

### **3.3 Terrestrial and Aquatic Ecology**

#### **Introduction**

Tim Miller Associates Inc. (TMA) inventoried existing vegetation on the Waters Edge project site and completed wildlife habitat assessments of the property. Site visits were conducted by TMA staff during June 2005 and August 2006.

The project site is approximately 4.4 acres in area and consists of open lawn and brush, with occasional trees occurring throughout much of the property. The majority of the site is flat, although along its western limits, the site slopes steeply toward the Metro North railroad tracks and the Hudson River beyond. With a few exceptions as noted below, the trees on the property appear to be in the 20 to 40 year old class.

#### **3.3.1 Existing Conditions**

##### **Vegetation**

Various parts of the site have different cover types. Those areas east and west of the existing home on the property have been maintained as lawn, and are dominated by warm season grasses and ornamental plantings (Refer to Photo 1 of the Wildlife Habitat Assessment and Vegetation Inventory (WHAVI) located in appendices of Full Environmental Assessment Form (EAF)). The EAF is located in Appendix I of this document. These plantings include forsythia, privet, rose of Sharon, lilac and ornamental rhododendron. Several large trees were observed in this area west of the existing residence. Four of these trees are larger than 30 inches in diameter, including two oaks and a red maple. A 50 inch tulip poplar was also observed, but the trunk of this tree is hollow.

An area south of the existing house which has not been regularly maintained is dominated by common invasive and non-native species and makes up the largest undeveloped portions of the site (Please refer to Photos 2, 3 and 4 of the WHAVI appended to the EAF, Appendix I). The dominant herbaceous species in this portion of the site are tall goldenrod and mugwort, which often dominate previously disturbed areas with open canopies. Except for a few small trees (primarily black locust and mulberry), there is little canopy in this area. Most of the woody vegetation in this central portion of the site is impacted by vines, particularly bittersweet and porcelainberry. The vines rely upon the woody plants for support but eventually kill them by choking out light and wrapping tightly around their trunks.

Further south is a fenced in area of the property where trees and shrubs have become established. Sugar maples, ailanthus, cottonwood and small tulip poplars form a small wooded area. This part of the site is separated from the brushy area by the fence and the gravel portion of Fairlawn Avenue (Refer to Photo 5 of the WHAVI appended to the EAF, Appendix I).

The western edge of the site is very steep and poorly vegetated (See Photos 6 and 7 of the WHAVI appended to the EAF, Appendix I). There are several small trees growing along this slope, which drops approximately 60 feet from the top of the slope to the land adjacent to the Metro North railroad tracks. These trees have also been impacted by the vine growth, and are in poor condition. The exceptions to this are two large red oaks at the southern end of the property.

Immediately south of the existing residence a ravine has formed, which drops 20 to 25 feet below the existing landscape (Refer to Photo 8 of WHAVI appended to the EAF). The ravine may have been formed in part by two land fill operations and the placement of a storm sewer outlet, which flows to the Hudson River.

The areas north and south of the ravine show indications of historic fill that was brought in to level the site. There is no indication, based on the lack of a natural channel or groundwater seepage, that this feature is a watercourse. Rather, the ravine serves as a stone lined conveyance path for stormwater discharged from the existing pipe during storm events. There are several large trees within the ravine area, one of which is dead, which is an indication that this feature has existed for some time.

By letter of October 4, 2006, the New York State Department of Environmental Conservation Division of Fish, Wildlife, and Marine Resources (Appendix E) indicated that the New York Natural Heritage Program database does not identify any rare or State-listed plants on the project site, or in the immediate vicinity of the site.

The site is currently a mix of wooded areas, lawn and brush/meadow. The wooded area is mostly limited to the westerly portion of the site, on the embankment between the relatively level central and easterly portions of the site and the railroad tracks below. Other areas of the site have individual or groups of trees. The trees on the westerly embankment, with the exception of the ravine, will generally be preserved.

A table of plant species that were identified on the site is provided below.

<b>Table 3.3-1 Site Vegetation Water's Edge at Dobbs Ferry</b>	
<b>Common Name (Scientific name)</b>	
<b>TREES</b>	<b>SHRUBS</b>
Chestnut oak ( <i>Quercus prinus</i> )*	Red-osier dogwood ( <i>Cornus stolonifera</i> )*
Red oak ( <i>Quercus rubra</i> )	Red-panicle dogwood ( <i>Cornus racemosa</i> )
Mulberry ( <i>Morus rubra</i> )	Silky dogwood ( <i>Cornus amomum</i> )*
American beech ( <i>Fagus grandifolia</i> )*	Rhododendron ( <i>Rhododendron sp.</i> )
Red maple ( <i>Acer rubrum</i> )*	Witch hazel ( <i>Hamamelis virginiana</i> )
Sugar maple ( <i>Acer saccharum</i> )*	Forsythia ( <i>Forsythia intermedia</i> )
Norway maple ( <i>Acer platanoides</i> )*	Lilac ( <i>Syringa vulgaris</i> )
Apple ( <i>Malus spp.</i> )*	Tartarian honeysuckle ( <i>Lonicera tartarica</i> )
Black birch ( <i>Betula nigra</i> )	Brambles ( <i>Rubus spp.</i> )*
White cedar ( <i>Thuja occidentalis</i> )	Japanese barberry ( <i>Berberis thunbergii</i> )*
Tulip poplar ( <i>Liriodendron tulipifera</i> )*	Rose of Sharon ( <i>Hibiscus syriacus</i> )
American basswood ( <i>Tilia americana</i> )	Staghorn sumac ( <i>Rhus hirta</i> )
Black locust ( <i>Robinia pseudoacacia</i> )*	Privet ( <i>Ligustrum spp.</i> )*
Eastern cottonwood ( <i>Populus deltoides</i> )*	
Black cherry ( <i>Prunus serotina</i> )*	
Box Elder ( <i>Acer negundo</i> )	
Tree of Heaven ( <i>Ailanthus altissima</i> )*	
Black cherry ( <i>Prunus serotina</i> )*	
Slippery elm ( <i>Ulmus rubra</i> )*	
White pine ( <i>Pinus strobus</i> )*	
<b>VINES, HERBS AND FORBS</b>	
Mullein ( <i>Verbascum blattaria</i> )*	Common greenbriar ( <i>Smilax rotundifolia</i> )*
Curly dock ( <i>Rumex crispus</i> )	Poison ivy ( <i>Toxicodendron radicans</i> )*
Common yarrow ( <i>Achillea millefolium</i> )	Bittersweet ( <i>Celastrus scandens</i> )*
Multiflora rose ( <i>Rosa multiflora</i> )*	Porcelainberry ( <i>Ampelopsis brevipedunculata</i> )
Grape ( <i>Vitis spp.</i> )*	Goldenrod species ( <i>Solidago spp.</i> )*
Garlic mustard ( <i>Alliaria petiolata</i> )*	Japanese knotweed ( <i>Polygonum cuspidatum</i> )
Dame's rocket ( <i>Hesperis matronalis</i> )*	Wild onion ( <i>Allium spp.</i> )*
Common plantain ( <i>Plantago rugellii</i> )	Pokeweed ( <i>Phytolacca americana</i> )
Foxtail ( <i>Setaria viridis</i> )	Milkweed ( <i>Asclepias spp.</i> )*
Virginia creeper ( <i>Parthenocissus quinquefolia</i> )	Common evening primrose ( <i>Oenothera biennis</i> )*
Periwinkle ( <i>Vinca minor</i> )	Mugwort ( <i>Artemisia vulgaris</i> )*

Wildlife

The site as it exists has limited potential for use by wildlife. The suburban surroundings, with relatively high density housing and close proximity to Broadway (NYS Route 9), does not present ideal habitat conditions for any but those species that are adapted to an urban/suburban landscape.

The maintained areas associated with the existing residence are used by a number of common species. During the June 2005 site visit, house sparrows were observed on the roof and under the eaves of this house, presumably preparing nests for the coming breeding season. Blue jays, robins and cardinals were also observed, as was evidence of use of the site by a woodchuck. The cedars trees east of the house could provide good cover for bird species that might wish to nest in this area.

The brushy area to the south of the house could provide cover for a number of species, all of which are also relatively common in the suburban landscape. Mourning doves, white throated sparrow and a cardinal were observed in this area. It is likely that eastern cottontail rabbit, american goldfinch and several small rodents, including house mouse, meadow vole and star nosed mole utilize this area. Robins, sparrows, purple finch, black capped chickadee and other bird species that prefer thickets are also likely to use the site. Seeds and invertebrates would be available as food sources. It is also likely that garter snakes would be found on this site.

The larger trees on the site could be used for nesting by several bird species, including robins, Baltimore oriole, mockingbird, catbird and others. Gray squirrels were also observed in these trees during the June 2005 site visit. Deer were observed at the bottom of the slope, and there was a recognizable deer trail traversing the slope. Some cavities within trees were observed, which could also provide nesting opportunities for bird species. A pair of northern flickers were observed nesting in a cavity in a dead tree along the dirt access road.

The steep slope descending to the Metro North railroad tracks and the Hudson River also offer limited habitat, although this area has been removed from the higher activity areas. The absence of healthy trees and understory, the presence of rubbish and debris, and the proximity to the Metro North train tracks (trains were observed passing every five to eight minutes during the site visits would limit the use of this area).

Neighbors have reporting seeing an eagle, hawk and owl at the site. It is possible that some raptor species, such as hawks, owls and eagles, could use the larger trees closest to the river as perches or for stopovers, considering the proximity to the Hudson River.

Several common species of owls, including great horned own and barred owl, may nest in cavities within the larger trees on site. Common hawk species, including retailed hawk and sharp-shinned hawk, may also use the site for nesting. It is noted, however, that no nests were observed during the site visits. Any long term use by eagles, i.e., nesting, is very unlikely and has not been reported in the area. The lower Hudson Valley sees a number of winter eagles, with numbers increasing each year, but nesting is typically reserved for areas to the north of the project site.

<b>Table 3.3-2 Observed and Expected Wildlife List Water's Edge, Dobbs Ferry</b>	
<b>Mammals</b>	
white-tail deer	<u>Odocoileus virginianus</u>
raccoon	<u>Procyon lotor</u>
opossum	<u>Didelphis virginiana</u>
eastern chipmunk	<u>Eutamias sp.</u>
gray squirrel	<u>Sciurus carolinensis</u>
cottontail rabbit	<u>Sylvilagus floridanus</u>
woodchuck	<u>Marmota monax</u>
meadow vole	<u>Microtus pennsylvanicum</u>
house mouse	<u>Mus musculus</u>
star-nosed mole	<u>Codylura cristata</u>
<b>Reptiles</b>	
garter snake	<u>Thamnophis sirtalis</u>
<b>Birds</b>	
downy woodpecker	<u>Picoides pubescens</u>
robin	<u>Turdus migratorius</u>
catbird	<u>Dumetella carolinensis</u>
mockingbird	<u>Mimus polyglottos</u>
crow	<u>Corvus brachyrhynchos</u>
blue jay	<u>Cyanocitta cristata</u>
American goldfinch	<u>Carduelis tristis</u>
cardinal	<u>Cardinalis cardinalis</u>
white throated sparrow	<u>Spizella passerina</u>
house sparrow	<u>Passer domesticus</u>
Baltimore oriole	<u>Icterus galbula</u>
purple finch	<u>Carpodacus purpureus</u>
junco	<u>Junco hyemalis</u>
mourning dove	<u>Zenaida macroura</u>
chickadee	<u>Parus spp.</u>
nuthatch	<u>Sitta spp.</u>
humming bird	<u>Archiochus colubris</u>
titmouse	<u>Parus bicolor</u>
brown thrasher	<u>Toxostoma rufum</u>

By letter of October 4, 2006, the New York State Department of Environmental Conservation Division of Fish, Wildlife, and Marine Resources (Appendix E) indicated that the New York Natural Heritage Program database suggests that the endangered Shortnose Sturgeon (*Acipenser brevirostrum*) occurs, or may occur, on the project site, or in the immediate vicinity of the site. The sturgeon is a known habitant of the Hudson River which is separated from the site by the Metro North (MTA) railway tracks.

### Bald Eagles

The Hudson River, and its corridor, are known to be utilized by bald eagles as a source of food, for nesting, and as a migratory route. The 4.4 acre project site is located between an existing residential neighborhood and Broadway (NYS Route 9) and the heavily used Metro North rail road line which separates the site from the Hudson River.

Preferred bald eagle nesting and roosting habitats include mature old growth canopy and super canopy trees (especially white pines). None of the vegetation communities on the site provide important nesting, breeding, or roosting sites for bald eagles, and the site's proximity to the Hudson River precludes acceptable open water habitat for fishing. It is possible that eagles occasionally use the largest of the trees for resting and feeding. However, no eagles were observed on, or adjacent to, the site during the June 2005 or August 2006 field investigations conducted on the site by wildlife specialists on behalf of the applicant. Nor were any observed by applicant team members during several dozen site visits over the course of the past several years. Accordingly, there is little reason to suspect bald eagles use this property, or to anticipate that development of the 4.4 acre site would have any impacts on eagles, their habitats, or their migratory patterns.

### **3.3.2 Potential Impacts**

Neither field observations, or the NYSDEC Natural Heritage Program database, revealed the presence of any rare, endangered, or unusual plant or animal species on the subject property. Further, based upon on-site evaluations, the project site is limited in the number of uncommon or unusual species that it can support. Prior site disturbance, regular maintenance of landscaped areas, proximity to roads, railroads and existing dwellings create an urban/suburban environment which is suitable only for those species that are most adaptable to human presence.

The existing vegetative community is comprised primarily of invasive and generally non-native plant species that offer only moderate wildlife habitat and food sources. Some of the existing trees are large and provide both habitat and food, and potential occasional stops for eagles. These trees, if healthy, should be preserved to the extent practicable.

It is anticipated that the construction of the proposed eleven lot subdivision and future homes on site will result in most trees and vegetation in the easterly, central and ravine areas of the site being removed due to grading and general site work.

### Potential Displacement of Wildlife During Construction

As noted, wildlife that utilizes the 4.4 acre site is typical of suburban environments and may include birds, opossums, raccoons, skunks, rabbits and rodents. Construction of the proposed road, the associated infrastructure, and the individual residences on the proposed lots will be completed in stages. During each phase of construction, wildlife (including birdlife, opossums, raccoons, skunks, rabbits, and rodents) will likely be displaced from the immediate area where the construction is taking place and would most likely relocate to other suburban areas of similar habitat in the vicinity.

#### Bald Eagles

No eagles were observed by representatives of the applicant during several dozen site visits over the course of the past several years nor were roosting trees identified. Accordingly, there is little reasons to suspect bald eagles use this property, or to anticipate that construction or development of the 4.4 acre site would have a significant impact on eagles, their habitats, nesting habits or their migratory patterns.

#### **3.3.3 Mitigation**

There are no known rare or endangered plant or animal species, including bald eagles, known to utilize the site for any purpose and use by wildlife is limited. Accordingly, no significant adverse impacts on terrestrial or aquatic ecology are anticipated as a result of the Proposed Action nor are any specific impact mitigation measures proposed.

#### Landscape Plan

A conceptual landscape plan is shown on Figure 2-4. Landscaping for the subdivision will include the installation of Village approved street trees. Buffer plantings on the north side of the subject site will extend for some 350 feet and will be installed before certificates of occupancy for homes on those specific lots where buffer landscaping is proposed are granted. No fencing is proposed at this time.

The Landscape Plan for the future homes will provide revegetation throughout the site to achieve several objectives. The new plantings will provide street trees along the new roads. Foundation plantings around the homes, side and rear yard plantings to buffer between new homes and existing homes will be done based on the preference of future individual homeowners. Buffer planting along the northerly boundary with St. Christopher's and infill planting in the ravine area will be done along with home construction on those individual lots. A landscape plan with more detailed specifications will be submitted to the Village between preliminary and final subdivision approval.