

## D. Flora and Fauna

A natural resources survey has been completed for the Project Site.

The collection of data was gathered from March through mid August 2009. The fieldwork occurred generally from 9:30 am–1:00 pm on March 28, April 8, 20, 28, May 7, 18, June 3, and 23, 2009 and 5:00 pm to 8:00 pm on August 11, 2009. The fieldwork was conducted on multiple occasions in order to maximize the likelihood of encountering wildlife and plant species inhabiting or existing on the site. Plants, shrubs, and trees are readily identified by blooms/buds, leaves, and berries that appear from late March through June which makes that the most appropriate time to conduct a vegetation/habitat survey. The appropriate time for bird surveys is during breeding (mid-May through end of June) at peak song period. Amphibian and reptile surveys are completed from late March to late June concentrating on amphibians from March-April and reptiles from April-June. Mammals are readily observed during the April through August period as the growing season begins and breeding/foraging activity commences. These timeframes are generally accepted by biologists as the appropriate periods for conducting reliable natural resources surveys and are consistent with accepted guidance from the New York State Department of Environmental Conservation for threatened and endangered species.

### 1. Existing Conditions

#### a. Vegetation

The vegetation inventory included identification of ecological communities or habitat cover types that would support wildlife of all types. Cover type surveys were conducted by first reviewing aerial photographs of the parcels and adjacent parcels and subsequently by investigating the habitats to identify and classify each. Within each cover type, visual searches for herbaceous and woody plant species or parts thereof, including leaves, bark, twigs, seeds, flowers, fruits, or other identifiable plant structures were conducted to identify and document vegetation on the parcels. Trees, shrubs, and flowering plants were identified to species levels where possible. The Plot Transect method was employed for the vegetation inventory. Plot sampling involves making observations within an area that is representative of the community as a whole.

There is only one (1) distinct natural cover type identified on the parcels as classified in the publication “*Ecological Communities of New York State*” and as listed in Table III.D-1. Approximate physical impacts to this habitat type are shown on Table III.D-2. The other land type in the proposed development area is maintained lawn and landscaping. Overall wildlife species diversity is low when compared to similar parcels of this size. This can be attributed to high noise levels from continuous traffic on the Taconic State Parkway as well as the lack of natural corridors or habitat connections to expansive natural areas offsite.

**Table III.D-1  
Habitat Cover Type Identified on the Taconic Tract Parcels**

No.	Ecological Communities of New York State - EDINGER 2002
1	Appalachian Oak-Hickory Forest

Source: Ecological Solutions Natural Resources Survey, Taconic Tract Subdivision, 8/26/09.

**Table III.D-2  
Cover Type Impacts Taconic Tract Parcels**

Ecological Communities of New York State	Acres Identified on Parcels (±)	Anticipated Impacts (acres(±))	Percent
Appalachian Oak-Hickory Forest	24.1	4.11	41.1% (17% of Appalachian Oak-Hickory forest area)
Existing Developed Area (Includes Lawn)	5.9	5.9	58.9%
<b>TOTAL</b>	<b>30</b>	<b>10.01</b>	<b>100%</b>

Source: Ecological Solutions Natural Resources Survey, Taconic Tract Subdivision, 8/26/09.

A portion of the Project Site contains an existing residence and several detached structures along with amenities including a pool, driving and putting area, tennis court, and extensive landscaped area with several acres of maintained lawn. The balance of it contains some minor roads or paved paths approximately 15 feet wide traverse the wooded areas on the western section of the parcels.

**Appalachian Oak-Hickory Forest Community**

*Undeveloped/Wooded Portion of Subdivision Parcels* – The wooded forest on the parcels was categorized utilizing the publication “*Ecological Communities of New York State*”. This hardwood forest occurs on well-drained portions of the parcels generally on upper slopes, or south and west facing slopes. The soils are loams or sandy loams. The trees observed on the site are typical of an Appalachian Oak-Hickory forest and include: red oak (*Quercus rubra*), white oak (*Quercus alba*), or black oak (*Quercus velutina*). Mixed with the oaks, at lower densities, are one the following hickories: pignut (*Carya glabra*) and shagbark (*Carya ovata*). Common associates in this wooded tract are white ash (*Fraxinus americana*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), Norway maple (*Acer platanoides*), black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), northern hemlock (*Tsuga canadensis*), tulip tree (*Liriodendron tulipifera*), cherry birch (*Betula lenta*), eastern red cedar (*Juniperus virginiana*), and eastern hop hornbeam (*Ostrya virginiana*). The trees are generally in same age class within sections of the parcels with a large section of the Taconic Tract parcels

containing small young trees in the 10-20 inch dbh range with several individuals in the 40 + inch dbh range.

The subcanopy or understory stratum contains the following small trees and tall shrubs including flowering dogwood (*Cornus florida*), witch hazel (*Hamamelis virginiana*), shadbush (*Amelanchier arborea*), and choke cherry (*Prunus virginiana*). Common low shrubs include blueberries (*Vaccinium angustifolium*), red raspberry (*Rubus idaeus*), and gray dogwood (*Cornus racemosa*). The shrub layer and groundlayer flora are more diverse. Characteristic groundlayer herbs are false Solomon's seal (*Smilacina racemosa*), Pennsylvania sedge (*Carex pensylvanica*), tick-trefoil (*Desmodium paniculatum*), garlic mustard (*Allaria petiolata*), star of Bethlehem (*Ornithogalum umbellatum*), white goldenrod (*Solidago bicolor*), and trout lily.

The sources cited in the scoping document (USFWS, NYSDEC and NYSDEC-NY, Natural Heritage Program) were consulted for the evaluation presented.

#### **b. Wildlife**

Extensive field surveys were conducted for potential wildlife species including mammals, birds, and herpetiles (reptiles and amphibians). Special surveys were also conducted to identify and locate potential seasonally active species of special concern such as the marbled salamander (*Ambystoma maculatum*) and Jefferson salamander (*Ambystoma laterale*). Multiple methods were used in these surveys, as multiple methodologies increase the potential accuracy of surveys.

Species observed on the parcels during the surveys include red backed salamander (*Plethodon cinereus*), red-bellied woodpecker (*Melanerpes carolinus*), little brown bat (*Myotis lucifugus*), eastern wild turkey (*Meleagris gallopavo*), common flicker (*Colaptes auratus*), golden-crowned kinglet (*Regulus satrapa*), ovenbird (*Seiurus aurocapillus*), scarlet tanager (*Piranga olivacea*), wood thrush (*Hylocichla mustelina*), and blackthroated green warbler (*Dendroica virens*). Other year round resident species also noted include common crow, bluejay, eastern robin, black capped chickadee, eastern phoebe, tufted titmouse, dark eyed junco, northern cardinal, nuthatches, gray squirrel, chipmunk, white footed mouse, raccoon, opossum, striped skunk, red fox (*Vulpes vulpes*), American mink (*Neovison vison*), woodchuck, shrew, and eastern mole. This list is inclusive of all observed animals.

#### **Potential Threatened and Endangered Species**

The Applicant's natural resource consultant has specifically evaluated the Project Site for the presence of potential threatened/endangered species, including the Indiana Bat and Bald Eagle. As noted in the Natural Resource Consultants report, the Project Site does not lend itself to being used as a habitat for either animal. Given the habitat on the site as well as the NYSDEC correspondence and USFWS list of federal species it was appropriate to evaluate the species mentioned in the report only. Refer to Appendix G for full report.

## 2. Anticipated Impacts

The proposed development and its appurtenant features will necessarily require clearing of vegetation beyond the existing residential area. Earth moving (excavation, filling, and grading), operation of heavy machinery, construction, and alteration to existing drainage patterns, addition of impervious surfaces, changes in traffic patterns, and increased human activity will occur on the parcels. These activities have a potential to impact the existing environmental elements of the parcels. Anticipated impacts from these activities are outlined below.

### a. Vegetation

The proposed activities on the parcels will require the removal of approximately 4.11 acres of natural vegetation altering the amount of oak-hickory forest area on the parcels but not its distribution on the parcels. Within the 4.11 acres, approximately 491 trees will be removed, of which 11 trees are dead. Forested areas that will not be impacted will remain and will continue to be classified Appalachian Oak-Hickory forest.

The upland forest area will be replaced with cultural cover types, such as mowed lawn with trees and paved driveways, single-family dwellings, garages, walks, etc. characteristic of the existing neighborhood. While some of the new cover types will provide usable wildlife habitat, in general, the cultural habitat types are of lower value to wildlife than the natural cover types. Habitat values will be dependent on landscape planting schemes and maintenance regimes of the developed lots, and on availability of protective cover for wildlife. Overall, however, a decrease in natural wildlife habitat value will result, and the species richness of the local wildlife community may reflect those changes.

The most significant impact associated with removal of forest area for use as a residential development is likely to be to hydrology. As a consequence of urban induced runoff changes, which in turn may cause flooding, erosion, and habitat damage, jurisdictions have long required some degree of stormwater mitigation. The most common approach has been to reduce flows through the use of detention ponds, which are intended to capture and detain stormwater runoff from developed areas.

### b. Wildlife

#### All Species

Direct impacts to wildlife from the proposed development will primarily be displacement. Some species found on the parcels are typically found in suburban settings and have already adapted to proximal human habitation. These species will remain on the developed portion of the parcels, though likely in fewer numbers, as availability of basic habitat features (food, cover, and space) may be decreased in the developed area.

**Listed Species**

No state or federally listed threatened or endangered species were observed on the parcels.

**3. Proposed Mitigation**

The proposed development of the Project Site is anticipated to have the potential for environmental impacts that can be minimized through the implementation of mitigation measures. These are actions taken to prevent or lower the probability of adverse effects from the development. Open Space created by this development will be owned and maintained by the Home Owners Association. Mitigation measures for the potential impacts are outlined below.

**a. Vegetation**

A tree survey completed for the parcels by WSP-Sells indicates that there are no rare native trees located within the proposed development area on the parcels. Forty-eight of the larger trees (24 inches dbh and over) will have to be removed for development. However, more than seventy-two percent of the larger trees will remain after development occurs. To minimize loss of habitat, the Applicant will minimize removal of natural vegetation as much as possible to preserve natural cover on the parcels. Vegetation clearing will be minimized and demarcated by orange construction fencing.

**Table III.D-3  
Removal of Trees with DBH Greater than 24 inches**

Tree Size (inches)	Number of Trees to be Removed	Number of Trees to Remain	Percent of Trees Removed (per size)
24	16	47	25.4%
26	11	21	34.4%
28	12	22	35.3%
30	4	15	21.0%
32	2	10	16.7%
36	1	4	20.0%
38	1	1	50.0%
40+	1	5	16.7%
<b>TOTAL</b>	<b>48</b>	<b>125</b>	<b>27.7%</b>

In addition, contiguous forested area will remain on the northern portion of the parcels to continue to provide mature trees in the landscape of the proposed development. This will not only have ecological benefits, but will also provide mature trees in the development being built, giving the appearance of long-term establishment and stability. Other habitat aspects of the parcels should be preserved where they do not interfere with the functioning of the development. Such elements may include existing rock outcrops and standing dead trees (snags). The rock outcrops at the southern boundary provide microhabitats for small mammals, herpetiles, and invertebrates. Snags provide perching, nesting, and feeding areas for a variety of resident wildlife. These elements or parts thereof should be protected from removal during construction activities where possible.

Tree Reforestation requirements were calculated in accordance with *Chapter 201: Article I Tree Preservation* of the Mount Pleasant Town Code. This method accounts for trees with a DBH (Diameter at Breast Height) of ten inches and larger. The required replacement density (RDF) for the proposed layouts is negative (-1,108), meaning that no reforestation is necessary for the proposed site because of the extensive number and high density of trees to remain. The existing density factor (EDF) of trees to remain on the site is 1770.

Landscape plans will be provided, including the number and species to be used, will be prepared. A detailed plant list has been developed that consists of plants that are native to Westchester County and have strong emphases on plants material found in an Appalachian Oak-Hickory Forest ecological community. The plant list will be used to develop Landscape Plans that will be prepared for Site Plan Review and will include the number and species of plantings.

**Table III.D-4  
Proposed Planting List for the Taconic Tract Project Site**

2.11.10				
ITEM	QTY	SYM	BOTANICAL NAME	COMMON NAME
<b>MAJOR DECIDUOUS TREES</b>				
		AR	ACER RUBRUM	RED MAPLE
		FA	FRAXINUS AMERICANA 'AUTUMN PURPLE'	AUTUMN PURPLE 'WHITE ASH'
		QBC	QUERCUS BICOLOR	SWAMP WHITE OAK
		QM	QUERCUS PRINUS	CHESTNUT OAK
		QR	QUERCUS RUBRA	NORTH RED OAK
<b>MINOR DECIDUOUS TREES</b>				
		AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY
		CAP	CORNUS ALTERNIFOLIA	PAGODA DOGWOOD
		HV	CERCIS CANADENSIS	EASTERN REDBUD
		CF	CORNUS FLORIDA	FLOWERING DOGWOOD
		HV	HAMAMELIS VIRGINIANA	COMMON WITCHHAZEL
		MS	MAGNOLIA STELLATA	STAR MAGNOLIA

<b>EVERGREEN TREES</b>				
		JV	EASTERN REDCEDAR	JUNIPERUS VIRGINIANA
		PE	TSUGA CANADENSIS	CANADA HEMLOCK
		PS	WHITE PINE	PINUS STROBUS
<b>DECIDUOUS SHRUBS</b>				
		AA	ARONIA ARBITIFOLIA	RED CHOKEBERRY
		CAF	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH
		CS	CORNUS STOLONIFERA	REDOSIER DOGWOOD
		LB	LINDERA BENZOIN	SPICEBUSH
		MPP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY
		VA	VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY
		VAM	VIBURNUM ACERFOLIUM	MAPLE LEAFED VIBURNUM
		VD	VIBURNUM DENTATUM	ARROWWOOD
		VP	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
<b>EVERGREEN SHRUBS</b>				
		JCH	JUNIPERUS COMMUNIS	COMMON JUNIPER
		JH	JUNIPERUS HORIZONTALIS	CREEPING JUNIPER
		KL	KALMIA LATIFOLIA	MOUNTAIN LAUREL
		RCA	RHODODENDRON CATAWBIENSE 'AMERICA'	AMERICAN CATAWBA RHODODENDRON
<b>GROUND COVERS</b>				
		AP	ARCTOSTAPHYLOS UVA-URSI	BEARBERRY
		GP	GAULTHERIA PROCUMBENS	WINTERGREEN
<b>PERENNIALS</b>				
		ACA	AQUILEGIA CANADENSIS	WILD COLUMBINE
		AD	ASTER DIVARICATUS	WOODLAND ASTER
		AN	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER
		EC	ECHINACEA PURPUREA	PURPLE CONEFLOWER
		EPP	EUPATORIUM PURPUREUM	JOE PYE WEED
		PB	POLYGONATUM BIFLORUM	SMOOTH SOLOMON'S SEAL
		RF	RUDBECKIA FULGIDA 'GOLDSTRUM'	PERENNIAL BLACK EYED SUSAN
		RM	RUDBECKIA MAXIMUM	CONE FLOWER
		RT	RUDBECKIA TRILOBA	BROWN-EYED SUSAN
<b>FERNS</b>				
		DP	DENNSTAEDTIA PUNCTILOBULA	HAYSCENTED FERN
		OC	OSMUNDA CINNAMOMEA	CINNAMON FERN
		OR	OSMUNDA REGALIS	ROYAL FERN
		PA	POLYSTICHUM ACROSTICHOIDES	CHRISTMAS FERN
<b>GRASSES &amp; SEDGES</b>				
		AS	ANDROPOGON SCOPARIUS	LITTLE BLUE STEM
		CP	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE
		PV	PANICUM VIRGATUM	SWITCH GRASS

<b>NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES</b>	
Application Rate: 1kg per 179 square meters (1 lb per 875 sq. ft.)	
<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
AGROSTIS PERENNANS	UPLAND BENTGRASS
AGROSTIS STOLONIFERA	CREEPING BENTGRASS
ANDROPOGON GERARDII	BIG BLUESTEM, NIAGRA
ASTER NOVAE - ANGLIAE	NEW ENGLAND ASTER
CAREX VULPINOIDEA	FOX SEDGE
ELYMUS VIRGINICUS	VIRGINIA WILD RYE
EUPATORIUM PERFOLIATUM	BONESET
EUTHAMIA GRAMINIFOLIA	GRASS LEAVED GOLDENROD
FESTUCA RUBRA	CREEPING RED FESCUE
JUNCUS EFFUSUS	SOFT RUSH
ONOCLEA SENSIBILIS	SENSITIVE FERN
PANICUM VIRGATUM	SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
SCIRPUS ATROVIRENS	GREEN BULRUSH
SCIRPUS CYPERINUS	WOOL GRASS
VERBENA HASTATA	BLUE VERVAIN
<b>NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR DRY SITES</b>	
Application Rate: 1 kg per 179 square meters (1 lb per 875 sq. ft.)	
<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
AGROSTIS PERENNANS	UPLAND BENTGRASS
AGROSTIS SCABRA	ROUGH BENTGRASS / TICKLEGRASS
BOUTELOUA GRACILIS	BLUE GRAMA
ELYMUS CANADENSIS	CANADA WILD RYE
FESTUCA RUBRA	CREEPING RED FESCUE
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
SORGHASTRUM NUTANS	INDIAN GRASS
<b>ESTABLISHING TURF</b>	
Application Rate: 1 kg per 179 square meters (1 lb per 875 sq. ft.)	
<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
ELYMUS CANADENSIS	CANADA WILD RYE
FESTUCA RUBRA	CREEPING RED FESCUE

Non-point source impacts can be managed through engineering practices including the proposed stormwater basin and biofilters.

The Applicant anticipates that pesticide and fertilizer use on the proposed lots will be typical of that associated with residential use and will employ efforts to reduce the need for pesticides and fertilizers such as by using hardy, pest-resistant grasses and ground covers. In addition, a homeowners association will be formed, of which each homeowner will be a member, which will be responsible, among other things, to manage the maintenance of lawns and landscaping. By centralizing such matters in the homeowners association, the potential for unnecessary or excessive application of chemicals that may arise were the preferences of sixteen separate homeowners to

control will be reduced. The homeowners association will be required to hire a reputable landscape contractor experienced in lawn and landscape maintenances and certified to apply chemicals to perform the maintenance work.

The Declaration creating the homeowners association will provide for such a structure and will provide that any pesticide and fertilizer application will be made in compliance with all applicable Federal, State, County and local laws, rules and regulations governing the application of pesticides and fertilizers.

**b. Wildlife**

Temporary wildlife displacement during construction is a short-term impact. The development plan minimizes forest cover removal to only about 4.11 acres. Native plantings will be provided at each dwelling to mitigate for the loss of natural forest area. The layout of the plantings including the number and species to be used, will be prepared at part of the site plan review.

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