

### **3.4 Wildlife Resources**

#### **3.4.1 Existing Conditions**

Site evaluations for wildlife and habitat potential were conducted by Steve Marino, PWS and staff at Tim Miller Associates, Inc., Environmental Planners. Mr. Marino is a certified Professional Wetland Scientist, with a degree in Biology and over 16 years of experience in the assessment of wetlands and terrestrial ecology.

Based on aerial photography available from Westchester County, the New York State DEC and private sources, the site was used for agricultural purposes through at least 1960 (Figure 3.3-1 in Section 3.3, Vegetation). 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. Subsequent aerial photos (Figure 3.3-2, from 1974, and Figure 3.3-3, from 1993) show the transition of parts of the site from agricultural fields to wooded areas.

#### **3.4.2 Known and Expected Wildlife Species**

A site specific list of species common to the area that could reasonably be expected to utilize the site or the surrounding environment is provided as Table 3.4-1. This list is derived in part from "The Wildlife Resources of Westchester County," published in 1987 by the Westchester County Department of Planning. The list identifies common species that are likely to utilize the given habitat types available on the site. The list also identifies all species actually observed within these habitat types. Habitat types identified include forested uplands, forested wetland, scrub-shrub wetland, old field, hedgerows and stone walls. 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.

A variety of small terrestrial animals have been sighted on the project site during the course of site visits. These small animals include rabbits, raccoons, squirrels, chipmunks, and various bird species. Deer also utilize the property. The project site is used by numerous species of birds, particularly those that make use of the open field and edge habitat that exists.

Table 3.4-1 Wildlife List Yorktown Farms, Yorktown							
		Habitat Type					
		U	FW	OF	SS	Ed	SW
<b>Mammals</b>							
white-tail deer*	<u>Odocoileus virginianus</u>	X	X	X	X	X	
raccoon*	<u>Procyon lotor</u>	X	X				
red fox	<u>Vulpes vulpes</u>	X	X		X	X	
gray fox	<u>Urocyon cinereoargenteus</u>	X			X		
opossum	<u>Didelphis virginiana</u>	X	X				
eastern chipmunk*	<u>Eutamias sp.</u>	X					X
gray squirrel*	<u>Sciurus carolinensis</u>	X	X				
flying squirrel	<u>Glaucomys volans</u>	X	X				
cottontail rabbit*	<u>Sylvilagus floridanus</u>	X		X	X	X	
striped skunk	<u>Mephitis mephitis</u>	X					
white-footed mouse	<u>Peromyscus leucopus</u>	X					X
deer mouse	<u>Peromyscus maniculatus</u>	X					X
house mouse	<u>Mus musculus</u>			X			
meadow vole*	<u>Microtus pennsylvanicum</u>			X			X
star-nosed mole	<u>Codylura cristata</u>	X		X			
eastern mole	<u>Scalopus aquaticus</u>	X		X			
woodchuck	<u>Marmota monax</u>	X				X	
short-tailed shrew	<u>Blarina brevicauda</u>	X					X
common shrew	<u>Sorex cinereus</u>	X					
little brown bat	<u>Myotis lucifugus</u>	X	X				
red bat	<u>Lasiurus borealis</u>	X	X				
<b>Reptiles</b>							
garter snake	<u>Thamnophis sirtalis</u>	X	X	X	X	X	X
milk snake	<u>Lampropeltis triangulum</u>	X		X	X	X	
brown snake	<u>Storeria dekayi</u>	X	X	X	X	X	X
eastern racer	<u>Coluber constrictor</u>	X		X	X	X	X
box turtle	<u>Terrapene carolina</u>	X	X		X	X	
<b>Amphibians</b>							
red-backed salamander	<u>Plethodon cinereus</u>	X	X				X
two-lined salamander	<u>Eurycea bislineata</u>		X				X
four-toed salamander	<u>Hemidactylium scutatum</u>		X				X
newt	<u>Notophthalmus viridescens</u>	X	X				X
American toad	<u>Bufo americanus</u>	X					X
gray treefrog	<u>Hyla versicolor</u>	X	X				
<b>Birds</b>							
turkey*	<u>Meleagris gallopavo</u>	X	X	X	X		
ruffed grouse	<u>Bonasa umbellus</u>	X		X	X		
hairy woodpecker*	<u>Picoides villosus</u>	X	X				
downy woodpecker*	<u>Picoides pubescens</u>	X	X				
yellow-shafted flicker	<u>Colaptes auratus</u>	X	X				
yellow-billed cuckoo	<u>Coccyzus americanus</u>	X	X				
red-tailed hawk*	<u>Buteo jamaicensis</u>	X	X			X	
robin*	<u>Turdus migratorius</u>	X	X	X	X	X	
catbird*	<u>Dumetella carolinensis</u>	X					
mockingbird*	<u>Mimus polyglottos</u>	X	X	X	X	X	
flycatchers	<u>Empidonax sp.</u>	X	X	X	X		
eastern phoebe	<u>Sayornis phoebe</u>	X	X				
common yellowthroat	<u>Geothlypis trichas</u>						

Table 3.4-1 Wildlife List - Yorktown Farms (cont'd)							
crow*	<u>Corvus brachyrhynchos</u>	X	X	X	X	X	
blue jay*	<u>Cyanocitta cristata</u>	X	X	X	X	X	
scarlet tanager	<u>Piranga olivacea</u>	X	X				
American goldfinch*	<u>Carduelis tristis</u>	X	X	X	X		
cardinal*	<u>Cardinalis cardinalis</u>			X	X		
chipping sparrow*	<u>Spizella passerina</u>			X	X		
towhee	<u>Pipilo erythrophthalmus</u>	X	X				
junco*	<u>Junco hyemalis</u>	X	X				
mourning dove*	<u>Zenaida macroura</u>				X		
chickadee*	<u>Parus spp.</u>	X	X	X	X		
nuthatch*	<u>Sitta spp.</u>	X	X				
turkey vulture*	<u>Cathartes aura</u>	X	X				
E. screech owl	<u>Otus asio</u>	X	X				
great horned owl	<u>Bubo virginianus</u>	X	X				
<b>Habitat type:</b> U - Forested upland, FW - Forested wetland, OF - Old Field, SS - Scrub-shrub wetland, Ed - Edge Habitat, SW - Stone walls							
*Species observed during site walks Source: Tim Miller Associates, Inc., 2003-4, Westchester County, 1987							

#### *Potential for Use by Rare or Endangered Species*

According to the New York State DEC, there are no rare or endangered wildlife species known to inhabit the site or nearby areas. (See letter in Appendix B.) On-site observations by Steve Marino of Tim Miller Associates, Inc., are consistent with this assessment, with some caveats as described below.

The site was reviewed for potential use by a number of rare, endangered or protected species, as listed by the New York State DEC (2001). Based on the old field habitat of the property and the existence of isolated wetland areas, habitat potential for the following species listed by the State as endangered or threatened was analyzed:

- Bog Turtle - Endangered
- Mud Turtle - Endangered
- Tiger Salamander - Endangered
- Northern Cricket Frog - Endangered
- Fence Lizard - Threatened
- Timber Rattlesnake - Threatened

Habitat potential for the following species of special concern was also evaluated:

- Spotted Turtle
- Wood Turtle
- Eastern Box Turtle
- Eastern Hognose Snake
- Worm Snake
- Marbled Salamander
- Jefferson Salamander
- Blue spotted salamander

Several of these species were eliminated from consideration due to the lack of known populations in Yorktown, specifically, or Westchester County, generally:

- Mud turtle - north of its known range, lack of open field areas, lack of suitable open water, considered to be extirpated in Westchester County
- Tiger salamander - north of its known range, confined to eastern Long Island
- Northern cricket frog - requires a sunny pond, known only in the Hudson Highlands and Shawangunk area (Catskills)
- Timber rattlesnake - known in higher altitudes, rugged terrain with open areas of rocky ledges for basking

Habitat conditions available on the site (forested upland and wetland, stream corridors, stone walls, a small man-made pond) were then considered, and several species eliminated from consideration.

- Bog turtle - lack of rich graminoid fen or similar habitat on or adjacent to the site
- Spotted turtle - lack of suitable open water and basking areas
- Wood turtle - lack of suitable stream corridors with sandy banks and overhangs, open meadows for nesting and foraging
- Fence lizard - similar to Timber rattlesnake for terrain and basking, does not prefer closed canopy woodlands
- Ambystomid salamanders (blue-spotted, marble, Jefferson) - lack of vernal pool breeding habitat on or adjacent to site

Evaluations of site specific requirements were then conducted for the remaining State listed species (Eastern Box Turtle, Eastern Hognose Snake, Worm Snake).

There is the possibility that habitat on-site could support the eastern hognose snake (Heterodon platyrhinos). This species is listed by New York State as being a species of special concern (NYSDEC, 2001), although it is identified as being locally common in Westchester County. It is a highly secretive species that may utilize the stone walls and wooded areas of the site for cover and feeding. Since this species also is adaptable to new fields, pastures and suburban areas, the proposed residential development, which will impact less than one-half of the property, should not result in a significant adverse impact to the hognose snake, if in fact it is present on this site.

A similar situation exists for the eastern worm snake (Carphophis amoenus). The worm snake inhabits moist wooded areas with sandy or rocky substrate, often burrowing underground for long periods to avoid dry surface conditions. Its main food sources are earthworms and salamanders, which exist on this site along the moist drainageways and within the existing stone walls. If there is a population of worm snakes on this site, they are likely to avoid the areas of new development but should otherwise be unaffected by site development in the long term. In the short term, site excavation and blasting may cause some individuals close to areas of disturbance to relocate temporarily. Open space areas will remain around the perimeter of the site, adjacent to the wetland corridors, providing space for temporary movement if required. No worm snakes were observed during on-site field investigations.

The eastern box turtle is another species that may occupy this site. Recently listed as a State species of special concern, the box turtle may wander the woods of this site, although

none were observed during numerous site visits. It is primarily a terrestrial turtle, although it may use stream beds or shallow ponds during the hot summer months. The major threat to box turtles appears to be pesticide poisoning and collection as pets. The most likely location for box turtles that may be utilizing this site is the wooded area in the southeast corner of the property, which will be preserved, and the off site wetland to the south and east.

Wildlife Habitat

Table 3.4-2 represents a list of available wildlife habitat types that are currently existing on this site:

<b>Table 3.4-2 Existing Habitat Types Yorktown Farms, Yorktown</b>	
Habitat Type	Approximate Acreage
Second growth woods	21.8
Palustrine wetland	4.1
Old field/meadow	16.3
Scrub shrub wetland	1.6
Stone walls (6,950 l.f.)	n/a
Edge habitat	n/a
Source: Tim Miller Associates, Inc., 2004.	

The general location of these habitat types are shown on Figure 3.4-1.

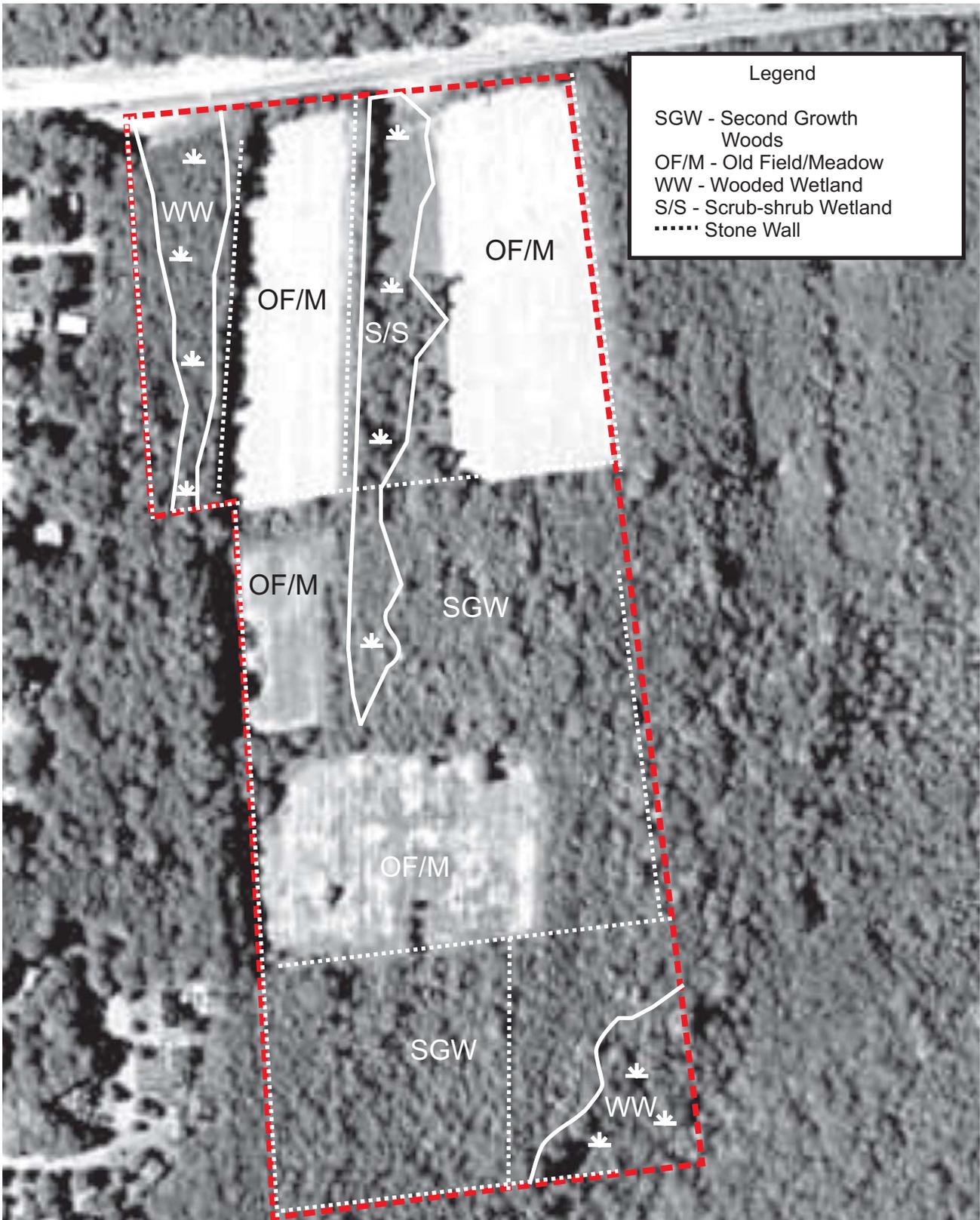
Mature Forest (Upland)

The second growth forest areas contain mature tree species (beech, oaks, hickory) that provide mast for deer and other mammals, and cover in the upper canopy and in standing dead trees. There is generally a lack of significant understory and thickets within these woods, but some of these areas do exist along the edge habitat provided by hedgerows and that interface between the wooded areas and the old fields. These areas are valuable for use as cover for some smaller ground-based creatures, such as rabbits, rodents, snakes and turtles.

Wooded Swamp

Of the larger species likely to use the site, deer and raccoon are known to utilize the wooded wetland areas (Wetlands A and D). Signs of both species were distributed throughout the site.

The wooded wetlands are also likely to provide habitat for a number of other animal species, particularly that off site component of Wetland D that extends east and southeast of the site. As listed in Table 3.4-1, Wetlands A and D provide cover, food and nesting sites for numerous species, typical of other wetlands in Westchester County. The vertical structure provided by the trees provides an added dimension to the habitat use of this area, although the lack of a well developed shrub layer reduces the overall value somewhat.



Legend

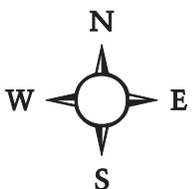
SGW - Second Growth Woods

OF/M - Old Field/Meadow

WW - Wooded Wetland

S/S - Scrub-shrub Wetland

..... Stone Wall



File 0326 08/26/03

Figure 3.4-1 Available Habitat Types  
 Yorktown Farms  
 Town of Yorktown, Westchester County, New York  
 Source: 1993 Aerial Photo  
 Scale: 1" = 655'

### Old Field/Meadow

This area is made up of grasses with occasional shrubs, and provides habitat for small mammals (primarily rabbits and rodents), snakes and songbird species, which utilize the seeds and berries produced as a food source. Due to the poor soil substrate, a result of past agricultural activities, the vegetation here is very slow in transitioning to woods as the rest of the site has. The highest ecological value of this area is as an adjacent habitat type to the woods, where birds and small mammals can feed on the abundant seeds but retreat back under the woodline when a predator approaches. Conversely, the field provides a food source for higher predators, particularly owls and the red tailed hawk. A large hawk was observed perched in a large maple along the tree line, then swooping down to take a mouse out of the field.

### Scrub-shrub Wetland

Wetland B/C is located within a drainageway through the center of the property, draining to a culvert under Route 6. The mixture of grasses, forbs, shrubs and small tree species provides a complex mix of food sources, cover and nesting opportunities. The seasonally saturated soil conditions also 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.

### Stone Walls

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, small mammals (chipmunks, mice, rabbits, voles, etc.) and various amphibian species. Newts and salamanders are particularly likely to find suitable habitat within the stone walls within 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. An analysis of existing survey and aerial photo information shows that there are at least 6,940 linear feet of rock walls distributed throughout the property and along the site perimeter. The largest trees on the property, some in excess of 36 inches in diameter, are located along the stone walls. These trees were growing on this site when it was open pasture, along hedgerows and as shade for the livestock.

### Edge Habitat

Each of the vegetative community types noted above represents a different type of wildlife habitat. The "edge habitats" between the different vegetative communities provide a diversity of structure and niches for wildlife species. The overall value of the project site as wildlife habitat is generally high, due to the existing interface between open areas and woods.

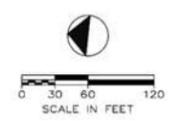
As described above, the site conditions create a valuable connection between the wooded areas of the site and the open meadows. Predatory species, which include hawks, vultures and owls among the avian species and foxes among the mammals, can hide under the cover of the tree line and prey on smaller species that wander into the open to feed or bask in the sun. Conversely, the prey species, which include rabbits, mice and voles, snakes, ground feeding birds and some of the amphibians, can feed in the open, where seed and fruit are



**Legend**

SGW - Second Growth Woods  
 OF/M - Old Field/Meadow  
 WW - Wooded Wetland  
 S/S - Scrub-shrub Wetland  
 Stone Wall

LOCATION MAP  
 SCALE: 1" = 2000'



**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
[Symbol]	[Symbol]	CATCH BASIN
[Symbol]	[Symbol]	DRAIN MANHOLE
[Symbol]	[Symbol]	SAN. SEWER MANHOLE
[Symbol]	[Symbol]	HYDRANT
[Symbol]	[Symbol]	DRAIN INLET
[Symbol]	[Symbol]	WATER VALVE
[Symbol]	[Symbol]	HEADWALL
[Symbol]	[Symbol]	DRY WELL
[Symbol]	[Symbol]	STREET LIGHT
[Symbol]	[Symbol]	MONUMENT
[Symbol]	[Symbol]	WELL
[Symbol]	[Symbol]	S.D.A.
[Symbol]	[Symbol]	CONTOUR LINE
[Symbol]	[Symbol]	WETLANDS FLAGGED BY TIM MILLER ASSOCIATES (2003-2004)

TOTAL LOT AREA:  
 43.17 acres

RALPH G. MASTROMONACO, P.E., P.C.  
 Consulting Engineers  
 13 Dove Court, Croton-on-Hudson, New York 10520  
 (914) 271-4762 (914) 271-2820 Fax

YORKTOWN FARMS  
 TOWN OF YORKTOWN  
 WESTCHESTER CO., N.Y.  
 APRIL 14, 2004  
 SHEET OF SHEETS

REVISED: OCTOBER 26, 2004  
 REVISED: MAY 13, 2004



**Figure 3.4-2: Habitat Alteration**  
 Yorktown Farms Subdivision  
 Town of Yorktown, Westchester County, New York  
 Source: Ralph G. Mastromonaco, P.E., P.C., rev. 10/26/04  
 Scale: As shown

more plentiful, but duck back into the cover of the stone walls and thickets below the tree line and hedgerows.

**3.4.3 Potential Impacts**

*3.4.3.1 Wildlife Habitat Impacts*

Upland vegetation will be removed as a result of the proposed project, which will impact some of the wildlife habitat on this site. A total of 24.7 acres of the site will be affected as a result of clearing necessary for the creation of a residential subdivision on this parcel. This clearing will result in the alteration of portions of this site from successional woodlands and open fields to managed lawn and landscaped areas.

<b>TABLE 3.4-3 Disturbance Calculations</b>			
	<b>Existing Acreage</b>	<b>Disturbed Acreage</b>	<b>Post-Development Acreage</b>
Impervious Surfaces	0.0	0.0	5.8
Second Growth Woods (Upland)	21.8	12.8	8.9
Woods (wetland)	4.1	0.3	3.8
Old Field / Meadow (upland)	16.3	11.1	4.7
Shrub-scrub Wetland	1.6	0.4	1.2
Stone walls	6,950 lf	655 lf	6,295 lf
Turf & Landscaped Areas	0.0	0.0	17.7
Water Quality Basins	0.0	0.0	1.1
<b>TOTAL</b>	<b>43.2</b>	<b>24.7</b>	<b>43.2</b>
Source: Ralph G. Mastro Monaco, P.E., P.C., 2004			

Site development will eliminate a portion of the available woodland and meadow wildlife habitat, including stone walls, and convert approximately 5.8 acres of that total into impervious surfaces for roads, driveways and buildings. The remainder will be cleared and developed as a residential subdivision, with a total of 34 building lots on this 43.2 acre parcel. Wooded and un-maintained meadow areas will still encompass 18.6 acres, or over 43 percent of the site.

Upland Forest

Conversion of existing woodland to residential use will result in the loss of 13.1 of the 25.9 acres of forest habitat on this site, with approximately 12.7 acres of woods remaining. Figure 3.4-2 shows those areas of the site that will remain undeveloped, and the extent of the limits of disturbance. These areas will serve as habitat for many of the existing species that are dependent on woodland habitat. These species may include the woodpeckers, and various bats and other small rodents. Due to the transitional nature of this site, few of the species that exist in this area are solely dependent on one cover or habitat type.

### Forested Wetlands

Both of the larger areas of forested wetlands on site (Wetlands A and D) will remain intact with a minimum 100 foot buffer. No impact is expected to species that are dependent on these wetland corridors.

### Old Field/Meadow

Up to 11.1 acres of land that is currently maintained as old field/meadow will be altered by this proposal. As stated earlier, this portion of the site was maintained as agricultural land until approximately 40 years ago, when it began the succession process after agricultural activities were ceased. Some areas of the site, including those fields at the front of the property and representing most of this cover type, appear to have been mowed regularly in recent years. This prevents these areas from becoming established as high quality wildlife habitat for species that are generally indigenous to the area. Because these areas are providing only modest habitat potential now, the expected impact to wildlife from the alteration of these areas to maintained lawns and landscaped areas is expected to be minimal. The most significant potential impact is the impact to those predatory species that use the "edge" between the woods and fields for hunting. This is discussed further below.

### Shrub-scrub wetland

The applicant is proposing to install a culvert over Wetland B/C for the site access road. This is necessary in order to create the most efficient road network to reach all of the site. This activity will result in the loss of 0.14 acres of Town-regulated wetland. As long as the culvert is properly sized to allow the free flow of runoff from south to north, this action will not impact the functions of this wetland. Careful installation of erosion controls and timing of the culvert installation to coincide with a low flow period will be necessary to ensure that there are no impacts to the drainageway or downstream areas.

The applicant is also proposing the alteration of that portion of Wetland B/C on proposed lots 14, 16 and 18 (0.33 acres, including new areas indicated as "soils only"). As described in Section 3.7, this portion of the wetland performs at a low level of wetland function, primarily as a conveyance for overland runoff towards Route 6.

### Stone walls

As stated previously, the stone walls on this property provide wildlife habitat. Approximately 6,950 linear feet of stone wall have been identified on the site from survey information. The project engineer has designed the lot layout to include stone walls as property lines wherever feasible. Thirteen of the 34 proposed lots have interior stone walls as property boundaries, and many of the lots along the perimeter have stone walls for rear lot lines. Only 655 linear feet of stone wall, or less than 10 percent, will be impacted by this proposal, most of that for the construction of the stormwater management basins in the southeast corner of the site.

*Potential Wildlife Impacts*

Potential impacts to identified rare or endangered species are discussed above. For this proposal, these impacts would be primarily the result of site activities during construction. Once excavation, truck traffic and possible blasting are completed, it appears that site conditions will stabilize and conditions for these species, if they exist on site, will be restored, although reduced in size.

The largest potential impact to the ecology of this site is the elimination of a large portion of the edge habitat that exists at the interface between the fields and tree line. Predatory species use this area for hunting, and prey species use it as an opportunity to find new food sources in close proximity to cover areas. These impacts are consistent, however, with those incurred wherever medium density residential projects are built, and are not in any way unique to this property.

**3.4.4 Mitigation Measures**

The proposed subdivision layout and road configuration were designed to consider a number of factors, including zoning and land use requirements, traffic flow, wetland and buffer preservation, drainage patterns, preservation of woodlands and stormwater quality treatment. Where appropriate, retaining walls have been utilized to reduce overall grading and land disturbance, although the topography of this site allows for construction of the majority of the project with minimal grading except at the site access. This will result in the preservation of a higher number of trees than is usual for a project of this scope.

As shown in Figure 3.4-2, corridors of undisturbed vegetation can be preserved along the edges and through the center of the property, as well as larger blocks of habitat within and adjacent to the existing wetlands.

The largest proposed residential parcel, proposed lot 10, is approximately 4.5 acres in size, and located at the rear of the property, which will allow for the construction of a residence, a stormwater management basin and still maintain a 100 foot setback to Wetland D.