

Appendix F
BIODIVERSITY SURVEY

Biological Survey Report
For
Yorktown Farms Site
Town of Yorktown, Westchester County, New York

VS CONSTRUCTION CORP.
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1.0 INTRODUCTION

Tim Miller Associates, Inc. (TMA) staff completed a multiple day biological survey of the Yorktown Farms project site located on Gay Ridge Road in Yorktown, Westchester County, New York. The survey focused on both potential supporting on-site habitat for, and the actual presence/absence of, certain species of concern, including nesting raptors, non-vernal pool breeding salamanders, and birds. In addition, incidental observations of other vegetation and wildlife were recorded throughout the field survey. A walking survey method was employed during each of the site visits. This method allowed the investigators to thoroughly examine all habitat types and conduct searches for all types of wildlife.

According to the New York State DEC, there are no rare or endangered wildlife or vegetation species known to inhabit the site or nearby areas. On-site observations by Tim Miller Associates, Inc. staff are consistent with this assessment.

The subject property is approximately 43.168 acres. Based on aerial photography, the project site appears to have been used for agricultural purposes through at least 1960. At that time, approximately 90 percent of the site was mowed or used as pasture, with the exception of the wet and more steeply sloped area in the southeast corner of the site. Habitat types that have been identified include forested uplands, forested wetland, scrub-shrub wetland, old field, hedgerows and stone walls. There are two general vegetation types present on the property: second growth hardwood forest and old field meadow. The hardwood forest is divided somewhat into areas of dry substrate versus areas where depressional areas and/or intermittent watercourses result in a moist substrate that supports a shrub and herbaceous layer that is tolerant of wet conditions. The locations of these associations are indicated on DEIS Figure 3.3-4, Vegetative Associations.

2.0 BIOLOGICAL SURVEY

This report presents methods and observations for each of the following surveys conducted: birds; reptiles and amphibians; and flowering vegetation.

2.1 Birds

Bird surveys were conducted to identify avian species utilizing the project site. Weather on the dates of the surveys was fair with cloudy to partly cloudy skies and temperatures ranging from the high 50s (degrees F) to the low 70s (degrees F).

2.1.1 Survey Methodology

Based on existing ecological community data gathered during previous site visits as well as knowledge of bird survey techniques, representative survey points were selected across the site. These points were chosen to provide data that would represent bird use in all ecological community types found on the property.

During the surveys, point counts were performed near each of the habitat types identified on the site. Habitat types identified include forested uplands, forested wetland, scrub-shrub wetland, old field, hedgerows and stone walls.

At each of the data collection points, bird surveys were conducted for a minimum of thirty minutes. The TMA surveyor recorded all birds heard and/or seen during the point counts.

In addition, as the surveyor traveled between point locations and through the different habitats, incidental observations of birds were documented. The additional data gathered while walking over the site was added to the list of species observed during the point counts. Birds on the wing were also included in the counts as "flyby" to indicate that these individuals were observed passing overhead.

2.1.2 Observations

Species were identified by their calls and/or by visual observation. This typically results in the recording of a higher proportion of birds that are more vocal and/or have a loud call and a lower proportion of those that are not as vocal and/or have softer or high pitched call. Vocal birds may also be counted in habitats they do not typically use because their calls can carry for long distances making it difficult to accurately place their location. During the surveys, there were occasions on which calling birds were not identified due to similarities in the calls of different species, duration of the call or song, distance from the calling or singing bird, etc. Observed species are marked on the table with an asterisk. It is noted that this list is not solely based on observations at the site, but uses research carried out by Westchester County and the consulting biologists for similar habitat conditions on this and other nearby sites. Thus it is possible that many of the species listed are utilizing the site but were not observed due to weather conditions, time of day or seasonal patterns.

During one survey, a large hawk was observed perched in a large maple along the tree line of the old field/meadow, then swooping down to take a mouse out of the field. During a later survey, a red-tailed hawk was heard in the northwest corner of the property.

Of the birds identified during the survey, none of the species are listed by the New York State Department of Environmental Conservation (NYSDEC) as protected (Species of Special Concern).

2.1.3 Breeding Bird Atlas

The New York State Breeding Bird Atlas (NYS BBA) is a comprehensive, statewide bird survey that documents the breeding birds identified by trained volunteers in three-mile square blocks. The most recent surveys (2000 through 2004) have been completed and data is being compiled for inclusion in the final report to be released in 2008. The listings include data on the breeding behavior observed, the year the bird(s) was observed and the State protection status of the species.

Table 1 Observed and Expected Bird Species						
Common Name	Scientific Name	Habitat Type				
		FW	SC	ED	FB	SF
Birds						
American Crow	<i>Corvus brachyrhynchos</i>				X	
American Goldfinch*	<i>Carduelis tristis</i>				X	
American Redstart	<i>Setophaga ruticella</i>			X		
American Robin*	<i>Turdus migratorius</i>			X		
American Woodcock	<i>Philohela minor</i>			X		X
Baltimore Oriole	<i>Icterus galbula</i>			X		
Barred Owl	<i>Strix varia</i>	X				
Black-and-white Warbler	<i>Mniotilta varia</i>					X
Black-capped Chickadee	<i>Parus atricapillus</i>	X				X
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>					X
Blue Jay *	<i>Cyanocitta cristata</i>	X	X	X		X
Blue-winged Warbler	<i>Vermivora pinus</i>			X		
Broad-winged Hawk	<i>Buteo platypterus</i>					X
Brown-headed Cowbird	<i>Molothrus ater</i>			X		
Canada Goose	<i>Branta canadensis</i>				X	
Canada Warbler	<i>Wilsonia canadensis</i>					X
Cerulean Warbler	<i>Dendroica cerulea</i>					X
Chimney Swift	<i>Chaetura pelagica</i>				X	
Chipping Sparrow	<i>Spizella passerina</i>			X		
Common Grackle	<i>Quiscalus quiscula</i>				X	
Common Yellowthroat	<i>Geothlypis trichas</i>	X		X		
Cooper's Hawk	<i>Accipiter cooperii</i>			X		
Downy Woodpecker *	<i>Picoides pubescens</i>	X				X
Eastern Phoebe *	<i>Sayornis phoebe</i>					
Eastern Screech Owl	<i>Otus asio</i>			X		X
Eastern Towhee	<i>Pipilo erythrophthalmus</i>			X		X
Eastern Wood Peewee	<i>Contopus Virens</i>					X
Finch Species *	<i>Carpodacus spp.</i>			X		X
Gray Catbird *	<i>Dumetella carolinensis</i>			X		X
Great-crested Flycatcher	<i>Myiarchus crinitus</i>			X		X
Great-horned Owl	<i>Bubo virginianus</i>					X
Hairy Woodpecker *	<i>Picoides villosus</i>					X
Indigo Bunting	<i>Passerina cyanea</i>			X		
Kentucky Warbler	<i>Oporornis formosus</i>					X
Mallard	<i>Anas platyrhynchos</i>				X	
Mourning Dove *	<i>Zenaida macroura</i>			X		
Northern Cardinal *	<i>Cardinalis cardinalis</i>		X	X		X
Northern Flicker	<i>Colaptes auratus</i>	X		X	X	X
Ovenbird	<i>Seiurus aurocapillus</i>		X			X
Pileated Woodpecker	<i>Dryocopus pileatus</i>					X
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	X	X			X
Red-eyed Vireo	<i>Vireo olivaceus</i>	X				X
Red-tailed Hawk *	<i>Buteo jamaicensis</i>					X
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			X		
Scarlet Tanager	<i>Piranga olivacea</i>					X
Tufted Titmouse	<i>Parus bicolor</i>			X		X

Table 1 Observed and Expected Bird Species (Continued)						
Common Name	Scientific Name	Habitat Type				
Veery	<i>Catharus fuscescens</i>					X
Warbler Species *	<i>Dendroica/Vermivora spp.</i>	X	X	X		X
Warbling Vireo	<i>Vireo gilvus</i>					X
White-breasted Nuthatch	<i>Sitta carolinensis</i>	X				X
White-throated Sparrow	<i>Zonotrichia albicollis</i>	X				X
Wild Turkey *	<i>Meleagris gallopavo</i>					X
Wood Duck	<i>Aix sponsa</i>		X			
Wood Thrush	<i>Hylocichla mustelina</i>	X		X		X
Worm-eating Warbler	<i>Helmitheros vermivorus</i>					X
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>			X		X
Yellow Warbler	<i>Dendroica petechia</i>	X		X		
Habitat type: FW-Forested Wetland, SC-Stream Corridor, ED-Edge Habitat, FB-Flyby, SF-Second Growth Forest						
* Species that were observed during formal bird surveys Sources: Tim Miller Associates, Inc., 2003-07., NYS BBA data, 1980-1985 and 2000-2004.						

2.2 Amphibians and Reptiles

Surveys were conducted to locate non-vernal pool breeding amphibian species present on the project site. Weather conditions during the site surveys included fair, with cloudy to partly cloudy skies, as well as rainy periods, with daytime high temperatures increasing from approximately 50F to greater than 90F during study.

2.2.1 Survey Methodology

Encounter survey methodology was used to document the presence of amphibians and reptiles. The edges and the center of the site and the site wetlands were walked in order to make visual identification of species present. Cypitic species were randomly sought by overturning rocks, fallen tree trunks/limbs or the removal of leaf litter over limited areas of the site. Surveys were conducted by TMA researchers who typically made identifications by sight or by capture and release, with the collection of a photographic record for species captured. Data collected by this methodology provides information on the presence of a species but cannot establish absence or abundance of a species on the site.

2.2.2 Observations

No amphibians and reptiles were identified during the surveys. The project site lacks vernal pool habitat that is essential for several species of amphibians. The seasonally saturated soil conditions of the scrub-shrub wetland habitat on site may encourage the use of this area by macroinvertebrates and small amphibian species, which in turn form the basis of the food chain for larger predatory species. There are numerous stone walls distributed throughout the property between existing and former farm fields. These stone walls offer nesting and cover area for a variety of species, including snakes and various amphibian species. Newts and salamanders are particularly likely to find suitable habitat within the stone walls in or near wetlands and watercourses. Insect and worm populations that are likely to live within the walls provide a food base for many of these creatures. A list of expected amphibians and reptiles is shown below.

Table 2 Expected Reptiles and Amphibians							
Common Name	Scientific Name	Habitat Type					
		U	FW	OF	SS	Ed	SW
Reptiles							
garter snake	<i>Thamnophis sirtalis</i>	X	X	X	X	X	X
milk snake	<i>Lampropeltis triangulum</i>	X		X	X	X	
brown snake	<i>Storeria dekayi</i>	X	X	X	X	X	X
eastern racer	<i>Coluber constrictor</i>	X		X	X	X	X
box turtle	<i>Terrapene carolina</i>	X	X		X	X	
Amphibians							
red-backed salamander	<i>Plethodon cinereus</i>	X	X				X
two-lined salamander	<i>Eurycea bislineata</i>		X				X
four-toed salamander	<i>Hemidactylium scutatum</i>		X				X
newt	<i>Notophthalmus viridescens</i>	X	X				X
American toad	<i>Bufo americanus</i>	X					X
gray treefrog	<i>Hyla versicolor</i>	X	X				
Habitat type: U - Forested upland, FW - Forested wetland, OF - Old Field, SS - Scrub-shrub wetland, Ed - Edge Habitat, SW - Stone walls							
*Species observed during survey. Source: Tim Miller Associates, Inc., 2003-07							

2.3 Mammals

Observations of mammals on the site were recorded during the above surveys. These observations are listed in Table 3 below.

Table 3 Observed and Expected Mammal Species							
Common Name	Scientific Name	Habitat Type					
		U	FW	OF	SS	Ed	SW
Mammals							
white-tail deer*	<i>Odocoileus virginianus</i>	X	X	X	X	X	
raccoon*	<i>Procyon lotor</i>	X	X				
red fox	<i>Vulpes vulpes</i>	X	X		X	X	
gray fox	<i>Urocyon cinereoargenteus</i>	X			X		
opossum	<i>Didelphis virginiana</i>	X	X				
eastern chipmunk*	<i>Eutamias sp.</i>	X					X
gray squirrel*	<i>Sciurus carolinensis</i>	X	X				
flying squirrel	<i>Glaucomys volans</i>	X	X				
cottontail rabbit*	<i>Sylvilagus floridanus</i>	X		X	X	X	
striped skunk*	<i>Mephitis mephitis</i>	X					
white-footed mouse	<i>Peromyscus leucopus</i>	X					X
deer mouse	<i>Peromyscus maniculatus</i>	X					X
red bat	<i>Lasiurus borealis</i>	X	X				
Habitat type: U - Forested upland, FW - Forested wetland, OF - Old Field, SS - Scrub-shrub wetland, Ed - Edge Habitat, SW - Stone walls							
*Species observed during survey. Source: Tim Miller Associates, Inc., 2003-07							

Conclusion

Based on the surveys conducted, the Yorktown Farms project site has suitable habitat for several bird species, none of which are State listed species. Of the amphibians and reptiles expected to utilize the site, none are listed by the State nor by Westchester County. Neither the Federal, State, nor County governments list any of the vegetation identified during the biodiversity surveys at the site. As noted previously, none of the observed wildlife or vegetation is afforded protection under Federal law.