998, Shippensburg University B.S., Geoenvironmental Studies, 1996, Shippensburg University

Throughout the past 7 years, Mr. Berra's project experience has focused in the areas of jurisdictional wetland identification and delineation, the study and evaluation of aquatic ecosystems, wetland mitigation design/monitoring, stream and river classification, threatened/endangered/rare species investigations, and environmental permitting and documentation.

Mr. Berra has completed many wetland identification / delineation, and permitting projects for transportation, infrastructure, commercial, industrial, and residential development projects in Pennsylvania, New York, Maryland, and North Carolina. He has experience in wetland function evaluation using the USACOE Wetland Evaluation Technique II, Hydrogeomorphic Classification, and New England USACOE Descriptive Method. He has experience in the identification of potential wetland mitigation sites and their subsequent design, as well as experience in natural and constructed wetland monitoring.

Mr. Berra is on the U.S. Fish and Wildlife Service/Pennsylvania Fish and Boat Commission list of Recognized Qualified Bog Turtle Surveyors (for Pennsylvania). Mr. Berra has conducted numerous potential habitat evaluations and field surveys for the bog turtle (*Clemmys muhlenbergii*), a Federally listed threatened species and State listed endangered species, and has experience with radio telemetry research for the species.

Mr. Berra has also been involved with the biological evaluations for benthic macroinvertebrates, fish, and freshwater mussel communities, ambient water quality evaluations, and physical aquatic habitat evaluations. He has participated in surveys and research for the green floater (*Lasmigona subviridis*), a State listed rare species and other freshwater mussels; the rough greensnake (*Opheodrys aestivus*), a State listed threatened species, and numerous other amphibians and reptiles associated with wetlands, vernal pools, and waterways. Additionally, Mr. Berra has experience in the design, restoration, and enhancement of streams using the methodologies and techniques of Applied River Morphology (fluvial geomorphology.)

#### PROFESSIONAL EXPERIENCE\_

Field Crew Leader, Wetland Delineator, and Water Quality/Aquatic Resources Assistant, Route 322-B02, Corridor O Project, Centre and Clearfield County, PA - Responsible for the daily organization and operation of wetland delineation crew, identification and delineation of wetlands within the project area, and assisting with the water quality and aquatic sampling evaluations. Conducted field views, coordination, and meetings with Pennsylvania DOT, state and federal regulatory agencies, and the general public regarding project development, and alternative modification and selection. Assisted staff and teaming consultants in the development of environmental documentation and reports. Approximately 1,300 wetlands and 200 watercourses were identified and delineated in the 12,000 acre study area.

Bog Turtle Species Specialist - Conducted potential habitat investigations, field surveys, and radio telemetry research for the species throughout Pennsylvania, Maryland, and New Jersey. This includes characterization of the existing vegetative community, hydrologic regime, evaluation of the soil composition, metapopulation analysis, and hydrologic connectivity assessments. While assisting other recognized qualified surveyors, he has located numerous bog turtles at various sites, along with countless other herptofauna. Mr. Berra has also received training from the USFWS and the Pennsylvania Fish and Boat Commission regarding the species.

BENJAMIN T. BERRA Environmental Scientist Page 2 of 2

Field Crew Leader, Wetland Delineator, and Water Quality/Aquatic Resources Assistant, State Route 2001, sections 401/402, improvement Project, Pike County, PA - Responsible for the daily organization and operation of wetland delineation crew, identification and delineation of wetlands, and assisting with the water quality and aquatic sampling evaluations. Approximately 125 wetlands and 40 watercourses were identified and delineated within the project area.

Wetland Delineator, Surveyor, and Water Quality/Aquatic Resources Assistant, Central Susquehanna Valley Transportation Improvement Project, Snyder County, PA - Responsible for the identification and delineation of wetlands within the project area. Also responsible for the GPS surveying of delineated wetlands, and assisting with the water quality and aquatic sampling evaluations.

**Field Crew Leader, Wetland Delineator, Freestone Golf Course, Centre County, PA** - Responsible for field reconnaissance, and wetland delineations on this 270 acre site. More than 90 wetlands were delineated along with over 50 watercourses. Also assisted with the project development and layout, and permit application package and regulatory agency coordination.

Wetland Delineator, Surveyor, and Water Quality/Aquatic Resources Assistant, Route 15 Construction Project, Tioga County, PA and Steuben County, NY - Responsible for the identification and delineation of wetlands within the project area, the surveying of delineated wetlands, and assisting with the water quality and aquatic sampling evaluations. Mr. Berra also conducted the preliminary analysis and investigations for potential wetland mitigation sites.

Project Manager and Wetland Delineator, Hershey Trust Property #148, Conewago Township, Dauphin County, PA - Responsible for assisting with proposal development, initial field reconnaissance, and wetland delineations on this 500+ acre site. More than 85 acres of wetlands were delineated. Was also responsible for the preparation of the Wetlands Identification / Delineation and Functional Assessment Report.

Aquatic Resources Assistant, Patapsco River Watershed Water Quality Management Plan, Baltimore County, MD - Conducted a fluvial geomorphological assessment based upon Rosgen Classification methodology of the Patapsco River in support of Baltimore County's effort to determine existing and future watershed problems and development measures for the reestablishment of stream stability and reduction of non-point source pollution.

**Aquatic Resources Assistant, Rush Township Aquatic Survey, Schuylkill County, PA** - Responsible for assisting with the in-field sampling for water quality and benthic macroinvertebrates at select sites on township streams. Also assisted with the lab processing of the benthic macroinvertebrates, and the report preparation.

Aquatic Resources and Wetland Monitoring Assistant, S.R. 0220, Sections C10, C11, and C12 Highway Improvement Project, Centre and Blair Counties, PA - Responsible for assisting in the establishment of permanent monitoring points throughout the South Bald Eagle Creek, North Bald Eagle Creek, and Buffalo Run Watersheds. Included with the monitoring were evaluations of stream flow, ambient water quality, aquatic biota, and fluvial geomorphic conditions. Wetland monitoring consists of routine monitoring of conditions in select wetlands (pre, during, post construction).

**Pennsylvania Department of Conservation and Natural Resources** - While a student, Mr. Berra was employed for three years with the Bureau of Recreation and Conservation, Division of Conservation Partnerships. His duties included coordinating and administering Rivers Conservation Grants for the Rivers Conservation Program, and performing Scenic River Reviews for projects located within the corridors of Pennsylvania's designated Scenic and Priority 1A Rivers.