3.3 Vegetation

3.3.1 Existing Conditions

Site evaluations for vegetation were conducted by Steve Marino, PWS, Andrew Mavian, and James Bates of Tim Miller Associates, Inc., Environmental Planners. Combined, they have more than 40 years of experience in the identification and assessment of vegetation and vegetative communities.

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). 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.

General Vegetation Types

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 Figure 3.3-4, Vegetative Associations.

Second Growth Hardwood Forest

Second growth hardwood forest covers approximately 58 percent of the site, or 25 acres. This association is dominated by sugar maple (<u>Acer saccharum</u>) and red oak (<u>Quercus rubra</u>), and includes a number of American beech (<u>Fagus grandifolia</u>), tulip poplar (<u>Liriodendron tulipifera</u>), black cherry (<u>Prunus serotina</u>), yellow birch (<u>Betula lutea</u>), and shagbark hickory (<u>Carya ovata</u>). The shrub and herb strata includes japanese barberry (Berberis thunbergii), bittersweet (<u>Celastrus scandens</u>), poison ivy (<u>Toxicodendron radicans</u>), garlic mustard (<u>Alliaria petiolata</u>) and honeysuckle vines (<u>Lonicera sp</u>). These understory layers are not well-developed below the closed canopy of the large hardwoods in these areas. Based on site observations, there is a significant deer presence on this site, and the lack of well developed herb and shrub layers is likely the result of deer grazing. The southeast corner of the property has the oldest trees, some in excess of 36 inches in diameter. These larger trees are predominantly beech, sugar maple and tulip poplar. The younger wooded areas are almost entirely red maple (Acer rubrum), with scattered ash, elm and tulip poplar.

Within the wooded areas of the site are three specific areas that have been identified as wetlands. The boundaries of these wetlands were determined by a dominance of hydrophytic vegetation, presence of hydric soils, and/or hydrological indicators. The canopy consists predominantly of red maple (<u>Acer rubrum</u>), with a mixing of mature and immature green ash (<u>Fraxinus pennsylvanica</u>), American elm (<u>Ulmus americana</u>), Norway maple (Acer platanoides) and yellow birch (<u>Betula lutea</u>). The understory where it exists is dominated by spicebush (<u>Lindera benzoin</u>) and dogwood species (<u>Cornus spp</u>.), although deer predation has significantly impacted the shrub layer within these wooded areas. Multifloral rose is also present within the wetter wooded areas, although not in the densities found in the more

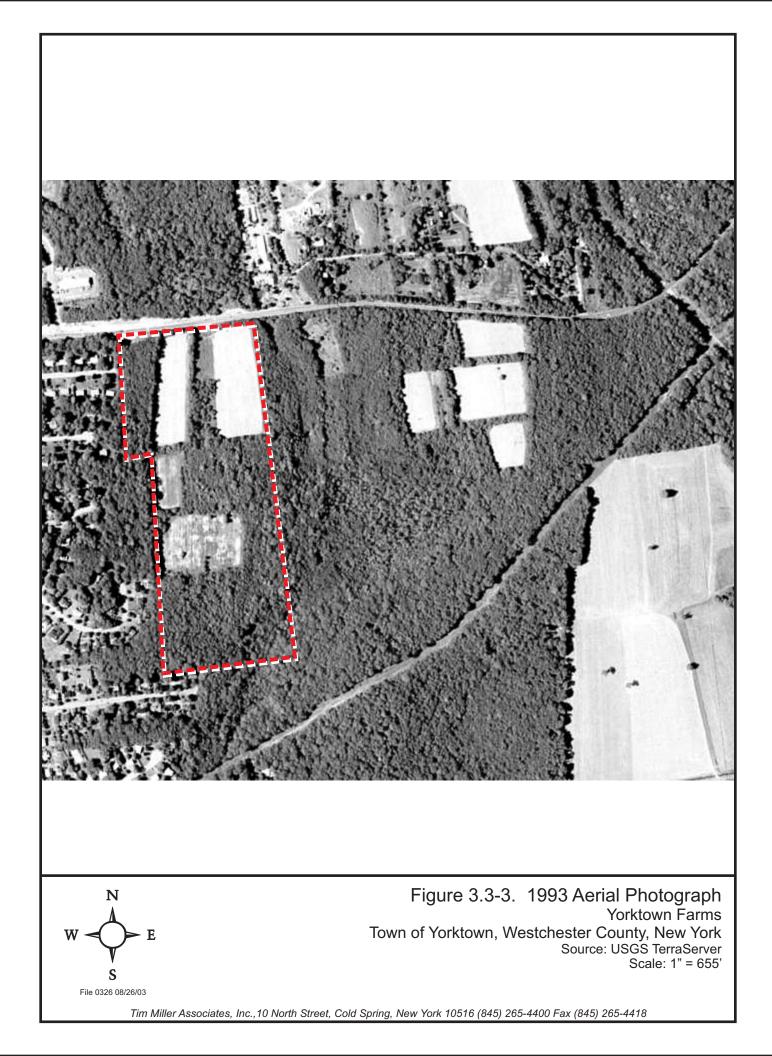
Yorktown Farms Subdivision DEIS 3.3-1

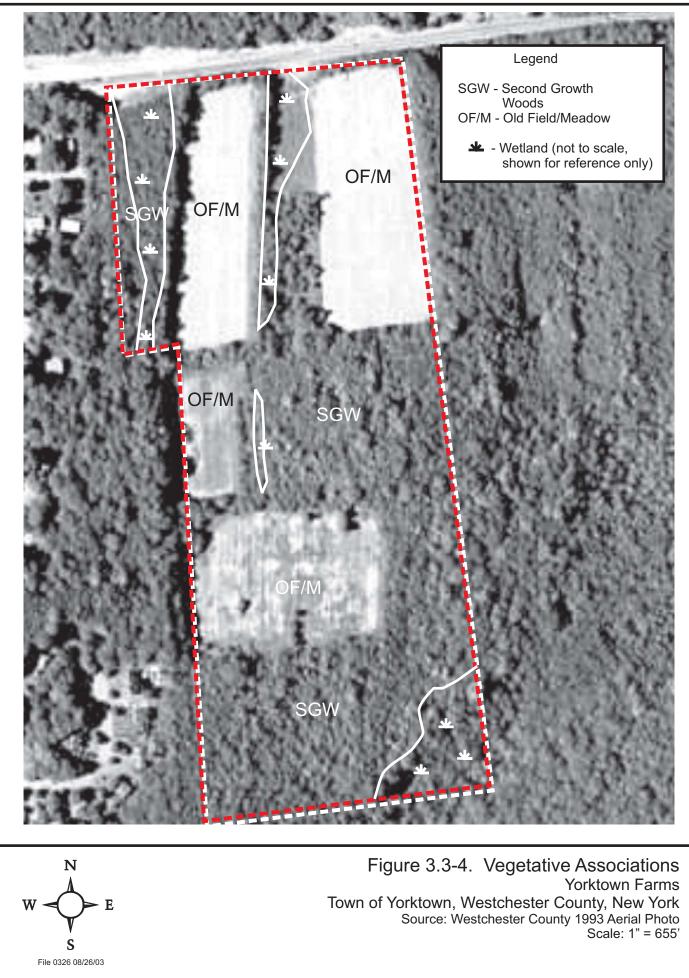


W S File 0326 03/12/03 Figure 3.3-1. 1960 Aerial Photograph Route 6 Property Town of Yorktown, Westchester County, New York Source: E Data Resources, Inc. Scale: 1" = 833'



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Vegetation December 8, 2004

open, sunny portions of the property. The herb stratum varies throughout the different areas of the wetlands, with skunk cabbage (<u>Symplocarpus foetidus</u>), jewelweed (<u>Impatiens capensis</u>), sedges (<u>Carex spp</u>.), cinnamon fern (<u>Osmunda cinnamomea</u>), sensitive fern (<u>Onoclea sensibilis</u>) and jack-in-the-pulpit (<u>Arisaema triphyllum</u>). A detailed description of site wetlands and potential impacts is provided in Section 3.7.

A total of 1,585 trees were surveyed and tagged on the site. Of these trees, 47 were 24 inches in diameter or larger.

Old Field Meadow

As shown on the 1993 aerial, four large fields still exist on the property, although they have now been fallow for some time. These fields are now dominated by goldenrods, lambs quarters, mugwort and other similar herbaceous species that are opportunistic and usually present in the early stages of succession. Multifloral rose is present throughout the site, including some of the younger wooded areas where dense canopy has not yet created too dark an environment for this species.

Included in the old field coverage of the site is a narrow drainageway that has been identified as meeting the Yorktown code as a regulated wetland. The vegetation in this area includes the same herbaceous species as in drier meadow areas on the site, as well as occasional soft rush (Juncus effusus), softstem bulrush (Scripus tabernaemontanii) and tussock sedge (Carex stricta). One clear differentiation between the wetter and drier areas of the meadow is the presence of redosier dogwood (Cornus sericea) and pussy willow (Salix discolor) as the dominant shrubs. Site wetlands are described in more detail in Section 3.7.

3.3.2 Potential Impacts

3.3.2.1 Vegetation Impacts

Outside of Wetland Areas

As shown on Table 3.3-1, this project will result in the alteration of the vegetative character of a portion of this property, and the elimination of vegetation from those areas that will become impervious surfaces. Up to 12.8 acres of upland forest vegetation will be removed as a result of the proposed project, and 11.1 acres of open meadow will be removed. A total of 24.7 acres of the site will be affected as a result of clearing and grading necessary for the creation of a residential subdivision on this parcel (Figure 3.3-5).

Of the 1,585 trees on the site, 47 trees were identified as being of significant size (greater than or equal to 24 inches in diameter. Of these 47 trees, 33 are identified as being preserved under the current plan, and five additional trees could be saved with careful site work.



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TABLE 3.3-1 Disturbance Calculations			
	Existing Acreage	Disturbed Acreage	Post-Development Acreage
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
Turf & Landscaped Areas	0.0	0.0	17.7
Water Quality Basins	0.0	0.0	1.1
TOTAL	43.2	24.7	43.2
Source: Ralph G. Mastromonaco, P.E., P.C., 2004			

Within Wetland Areas

As described in Section 3.7, wetland areas will be impacted in three different locations on the site. Wetland impacts will occur in areas of wooded wetlands and wetlands with scrub-shrub vegetative characteristics. While this will result in the minor loss of wetland function as described in Section 3.7, this activity will not have an impact on any unique or unusual vegetation on this property.

3.3.3 Mitigation Measures

The proposed subdivision layout and road configuration were designed to consider a number of factors, including road access and safety, preservation of significant vegetation, wetland and buffer preservation, drainage patterns, preservation of woodlands and stormwater quality treatment. Total site disturbance is estimated at 24.7 acres of the 43.2 acres of the entire parcel, or approximately 57 percent of the overall site.

Impacts to the character of the vegetation on this site are distributed evenly between open meadow and second growth forest. With the exception of some of the larger trees in the southeast corner of this site, the vegetation on the property is neither mature nor unique to the area. As described, most of the site was used annually for agricultural purposes less than 40 years ago, and as many as 12 acres were tilled until the recent past. As proposed, 5.8 acres of the site will be converted to impervious surfaces, the remainder will be preserved or re-planted as lawn and landscaped areas. This includes the stormwater management basins, which will have naturalized plantings. Additional mitigation is provided by the preservation of significant amounts of the site as parkland for dedication to the Town of Yorktown.