

# **Mount Airy Lodge Project Paradise Township, Monroe County**

## **Environmental Resources Report**

**Prepared For**

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



**Prepared By**

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With Pennsylvania Offices in  
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**August 2005**



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1605054

**MOUNT AIRY LODGE PROJECT  
PARADISE TOWNSHIPS, MONROE COUNTY  
ENVIRONMENTAL RESOURCES REPORT**

**PREPARED FOR**

**MOUNT AIRY NO 1. LLC.  
42 WOODLAND ROAD  
MOUNT POCONO, PENNSYLVANIA 18344  
AND  
CECO ASSOCIATES, INC.  
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## **I. EXECUTIVE SUMMARY**

## I. EXECUTIVE SUMMARY

Studies were completed to identify the different environmental resources as outlined in Paradise Township Existing Resource and Site Analysis Plan (ERSAP) requirements: Ordinance Number 131-38, including Wetlands, Waterways, Vegetative Cover, Historic Resources, Trails, and Threatened and Endangered Species. The results of the studies are summarized below. The Environmental Resource Map (existing conditions) is attached in Appendix A and the Proposed Site Development Map is attached in Appendix B.

### **Wetlands, Streams, Ponds, and Related Features:**

A detailed wetland delineation study was completed in the Spring of 2005 on the 970-acre project study area. The results of the study included the delineation of 73 wetlands, 35 watercourse channels, 14 open water ponds, 1 lake, 7 vernal pools, and 3 seeps. The majority of the project area is located within the Forest Hills Run Watershed, with smaller portions occurring within the surrounding Paradise Creek and Indian Run Creek watersheds. All of these watersheds are protected by the Pennsylvania Department of Environmental Protection (PA DEP) as High-Quality Cold Water Fishes watersheds. The extent of the wetlands, streams, ponds, and related features is illustrated on the Environmental Features map for the study area (Appendix A). Details regarding the Wetland Delineation Study are described in the *Mount Airy Lodge Project – Wetland Identification/Delineation Report, June 2005* (Appendix C). The Wetland Identification/Delineation Report was forwarded to the U.S. Army Corps of Engineers (USACE) in June 2005 for their review and to request a Jurisdictional wetland determination field view. The jurisdictional wetland determination field view is scheduled with the USACE in late August-early September 2005. The proposed development project will require three stream crossings over Forest Hills Run and an adjacent tributary associated with the roadway improvements to Woodland Road and temporary disturbances to wetlands and watercourses associated with utility crossings.

### **Vegetative Cover:**

Vegetative cover, including land cover and land use compartments, is identified on the Environmental Resource Map for the project (Appendix A). The majority of the project study area consists of resort development, forestland, and wetlands. In general, the forestlands are of the same relative age, type, and species composition. The forestlands consist of deciduous woodland species characterized by red maple, red oak, white oak, mountain laurel, low bush blueberry, and ferns. The proposed development project will impact 12 acres of forestland, including 251 trees with a dbh greater than 18 inches.

### **Historic Resources:**

No known Historic Resources were identified within the project area. Coordination with the Pennsylvania Historic Museum Commission (PHMC) was initiated for the project. The

PHMC has provided its archaeological clearance for the proposed development project and has requested additional information regarding the historic resource evaluation for the project.

**Trails:**

No public trails were identified within the project area. U.S.G.S. quadrangle mapping identifies two potential trails along the northern end of the 970-acre project study area. The locations of the potential trails are provided on the attached mapping (Appendix A). These are not identified as local, regional, or state trails.

**Threatened and Endangered Species:**

The U.S. Fish and Wildlife Service (USFWS) identified a potential conflict with the bog turtle, a federal threatened species. Copies of the threatened and endangered species coordination letters are provided in Appendix E. A Phase I Bog Turtle Habitat Assessment was completed for the project and determined that there was no bog turtle habitat within the proposed development area and the surrounding areas. The results were submitted to the USFWS and Pennsylvania Fish and Boat Commission (PFBC). Those agencies reviewed and concurred that there is no bog turtle habitat within the proposed development and surrounding areas. Therefore, there are no potential conflicts with the bog turtle for the project. Additionally, based on the agency coordination for threatened and endangered species, there are no potential conflicts with threatened or endangered species for the project.

The methods and results of the assessments completed to address each summarized environmental resource and the impacts from the proposed development are described in Section III.

## **II. INTRODUCTION**

## II. INTRODUCTION

### SCOPE OF STUDY



Skelly and Loy, Inc. is providing this report to document the environmental resource investigations completed for the Mount Airy Lodge Project. The investigations were completed to document the environmental constraints associated with the following Paradise Township Existing Resource and Site Analysis Plan (ERSAP) requirements.

- 131-38.C. Delineation of ponds, lakes, streams, wetlands, vernal pools, and natural drainage swales
- 131-38.E. Vegetative cover conditions on the property according to general cover type including cultivated land, permanent grass land, old field, hedgerow, woodland, and wetland; trees with a caliper in excess of eighteen inches; and the actual canopy line of existing trees and woodlands
- 131-38.H. Locations of historically significant sites or structures on the tract and on any abutting tract
- 131-38.I. Locations of trails that have been in public use (pedestrian, equestrian, bicycle, etc.)
- 131-38.K. Location, delineation and identification of any resource included within the Pennsylvania Natural Diversity Inventory (PNDI)

Skelly and Loy's investigations involved a combination of the review of existing secondary source information and detailed field studies. Our review focused on a 970-acre study area associated with Mount Airy Lodge and Golf Course property and the Strickland property. Figure 1 illustrates the limits of the 970-acre project study area and the surrounding area. The methods and results of the evaluations are described in the task description narratives. In addition, the impacts associated with the proposed New Mount Airy Lodge Development are described for the different environmental features listed above.



**Legend**

-  Study Area
-  Non-Inclusion Areas

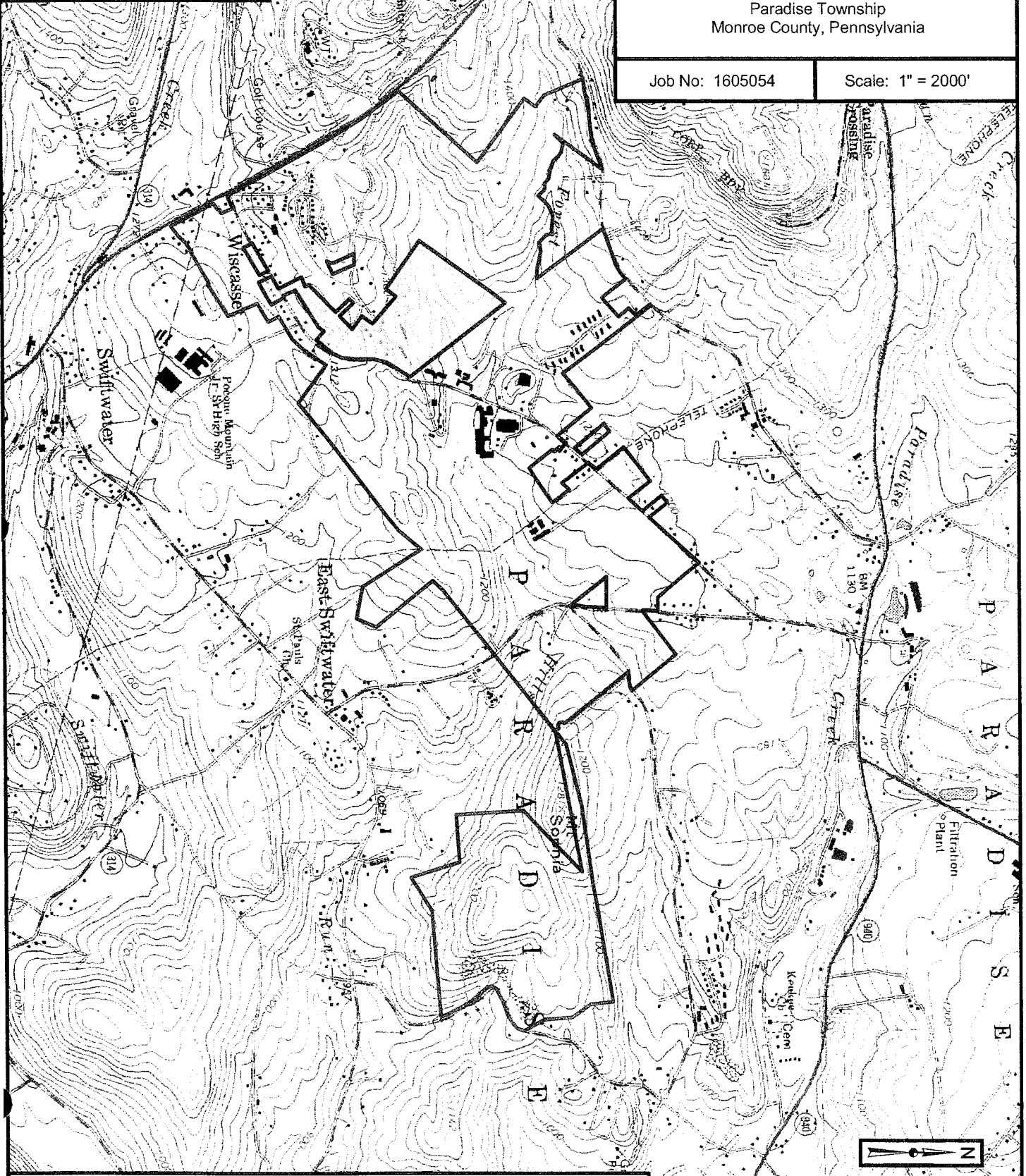
Mount Airy Lodge Project

**Project Location Map**

Paradise Township  
Monroe County, Pennsylvania

Job No: 1605054

Scale: 1" = 2000'



## PROJECT LIMITS

Throughout this report and as illustrated on the attached Environmental Resource map, there are two different study limits (Appendix A). The different study limits and the extent of each are described as follows.

1. **Proposed Mount Airy Development Area**, which includes the proposed development area where the former Mount Airy Lodge was located plus the proposed parking lot area across Woodland Road and the proposed improvements along Woodland Road from S.R. 611 to Carlton Road (Appendix B).
2. **970-acre project study area**, which includes the former Mount Airy Lodge Resort Complex and Golf Course and the former Strickland property.

The limits of these areas are outlined on the attached project mapping.

### **III. ENVIRONMENTAL RESOURCES OVERVIEW**

### III. ENVIRONMENTAL RESOURCES OVERVIEW

#### A. 131-38.C. - DELINEATION OF WETLANDS, WATERCOURSES, AND RELATED AQUATIC RESOURCES

##### Methodology

Existing wetland habitats and related aquatic resources within the 970-acre study area were identified through the combined use of existing secondary source information and detailed field studies. Existing secondary source information includes the following:

- USFWS National Wetland Inventory (NWI) Mapping;
- U.S. Department of Agriculture Natural Resources Conservation Service, Monroe County Soil Survey and Monroe County Hydric Soils List; and
- U.S.G.S. 7.5 Minute Topographic Mapping.

A detailed wetland delineation study was completed on the 970-acre study area in the Spring of 2005. The delineation study was conducted in accordance with the on-site delineation methods outlined in the USACE 1987 Wetland Delineation Manual.

##### Results

The wetland/watercourse delineation study delineated 73 wetlands, 35 watercourses, 15 open water habitats, 3 seeps, and 7 vernal pools within the 970-acre study area. The attached Wetland Location Map illustrates the different wetlands (labeled WL-001 through 073), watercourses (labeled as channels [CHN-001 through 035]), seeps (labeled as SEEP 001 through 003), vernal pools (labeled as VP-001 through 007), open water ponds (labeled as POW-001 through 014), and one lake labeled as LOW-001. Descriptions of the wetlands, watercourses, and related features are detailed in the Wetland Identification/Delineation Report for the project (Appendix C).

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 PA DEP, 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 resources.

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 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 individual wetlands, watercourses, and related features are listed in the following summary tables: Table 1, Wetlands; Table 2, Watercourses; and Table 3, Vernal Pools and Seeps. The Wetland Summary Table includes the identification number, vegetative classification, size, latitude/longitude, and connectivity. The Watercourse Summary Table includes the identification number, flow regime, and watershed. The Vernal Pool and Seep summary table includes identification number, size, latitude/longitude, connectivity.

**TABLE 1  
WETLAND CLASSIFICATION, SIZE, COORDINATES, AND CONNECTIVITY**

<b>WETLAND I.D.</b>	<b>VEGETATIVE CLASSIFICATION</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
Wetland 001	PEM	0.0162	41° 06' 58.8" N, 75° 19' 25.6" W	Isolated
Wetland 002	PEM	0.0439	41° 06' 56.2" N, 75° 19' 28.9" W	Isolated
Wetland 003	PEM	0.0618	41° 06' 55.0" N, 75° 19' 29.7" W	Connected
Wetland 004	30% PEM, 70% POW	0.0876	41° 06' 53.6" N, 75° 19' 31.0" W	Connected
Wetland 005	PFO	0.0387	41° 06' 58.6" N, 75° 19' 46.6" W	Isolated
Wetland 006	PEM	0.0653	41° 06' 51.7" N, 75° 19' 36.8" W	Isolated
Wetland 007	50% PEM, 50% PFO	0.0686	41° 06' 52.3" N, 75° 19' 32.5" W	Connected
Wetland 008	PFO	0.1579	41° 06' 55.5" N, 75° 19' 37.9" W	Connected
Wetland 009	PFO	0.0271	41° 06' 56.9" N, 75° 19' 44.5" W	Isolated
Wetland 010	PFO	0.0353	41° 06' 57.2" N, 75° 19' 42.0" W	Isolated
Wetland 011	PFO	0.1292	41° 06' 48.7" N, 75° 19' 34.7" W	Connected
Wetland 012	POW	0.0966	41° 06' 47.6" N, 75° 19' 35.8" W	Connected
Wetland 013	50% PEM, 50% PSS	0.0308	41° 06' 45.6" N, 75° 19' 32.6" W	Connected
Wetland 014	PEM	0.0215	41° 06' 45.4" N, 75° 19' 31.6" W	Connected
Wetland 015	PEM	0.0629	41° 06' 46.6" N, 75° 19' 29.5" W	Isolated
Wetland 016	PFO	0.0687	41° 06' 48.0" N, 75° 19' 38.9" W	Connected
Wetland 017	PEM	0.0108	41° 06' 49.6" N, 75° 19' 40.9" W	Connected
Wetland 018	PFO	5.3075	41° 06' 47.0" N, 75° 19' 39.8" W	Connected

**TABLE 1  
(CONTINUED)**

<b>WETLAND I.D.</b>	<b>VEGETATIVE CLASSIFICATION</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
Wetland 019	PFO	0.4252	41° 06' 51.0" N, 75° 20' 03.3" W	Connected
Wetland 020	PFO	0.634	41° 06' 51.2" N, 75° 20' 07.3" W	Connected
Wetland 021	PFO	1.5549	41° 06' 53.7" N, 75° 20' 10.8" W	Connected
Wetland 022	PEM	0.0285	41° 06' 55.2" N, 75° 20' 15.0" W	Connected
Wetland 023	PFO	0.0038	41° 06' 46.1" N, 75° 19' 45.5" W	Isolated
Wetland 024	PFO	7.8222	41° 06' 36.4" N, 75° 19' 56.4" W	Connected
Wetland 025	PEM	0.0209	41° 06' 42.4" N, 75° 19' 55.4" W	Isolated
Wetland 026	50% PEM, 50% POW	0.4501	41° 06' 45.1" N, 75° 20' 06.7" W	Isolated
Wetland 027	POW	0.3346	41° 06' 34.2" N, 75° 20' 23.5" W	Connected
Wetland 028	50% PEM, 50% PFO	0.0285	41° 06' 31.9" N, 75° 20' 18.4" W	Isolated
Wetland 029	PFO	0.1221	41° 06' 28.0" N, 75° 19' 42.8" W	Isolated
Wetland 030	PFO	0.492	41° 06' 23.9" N, 75° 20' 08.8" W	Connected
Wetland 031	PFO	0.1714	41° 06' 03.6" N, 75° 20' 02.4" W	Connected
Wetland 032	50% PFO, 50% POW	1.3928	41° 06' 06.4" N, 75° 20' 04.3" W	Connected
Wetland 033	PFO	1.4497	41° 06' 08.3" N, 75° 19' 57.2" W	Connected
Wetland 034	PFO	0.24	41° 06' 37.5" N, 75° 19' 34.4" W	Connected
Wetland 035	50% PFO, 50% POW	0.3146	41° 06' 39.6" N, 75° 19' 36.0" W	Connected
Wetland 036	PEM	0.0051	41° 06' 39.5" N, 75° 19' 36.5" W	Connected

**TABLE 1  
(CONTINUED)**

<b>WETLAND I.D.</b>	<b>VEGETATIVE CLASSIFICATION</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
Wetland 037	PEM	0.0189	41° 06' 40.0" N, 75° 28' 19.8" W	Connected
Wetland 038	PEM	0.0482	41° 06' 58.3" N, 75° 20' 24.2" W	Isolated
Wetland 039	PFO	0.2935	41° 06' 57.2" N, 75° 20' 15.0" W	Connected
Wetland 040	PEM	0.7056	41° 06' 55.5" N, 75° 20' 19.6" W	Connected
Wetland 041	PFO	0.1111	41° 06' 52.7" N, 75° 20' 24.6" W	Connected
Wetland 042	PFO	1.0201	41° 06' 55.2" N, 75° 20' 24.1" W	Connected
Wetland 043	PFO	0.3895	41° 06' 54.8" N, 75° 18' 46.2" W	Connected
Wetland 044	PFO	0.1631	41° 07' 05.6" N, 75° 18' 29.9" W	Connected
Wetland 045	PEM	0.0382	41° 06' 45.6" N, 75° 19' 25.8" W	Connected
Wetland 046	PEM	0.053	41° 06' 57.0" N, 75° 17' 50.5" W	Isolated
Wetland 047	PEM	0.0518	41° 06' 46.8" N, 75° 17' 26.6" W	Isolated
Wetland 048	PEM	0.0313	41° 06' 48.2" N, 75° 17' 27.6" W	Isolated
Wetland 049	PFO	0.9054	41° 06' 48.9" N, 75° 17' 33.5" W	Connected
Wetland 050	PEM	0.0052	41° 06' 47.0" N, 75° 17' 36.7" W	Connected
Wetland 051	PEM	0.0102	41° 06' 44.9" N, 75° 17' 34.2" W	Connected
Wetland 052	POW	0.0762	41° 06' 43.3" N, 75° 17' 34.1" W	Connected
Wetland 053	50% PEM, 50% PSS	0.0071	41° 06' 43.2" N, 75° 17' 34.8" W	Connected
Wetland 054	PEM	0.0073	41° 06' 45.7" N, 75° 18' 04.6" W	Isolated



**TABLE 1  
(CONTINUED)**

<b>WETLAND I.D.</b>	<b>VEGETATIVE CLASSIFICATION</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
Wetland 055	PEM	0.032	41° 06' 32.7" N, 75° 19' 30.1" W	Isolated
Wetland 056	PEM	0.0085	41° 06' 31.4" N, 75° 19' 05.1" W	Isolated
Wetland 057	PEM	0.0236	41° 06' 27.5" N, 75° 18' 47.5" W	Connected
Wetland 058	PEM	0.0019	41° 06' 47.0" N, 75° 18' 40.1" W	Connected
Wetland 059	15% PEM, 85% PFO	0.1433	41° 06' 53.2" N, 75° 18' 44.8" W	Connected
Wetland 060	PFO	1.6565	41° 06' 50.1" N, 75° 18' 43.4° W	Connected
Wetland 061	PEM	0.0044	41° 06' 50.8" N, 75° 18' 36.1" W	Connected
Wetland 062	50% PSS, 50% PFO	0.5641	41° 06' 51.4" N, 75° 18' 34.4" W	Connected
Wetland 063	PFO	0.0121	41° 06' 48.4" N, 75° 18' 34.8" W	Connected
Wetland 064	PFO	4.1228	41° 06' 53.5" N, 75° 18' 35.5" W	Connected
Wetland 065	PEM	0.0496	41° 06' 47.6" N, 75° 18' 31.7" W	Connected
Wetland 066	PFO	0.6187	41° 06' 50.8" N, 75° 18' 44.7" W	Connected
Wetland 067	PEM	0.0098	41° 06' 50.4" N, 75° 18' 50.2" W	Isolated
Wetland 068	PEM	0.4352	41° 06' 46.7" N, 75° 18' 48.9" W	Connected
Wetland 069	PEM	0.0163	41° 06' 46.5" N, 75° 18' 58.9" W	Connected
Wetland 070	PEM	0.0313	41° 06' 47.9" N, 75° 19' 00.7" W	Connected
Wetland 071	PEM	0.0846	41° 06' 47.4" N, 75° 19' 04.2" W	Connected
Wetland 072	PEM	0.0445	41° 06' 49.0" N, 75° 18' 43.5" W	Connected

**TABLE 1  
(CONTINUED)**

<b>WETLAND I.D.</b>	<b>VEGETATIVE CLASSIFICATION</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
Wetland 073	PEM	0.0092	41° 06' 44.0" N, 75° 19' 27.9" W	Connected
POW 1	POW	0.41	41° 06' 46.1" N, 75° 19' 00.4" W	Connected
POW 2	POW	1.56	41° 06' 47.9" N, 75° 18' 54.4" W	Connected
POW 3	POW	0.25	41° 06' 49.1" N, 75° 18' 51.4" W	Connected
POW 4	POW	0.47	41° 06' 32.4" N, 75° 19' 27.3" W	Isolated
POW 5	POW	0.24	41° 06' 31.9" N, 75° 19' 28.8" W	Isolated
POW 6	POW	1.85	41° 06' 24.7" N, 75° 19' 30.9" W	Isolated
POW 7	POW	0.53	41° 06' 27.5" N, 75° 18' 45.4" W	Connected
POW 8	POW	0.26	41° 06' 36.6" N, 75° 18' 57.7" W	Connected
POW 9	POW	0.17	41° 06' 31.6" N, 75° 19' 06.1" W	Isolated
POW 10	POW	1.63	41° 06' 29.6" N, 75° 19' 08.5" W	Isolated
POW 11	POW	0.35	41° 07' 03.1" N, 75° 19' 05.0" W	Isolated
POW 12	POW	0.56	41° 07' 00.6" N, 75° 19' 02.2" W	Isolated
POW 13	POW	0.6	41° 06' 59.8" N, 75° 19' 08.7" W	Isolated
POW 14	POW	0.47	41° 06' 58.2" N, 75° 19' 07.4" W	Isolated
LOW 1	POW	16.76	41° 06' 42.1" N, 75° 19' 09.7" W	Connected
Total		59.7		

**TABLE 2  
WATERCOURSE CLASSIFICATION AND LENGTH**

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

In addition to the wetlands and watercourses described above, several seeps and vernal pools are identified within the project study area. The delineated seep and vernal pool features are summarized below in Table 3.

**TABLE 3  
SEEP AND VERNAL POOL SUMMARY TABLE**

<b>I.D.</b>	<b>SIZE (ACRES)</b>	<b>LATITUDE AND LONGITUDE</b>	<b>CONNECTIVITY</b>
SEEP 1	0.0035	41° 06' 57.0" N, 75° 19' 43.6" W	Connected
SEEP 2	0.0421	41° 06' 41.4" N, 75° 19' 56.3" W	Connected
SEEP 3	0.0069	41° 06' 55.5" N, 75° 18' 46.8" W	Connected
VERNAL POOL 1	0.0344	41° 06' 56.4" N, 75° 19' 45.4" W	Isolated
VERNAL POOL 2	0.0065	41° 06' 57.6" N, 75° 19' 46.7" W	Isolated
VERNAL POOL 3	0.0069	41° 06' 57.6" N, 75° 19' 47.5" W	Isolated
VERNAL POOL 4	0.0871	41° 06' 57.6" N, 75° 19' 45.5" W	Isolated
VERNAL POOL 5	0.0028	41° 06' 56.4" N, 75° 19' 43.3" W	Isolated
VERNAL POOL 6	0.0064	41° 06' 57.4" N, 75° 19' 42.8" W	Connected
VERNAL POOL 7	0.1245	41° 06' 59.2" N, 75° 19' 24.3" W	Connected
<b>TOTAL</b>	<b>0.32</b>		

### Project Impacts

The proposed development will require minor encroachment to wetland, watercourse, and open water areas. The encroachments are associated with roadway improvements to Woodland Road, installation of utility lines, and minor grading activities. A map illustrating the extent of the proposed development is attached in Appendix B. The proposed project will require the

replacement of the two existing stream crossing structures under Woodland Road at Forest Hills Run (CHN-004) and watercourse CHN-023. Additionally, another crossing will be installed for a facility road over CHN-004 and CHN-023 just downstream of the Woodland Road crossing. Temporary impacts will occur from the installation of utility lines along Woodland Road and Strickland Road. The utility lines are positioned adjacent to the existing roadway. The installation of the utility line will require temporary disturbance to CHN-004, CHN-023, Wetland 037, CHN-020, CHN-018, CHN-019, and Wetland 021. The utility lines will be installed in accordance with the general installation methods and conditions associated with the PA DEP's General Permit 5 Utility Line installation permits. Each area of proposed impacts is described in Table 4.

**TABLE 4  
WETLAND WATERCOURSE, AND OPEN WATER  
IMPACT SUMMARY TABLE**

Feature	Size of Impact	Remarks
<b>WATERCOURSES</b>		
Watercourse - CHN-004	Woodland Road = 55 linear feet Crossing and Utility line = 25 feet Facility Road = 32 feet Crossing	Replacement of the existing stream crossing over Forest Hills Run and installation of an additional facility road crossing. Plus the installation of the utility line crossing.
Watercourse - CHN-018	6 linear feet	Temporary encroachment for utility line crossing.
Watercourse - CHN-019	7 linear feet	Temporary encroachment for utility line crossing.
Watercourse - CHN-020	20 linear feet	Temporary encroachment for utility line crossing.
Watercourse - CHN-023	Crossing area = 168 linear feet and Utility line = 35 linear feet	Replacement of the existing stream crossing over Forest Hills Run for Woodland Road and an additional facility road. Plus the installation of the utility line crossing.
<b>Total Watercourse Impact</b>	255 Linear feet of stream crossing 93 linear feet of utility line crossing	

**TABLE 4  
(CONTINUED)**

Feature	Size of Impact	Remarks
<b>OPEN WATER</b>		
LOW-001	0.03 acre	Minor encroachment associated with the installation of a small dock on the lake.
Total Open Water Impact	0.03 acre	
<b>WETLANDS</b>		
Wetland 021	0.037 acre	Temporary encroachment for utility line crossing.
Wetland 037	0.002 acre	Minor encroachment associated with Woodland Road improvements.
Wetland 045	0.004 acre	Minor encroachment associated with Woodland Road improvements.
Total Wetland Impact	0.043 acre	Total Permanent Impact = 0.006 acre Total Temporary Impact = 0.037 acre

**Summary**

There are numerous wetland, watercourse, and open water resources within the project area. The proposed development avoids impact to the majority of these resources. Overall, the proposed development project will require three stream crossings, including two over Forest Hills Run (CHN-004) and one over Watercourse CHN-023, totaling 255 linear feet. The project will include temporary impacts to wetlands and watercourses associated with the installation of the water and sewer utility lines. The construction of the dock on the Mount Airy Lake (LOW-001) will require a minor encroachment of 0.03 acre. The majority of the wetland and watercourse encroachments for the project are associated with the proposed improvements to Woodland Road and the installation of the utility lines. The proposed development project avoids and minimizes impacts to the wetland, watercourse, and open water resources in the watershed.

## **B. 131-38.E. - VEGETATIVE COVER CONDITIONS**

### **Methods**

Vegetative cover conditions were determined through the review of black-and-white aerial photography and the Monroe County GIS Department database map files and field reconnaissance. The Anderson Land Use/Land Cover Classification System was used to characterize the land cover conditions in conjunction with the Monroe County GIS mapping. Land cover/land use features were identified and organized by dominant cover type or use, such as forestland, grasslands, residential development, commercial development, resort area, etc. The extent of each compartment was added to the project mapping for the 970-acre study area.

In addition to the land cover/land use, trees with a caliper in excess of 18 inches were identified within the proposed development area including the forested areas surrounding the former Mount Airy Lodge building and along Woodland Road. For each of these trees, the diameter at breast height (dbh), species, and location were recorded. The location of each identified tree was surveyed with Global Positioning Systems (GPS) survey equipment.

The majority of the undeveloped portions of the 970-acre study area consists of mature deciduous woodlands. Common tree species observed include red oak, white oak, and red maple. A qualitative review of the study area suggests that all of the forested areas share common characteristics with regard to tree species, distribution, size, and relative age. Therefore, a 4-acre sampling plot was developed and every tree with an 18-inch or greater dbh was surveyed to develop an estimate of the number of trees, 18 inches or greater, per acre. This estimate would allow for the approximation of the number of 18-inch or greater dbh trees across the forestland within the 970-acre study area.

### **Results**

The vegetative cover for the project is outlined on the attached project mapping (Appendix A). The types and distribution of the land cover/land use compartments within 970-acre study area are outlined in Table 5.

**TABLE 5  
LAND COVER/LAND USE DISTRIBUTION  
FOR THE 970-ACRE STUDY AREA  
SUMMARY TABLE**

<b>LAND COMPARTMENT</b>	<b>SIZE (ACRES)</b>	<b>PERCENT COVER</b>
Forest	628	65%
Resort	195	20%
Commercial	3	<1%
Residential	38	4%
Transportation	37	4%
Wetlands, Ponds and Lakes	60	6%
Watercourses, Seeps, and Vernal Pools	9	1%
Total	970 acres	

The forested areas are characterized by primarily mature deciduous tree species ranging in size from 6 inches to 24+ inches in diameter with an average dbh of 10 to 12 inches. Common species observed in the forested areas include red oak, white oak, red maple, scarlet oak, shagbark hickory, chestnut oak, black cherry, and eastern hemlock trees in the canopy layer; mountain laurel, witch hazel, spicebush in the shrub layer; and low bush blueberry, bracken fern, oak seedlings, maple seedlings, and hay-scented fern. The resort areas are those areas associated with the former Mount Airy Lodge grounds and golf course. The residential areas consist of single-family home-type buildings that primarily line Woodland Road. The wetlands are described in a previous section of this report.

All trees with an 18-inch dbh or greater were surveyed in and around the proposed development area. A total of 360 trees were identified with an 18-inch dbh or greater. Each of these trees is identified on the attached environmental resource mapping (Appendix A). The detailed tree identification efforts completed for the proposed development area could be used to develop an estimate for the number of trees with an 18-inch dbh or greater on the remaining forested areas within the project area. This estimate could be applied to the remaining forested areas to obtain an estimate of the number of trees with an 18-inch dbh greater within the project area. A four-acre sample plot from the woodlot area adjacent to the Mount Airy Lodge parking lot was used to develop the sample tree estimate. The results of the survey of trees within the 4-acre sample plot identified 53 trees with an 18-inch dbh or greater. Based on these results, an estimate



of 13 trees with an 18-inch dbh or greater could be estimated to occur within each acre of forestland.

### Project Impacts

Land cover/land use impacts from the proposed development area are reported in Table 6. A map of the proposed site development is attached in Appendix B.

**TABLE 6  
LAND COVER/LAND USE IMPACT SUMMARY TABLE**

<b>LAND COMPARTMENT</b>	<b>SIZE (ACRES)</b>	<b>PERCENT OF DEVELOPMENT AREA</b>
Forest	12	21%
Resort	31.7	56%
Residential	2.8	5%
Wetlands	0.006	< 0.1%
Watercourses	0.11	0.2%
Lake	0.03	0.1%
Transportation/Roadways	9.7	17%
<b>TOTAL</b>	<b>56.3 acres</b>	

### Summary

The project study area is characterized by resort area and forestland. The proposed development is primarily located within the limits of the former Mount Airy Lodge facility grounds. Impacts to the surrounding woodlands and wetlands are for the most part avoided. The project will impact 251 trees that have a dbh of 18 inches or greater. The proposed development project avoids and minimizes impacts to the natural landscape by positioning the majority of the proposed development within the area of the former Mount Airy Lodge resort facility.

**C. 131-38.H. - LOCATIONS OF HISTORICALLY SIGNIFICANT SITES**

A qualitative review was completed to assess the extent of historic resources within the project study area in February 2005 and within the proposed development area in June 2005. The results of the assessment were forwarded to the PHMC for review and concurrence. The results of our review determined that there are no known archaeological or historic resources that are eligible for the listing on the National Register of Historic Places are known to occur within the study limits. The PHMC has cleared the proposed development area for archaeology and has requested additional information for historic resources. A copy of the Cultural Resource Assessment for the proposed development area that was prepared for the project and forwarded to the PHMC in June 2005 is in Appendix D. The proposed development project does not anticipate any impacts to historic or archaeological resources.

**D. 131-38.I. - LOCATIONS OF TRAILS**

Analysis of the Monroe County Comprehensive Plan (June 1999) indicated that there are no trails and/or bicycle/pedestrian pathways in the area of the Mount Airy Lodge property. Similarly, the Delaware State Forest Public Use Map and the Poconos/Northeast Outdoor Discovery Map also did not indicate any trails in the area of the Mount Airy Lodge property. Analysis of the U.S.G.S. topographic quadrangle map covering the subject property revealed two potential trails along the northern end of the 970-acre study area. However, these are not identified in the above-mentioned local, state, and regional information sources as known public trails.

**E. 131-38.K. - PENNSYLVANIA NATURAL DIVERSITY INVENTORY (PNDI) COORDINATION**

The PNDI Form, Supplement No. 1, was submitted to the Pennsylvania Department of Conservation and Natural Resources (DCNR) to obtain information regarding the potential presence of threatened or endangered species. The results of the PNDI coordination indicated that there are no conflicts with threatened or endangered species with respect to PNDI. The PNDI coordination recommended that additional agency coordination be made with the USFWS and the PFBC to determine if there would be any potential conflicts with species under their review. Requests for information regarding the potential threatened and endangered species was sent to

the USFWS, PFBC, and Pennsylvania Game Commission (PGC). The results of the threatened and endangered species coordination efforts are summarized as follows, including the commenting agency and potential species conflict.

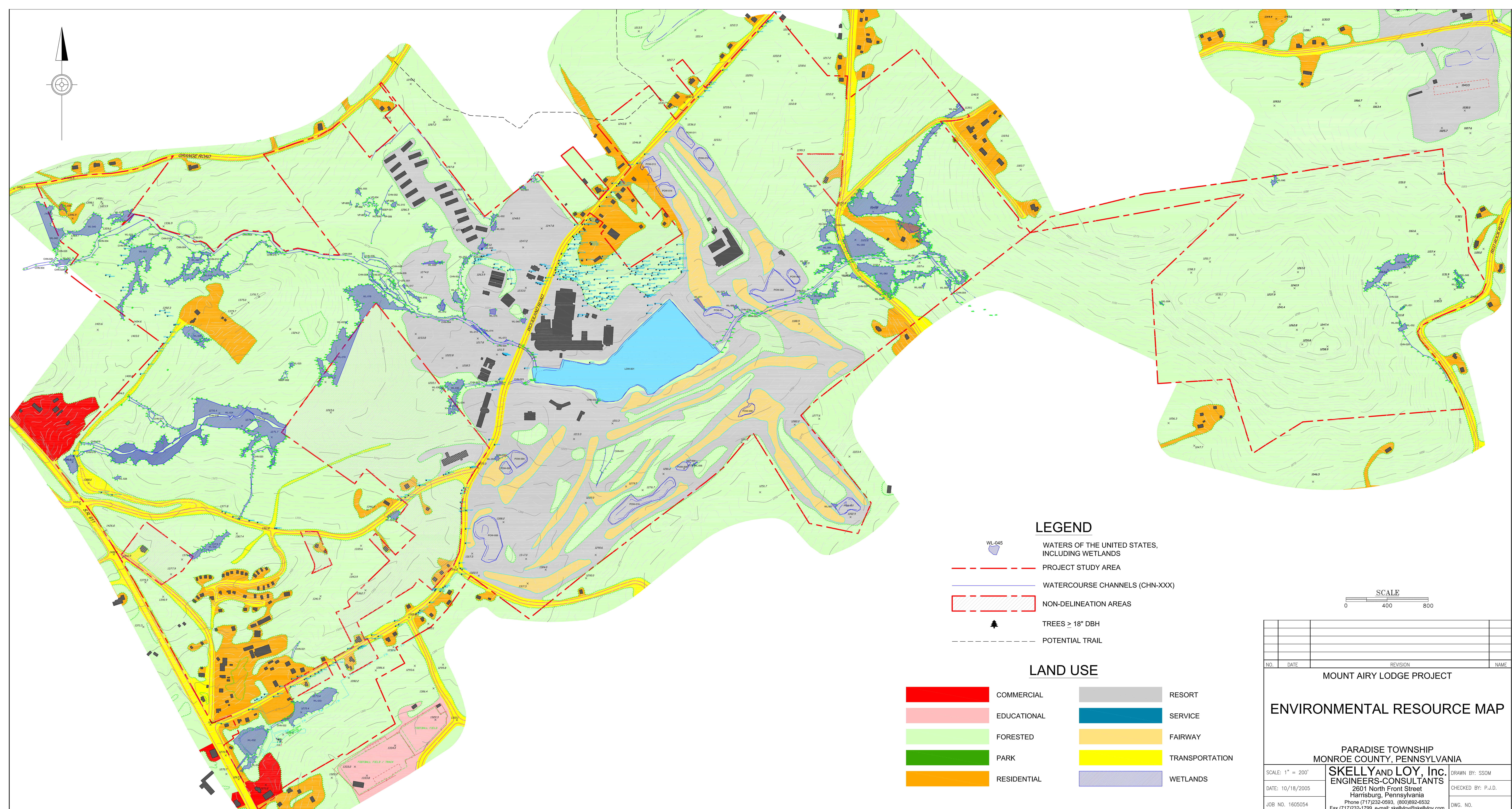
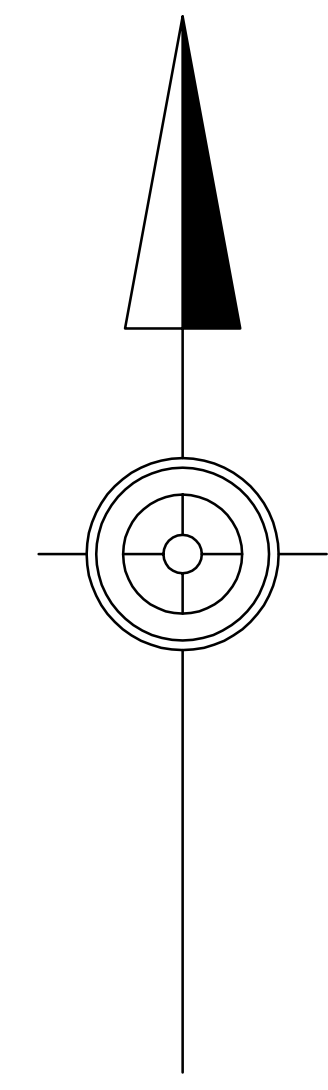
- DCNR, PNDI: no conflicts
- USFWS: Initial potential for bog turtle (*Clemmys muhlenbergii*), federal threatened  
After the completion of the Phase I Bog Turtle Habitat Assessment, there is no conflict with the bog turtle for the proposed development project
- PFBC: no conflicts
- PGC: no conflicts

Copies of the threatened and endangered species coordination response letters are provided in Appendix E.



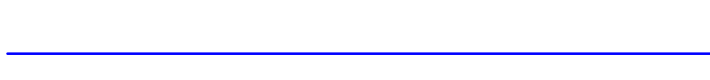


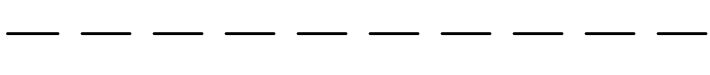
Based on the threatened and endangered species coordination, the bog turtle was the only potential species conflict identified for the project. The USFWS did not indicate if there is a known population within the project area. Monroe County is identified by the USFWS as a county that supports bog turtles. Bog turtles inhabit marshy wetland areas characterized by soft mud, cool clear rivulets of hydrology, and emergent vegetation. The USFWS required a Phase I Bog Turtle Habitat Assessment be completed for the project that included all wetlands within the proposed development areas, plus within a 300-foot buffer area of the development. The Phase I Assessment was completed by Mr. Ben Berra, a certified Bog Turtle Surveyor with Skelly and Loy, in May 2005 and a Phase I Bog Turtle Habitat Assessment Report was submitted to the USFWS and the PFBC in June 2005. A copy of the Phase I Bog Turtle Habitat Assessment Report is in Appendix F. The assessment determined that the wetlands within the proposed development area and the surrounding 300-foot buffer did not contain bog turtle habitat. Both the USFWS and PFBC concurred with the findings of our Phase I Bog Turtle Habitat Assessment and indicated that the proposed Mount Airy Lodge Development Project will not have a conflict with bog turtles. Copies of the resource agency coordination and clearance letters are attached in Appendix E.

## **IV. APPENDICES**





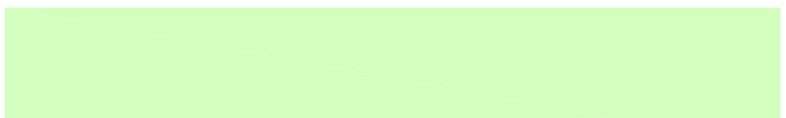


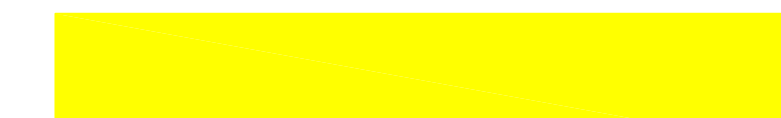

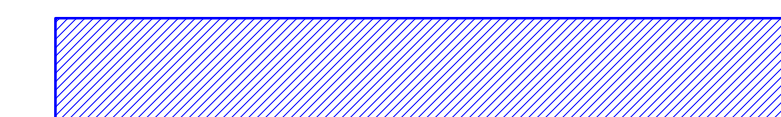
**APPENDIX A -  
ENVIRONMENTAL RESOURCE MAP**

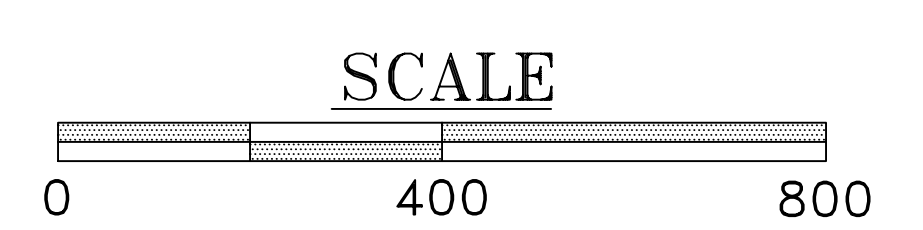


**LEGEND**

-  WATERS OF THE UNITED STATES, INCLUDING WETLANDS
-  PROJECT STUDY AREA
-  WATERCOURSE CHANNELS (CHN-XXX)
-  NON-DELINEATION AREAS
-  TREES ≥ 18" DBH
-  POTENTIAL TRAIL

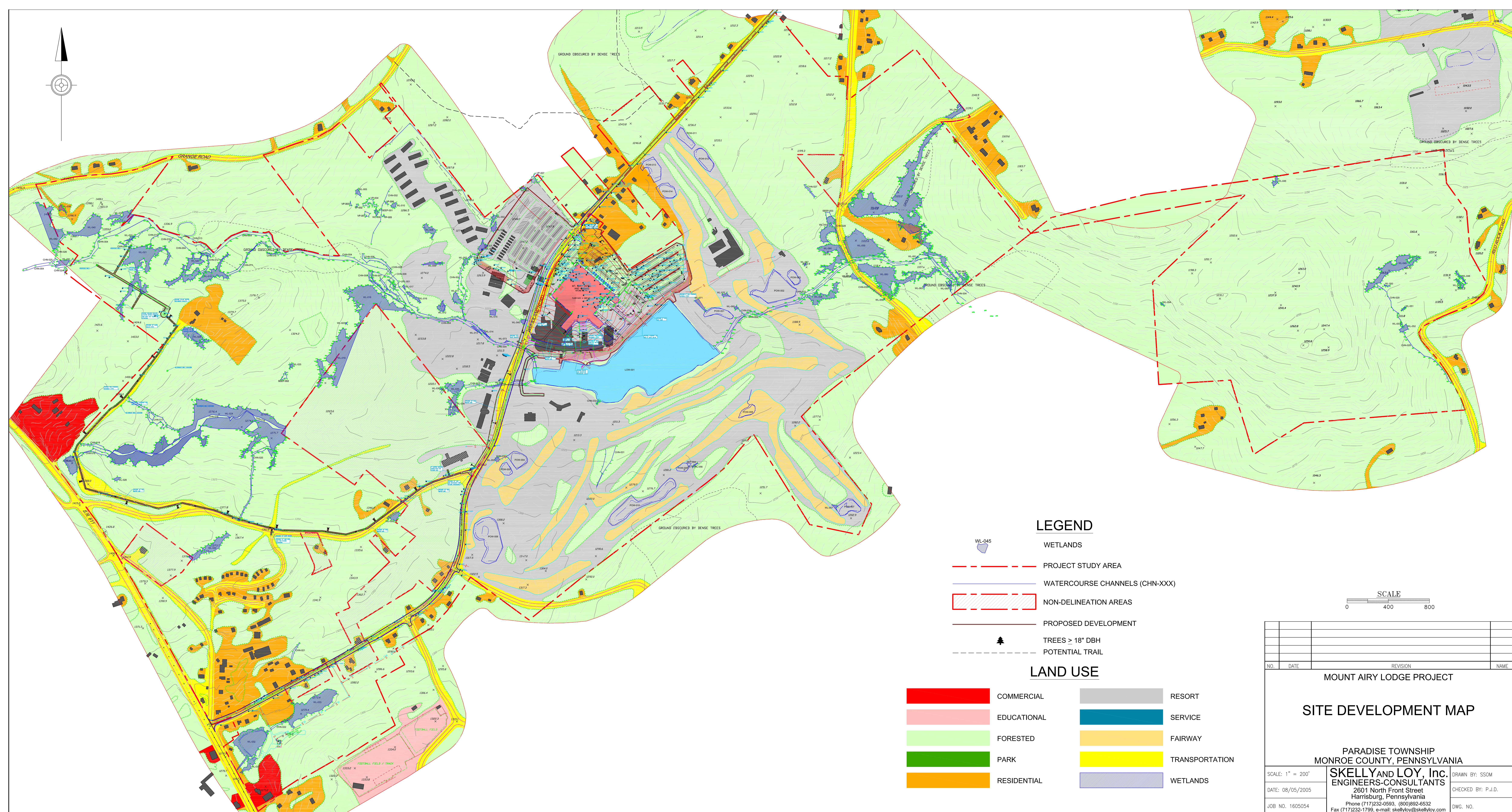
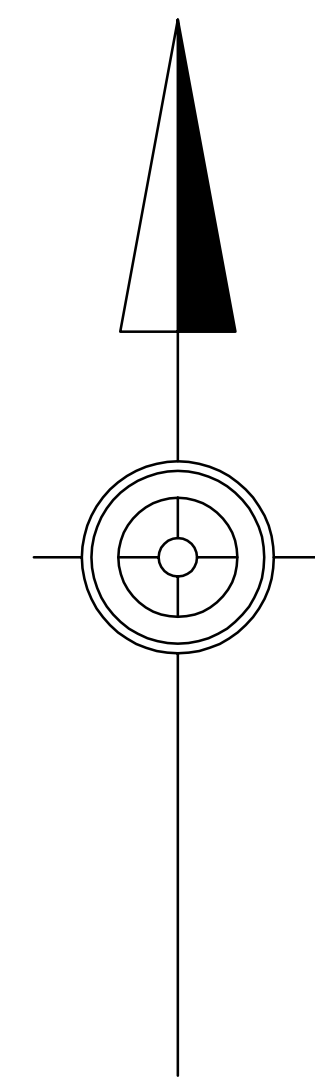
**LAND USE**

- |   |             |   |                |
|---|-------------|---|----------------|
|  | COMMERCIAL  |  | RESORT         |
|  | EDUCATIONAL |  | SERVICE        |
|  | FORESTED    |  | FAIRWAY        |
|  | PARK        |  | TRANSPORTATION |
|  | RESIDENTIAL |  | WETLANDS       |







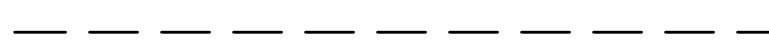


NO.	DATE	REVISION	NAME
<b>MOUNT AIRY LODGE PROJECT</b>			
<b>ENVIRONMENTAL RESOURCE MAP</b>			
PARADISE TOWNSHIP MONROE COUNTY, PENNSYLVANIA			
SCALE: 1" = 200'	<b>SKELLY AND LOY, Inc.</b> ENGINEERS-CONSULTANTS 2601 North Front Street Harrisburg, Pennsylvania Phone (717)232-0593, (800)892-6532 Fax (717)232-1799, e-mail: skellyloy@skellyloy.com		DRAWN BY: SSOM CHECKED BY: P.J.D. DWG. NO.
DATE: 10/18/2005	JOB NO. 1605054		



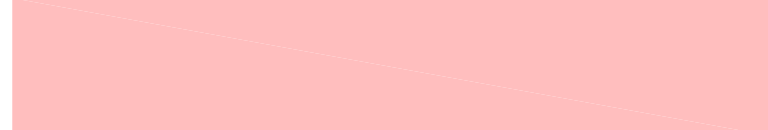

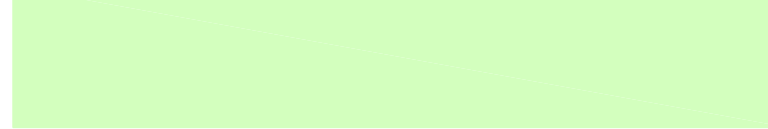


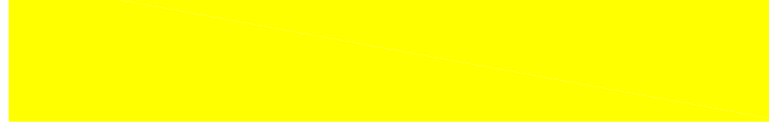

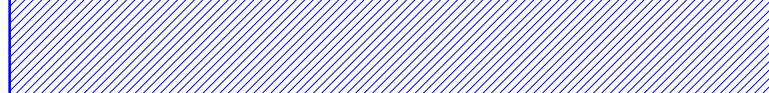
**APPENDIX B -  
SITE DEVELOPMENT MAP**

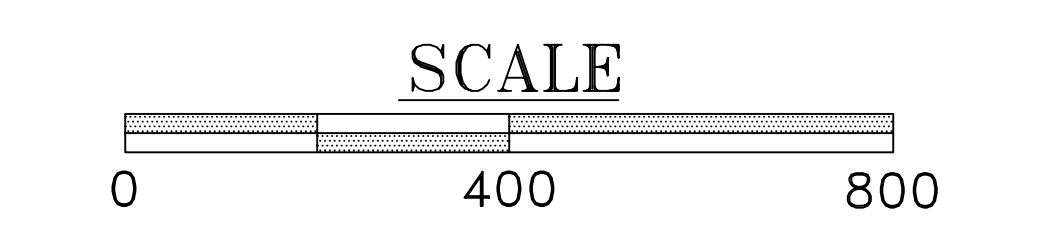


**LEGEND**

-  WETLANDS
-  PROJECT STUDY AREA
-  WATERCOURSE CHANNELS (CHN-XXX)
-  NON-DELINEATION AREAS
-  PROPOSED DEVELOPMENT
-  TREES ≥ 18" DBH
-  POTENTIAL TRAIL

**LAND USE**

- |   |  |
|---|--|
|  COMMERCIAL  |  RESORT         |
|  EDUCATIONAL |  SERVICE        |
|  FORESTED    |  FAIRWAY        |
|  PARK        |  TRANSPORTATION |
|  RESIDENTIAL |  WETLANDS       |



NO.	DATE	REVISION	NAME
<b>MOUNT AIRY LODGE PROJECT</b>			
<b>SITE DEVELOPMENT MAP</b>			
PARADISE TOWNSHIP MONROE COUNTY, PENNSYLVANIA			
SCALE: 1" = 200'	<b>SKELLY AND LOY, Inc.</b> ENGINEERS-CONSULTANTS 2601 North Front Street Harrisburg, Pennsylvania Phone (717)232-0593, (600)892-6532 Fax (717)232-1739, e-mail: skellyloy@skellyloy.com		DRAWN BY: S50M CHECKED BY: P.J.D. DWG. NO.
DATE: 08/05/2005	JOB NO. 1605054		