

3.3 Terrestrial and Aquatic Ecology

3.3.1 Existing Conditions - Gateway Summit and The Fairways Parcels

3.3.1.1 General Vegetation Types

Based on available aerial photography, much of the Gateway Summit portion of the subject property was used as farmland through the 1950s. Since that time, increased areas of the property became covered in second growth forest. A comparison of aerial photos reproduced in Figures 3.3-1 and 3.3-2 shows the change in vegetative cover between 1954 and 2001.

It appears from this 1954 photograph that agricultural use of The Fairways parcel probably ended a decade earlier (mid-1940s), as trees and other woody plants were beginning to dominate the landscape.

There are two general vegetation types present on the parcels: successional woodland and old field. As described below, some of these second growth woods include wet areas that were delineated as federal and town wetlands. There are also some open water and marsh areas located within the New York State DEC wetlands on, and adjacent to the properties. The locations of these associations, as derived from a 2001 aerial photo, are indicated on Figure 3.3-3, Vegetative Associations.

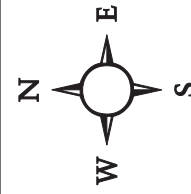
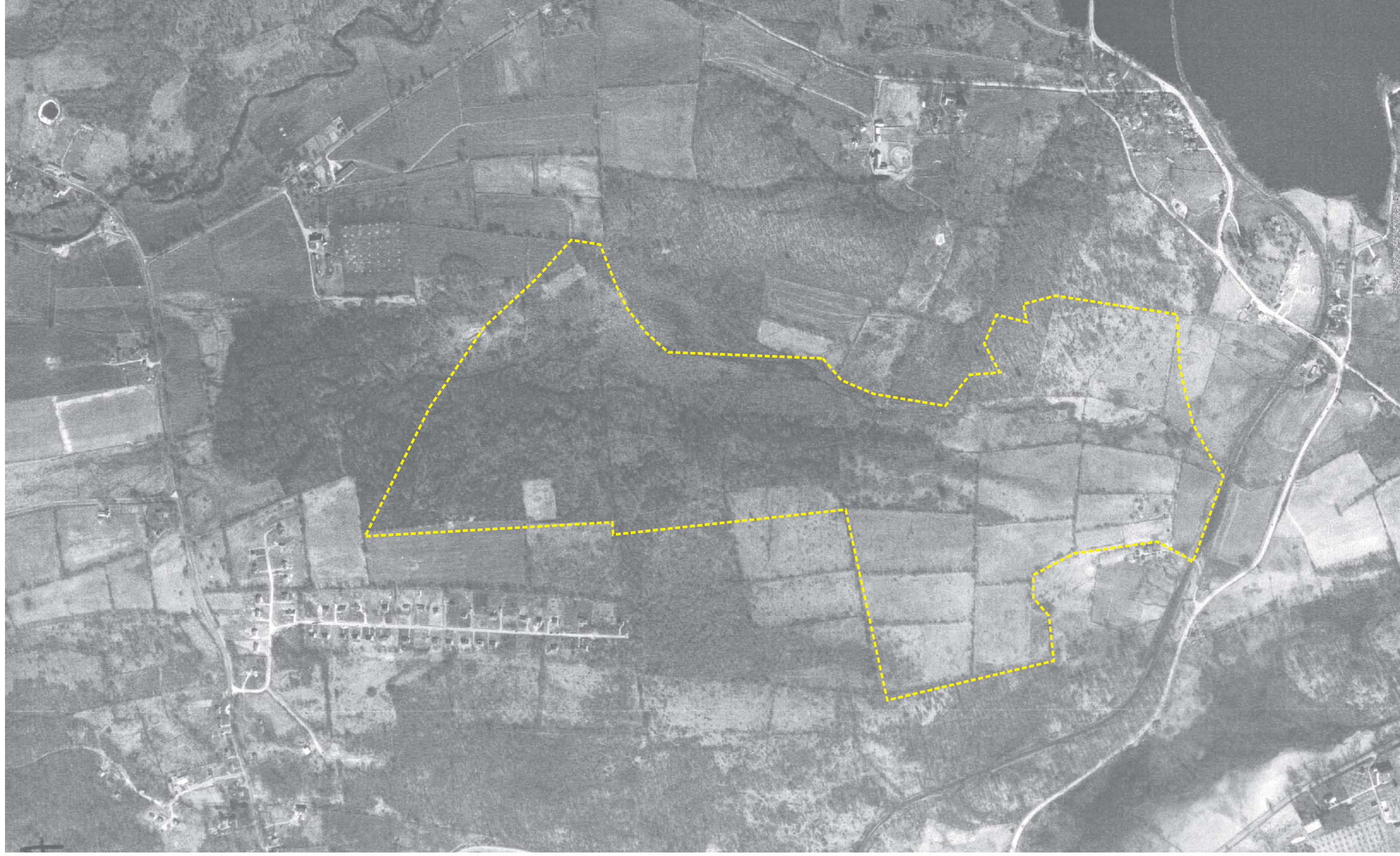
Successional Woodland

A substantial portion of the Gateway Summit property (approximately 80 acres) was actively managed as a farm as recently as the 1950s, as verified by a review of a 1954 aerial photograph (Figure 3.3-1). When cultivation of these areas ended in the early '60s, some of these areas began the succession process of reverting to woodlands (See Figure 3.3-2). These areas currently support a two strata system dominated by small trees (<12" in diameter) and a herb layer (see photos 1 and 2 in Appendix M).

The shrub layer has been severely impacted by deer browsing, and is virtually absent from most of the property. Some larger trees are also included in these areas, primarily along old farm lanes and existing stone walls. These farm lanes and walls crisscross the property, generally as shown on the 1954 aerial photo. In some locations, old cars and similar trash have been dumped along these old roads (photo 3).

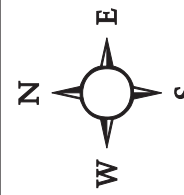
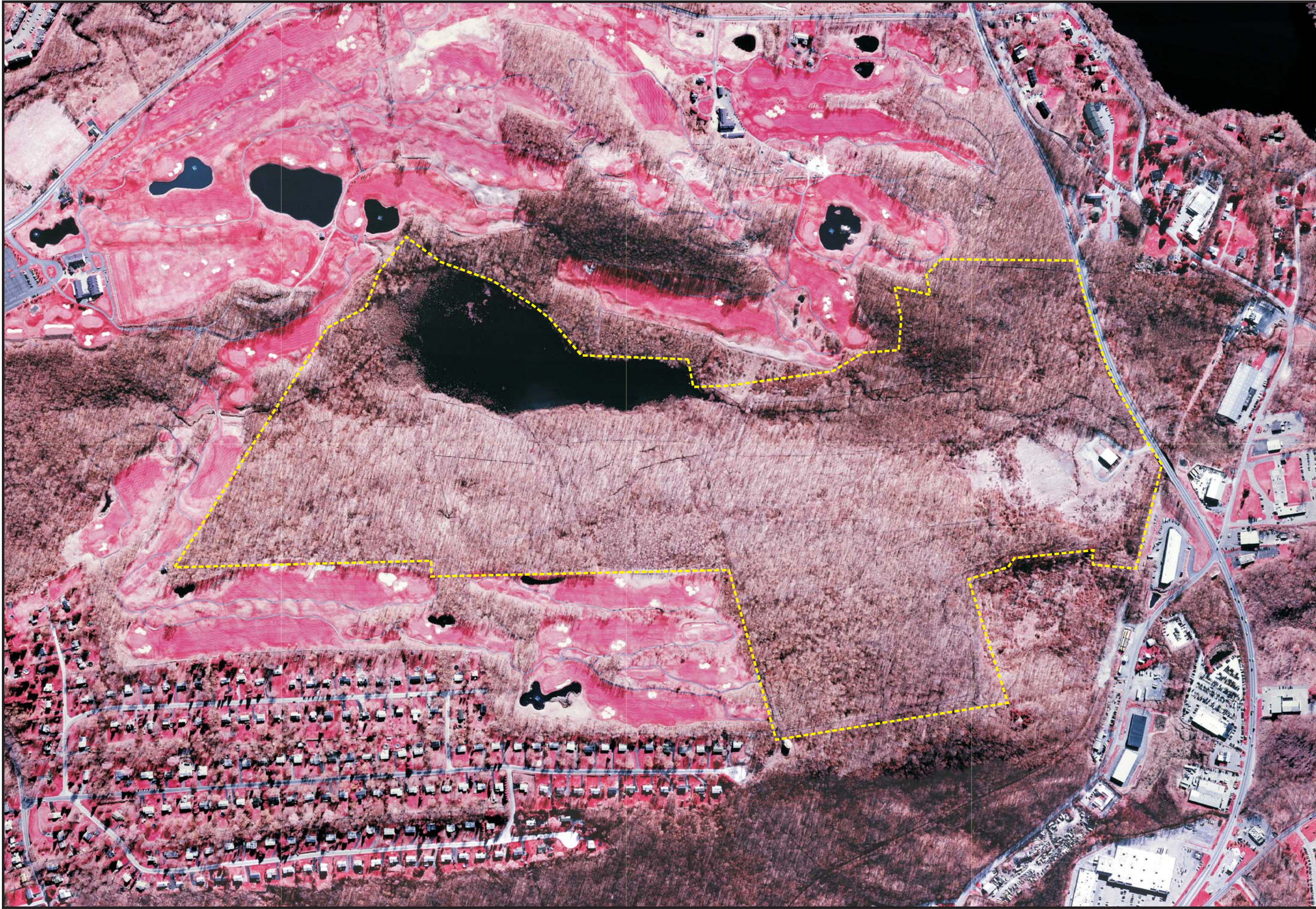
Tree species in these areas are variable dependent on slope and soil conditions. Generally all wooded areas include sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), black birch (*Betula lenta*), black cherry (*Prunus serotina*), white ash (*Fraxinus americana*) and tulip tree (*Liriodendron tulipifera*). Black walnut (*Juglans nigra*) and American elm (*Ulmus americana*) are less common but do exist. On the stonier slopes in the southeast of the site there is more dominance of white oak (*Quercus alba*), sugar maple and beech (*Fagus grandifolia*). Moist woodlands at the top of Mount Pisgah are dominated by red maples, as is the wetland area along the stream corridor in the east central part of the site.

Where it exists, the shrub layer includes barberry (*Berberis thunbergii*), winged euonymus (*Euonymus alata*) and spicebush (*Lindera benzoin*). Included with this layer are vining and cane species such as poison ivy (*Rhus toxicodendron*), virginia creeper (*Parthenocissus*



File 02136 Fig 3.1-1 12/10/03

Figure 3.3-1: 1954 Aerial Photo
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Source: Putnam County Highway Department



File 02136 Fig 3.1-1 12/10/03

Figure 3.3-2: 2001 Aerial Photo
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Source: NYS GIS Clearinghouse

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

quinquefolia), red raspberry (*Rubus idaeus*), fox grape (*Vitis labrusca*) and bittersweet (*Celastrus scandens*). There are occasional thickets of these viny species that are impassable by any but small species. These thickets also include Japanese honeysuckle (*Lonicera japonica*) and multiflora rose (*Rosa multiflora*).

The herb layer is dominated by some of the lower growing vine species, including bittersweet, virginia creeper, garlic mustard and poison ivy, as well as various fern species.

As noted above, the woodlands on The Fairways site are generally 10 to 20 years older, but the species composition is comparable to that on the Gateway Summit parcel.

Old Field / Upland Meadow

A small portion of the property, near the former Town highway yard, is in old field and upland meadow, in the early stages of succession into woodlands (see photo 4). It appears that portions of this area is still mowed occasionally. Dominant shrub species in the "old field" areas include silky dogwood (*Cornus amomum*), multiflora rose (*Rosa multiflora*), American fly honeysuckle (*Lonicera canadensis*), and various viburnum species, particularly wild raisin (*Viburnum cassinoides*). Herb species include wild carrot (*Daucus carota*), goldenrod (*Solidago sp.*), bachelor's button (*Centaurea cyanus*), common milkweed (*Asclepias syriaca*), butterfly weed (*Asclepias tuberosa*), butter and eggs (*Linaria vulgaris*) and daisy fleabane (*Erigeron annuus*).

Wetlands

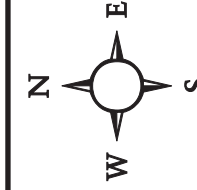
A portion of New York State DEC Wetland LC-27 (approximately 30 acres) is located on The Fairways parcel (Figure 3.3-4). This wetland is a drowned marsh area which is now permanently inundated as the result of a beaver dam (photo 5). There continues to be recent evidence of beaver activity. In the 1954 aerial photo, this area shows as a well developed wooded swamp. The lack of trees remaining (or even dead tree trunks) leads to the conclusion that this area has been flooded for some time, unless it was logged prior to the beaver activity. Large trees do remain along the submerged fringes (photo 6).

An area of groundwater seepage, made up of the surface discharge of shallow lateral flows, exists in the east-central portion of the Gateway parcel, as shown on Figure 3.3-3, and is located almost entirely on proposed Lot 8 (photo 7). Approximately 1.5 acres in area, this wetland is regulated by the Town of Carmel and the Army Corps of Engineers. This wetland is not identified on the National Wetlands Inventory maps (Figure 3.3-5), and was flagged by Steve Marino, PWS, of Tim Miller Associates and Dave Klotzle, wetland inspector for the Town of Carmel.

The boundaries of the wetland were determined by a dominance of hydrophytic vegetation, presence of hydric soils, and hydrological indicators. It exists primarily as a wooded wetland, dominated by red maple, spicebush, barberry, tussock sedge and various fern species. Soils in the wetland are identified by the Putnam County soil survey as being Ridgebury loams on 0 to 3 percent slopes, which is identified as a hydric soil. This identification was confirmed by field sampling of soils in the wetland. A stream, identified by the New York State DEC as a tributary to the Middle Branch Reservoir, flows along the eastern fringe of this wetland.



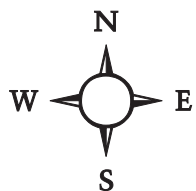
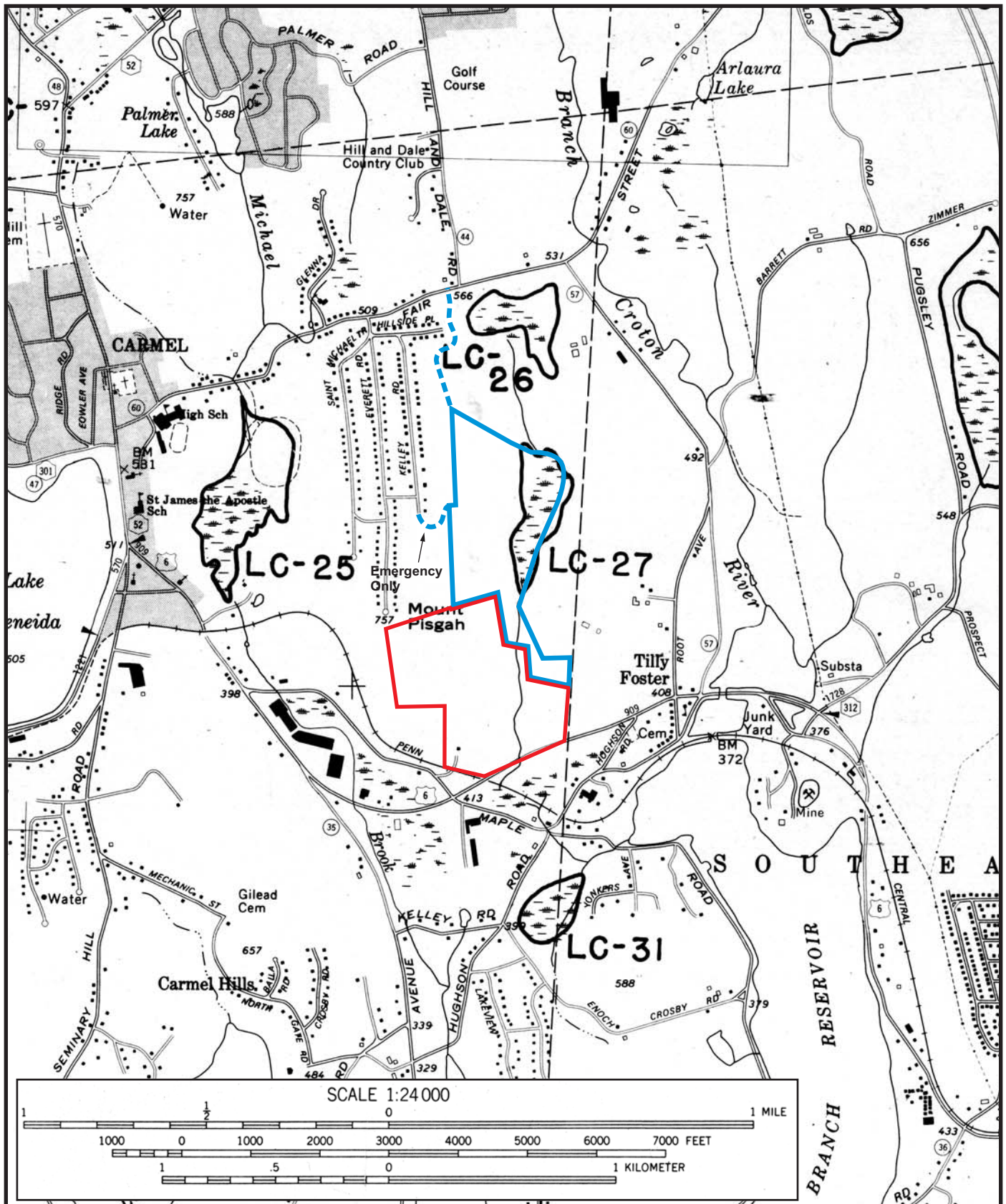
SW - Successional Woodland
 WW - Wooded Wetland
 OM - Open Marsh
 OF - Old Field
 SC - Stream Corridor



File 02136 Fig 3.1-1 12/10/03

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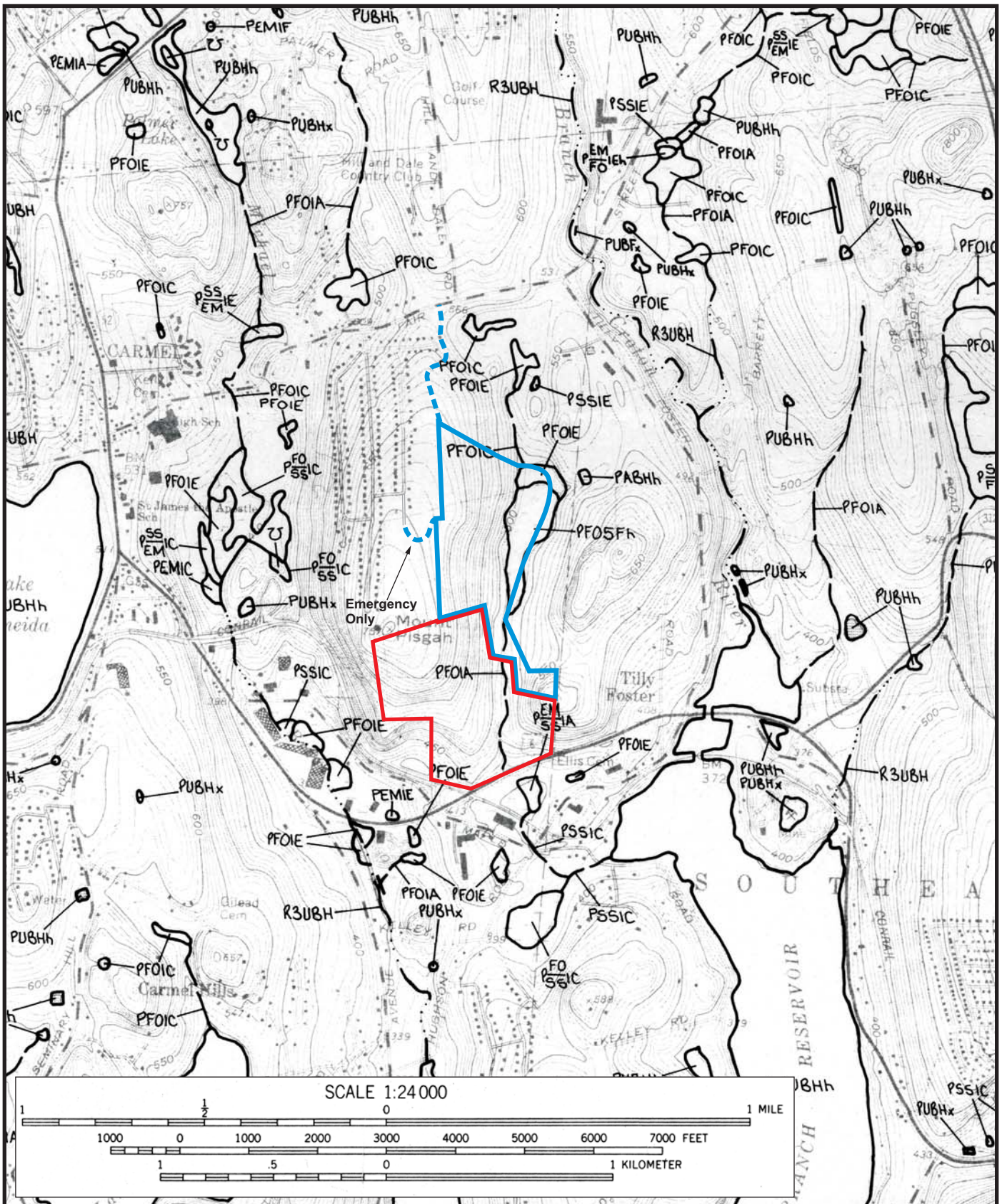
Figure 3.3-3: Vegetative Associations
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Source: NYS GIS Clearinghouse



KEY	
—	= Gateway Summit
—	= The Fairways
- - -	= Fairways Access

Figure 3.3-4: NYS Freshwater Wetlands
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Source: NYSDEC Freshwater Wetlands Map (Lake Carmel Quad)
 Scale: 1" = 2000'

File 02136 08/05/04



KEY

- Gateway Summit
- The Fairways
- - - Fairways Access
- PFOIA - Palustrine, forested, temp flooded
- PFO5Fh - Palustrine, forested (dead), semipermanently flooded, diked/impounded
- PFOIE - Palustrine, forested, seasonally flooded/saturated

File 02136 08/05/04

Figure 3.3-5: National Wetlands Inventory Map
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Source: US Dept. of Interior Fish and Wildlife Service
 Scale: 1" = 2000'

This wetland drains to a riparian corridor that flows from north to south, including the overflow from Wetland LC-27 (photo 8). The watercourse leaves the site through two culverts under Route 6 (photo 9).

New York State DEC Wetland LC-26 is located adjacent to the right-of-way for the proposed access to The Fairways parcel from Fair Street. More detailed information on site wetlands and their functions is provided in Section 3.2.

Rare or Unusual Plant Species or Habitat

Correspondence from the New York State DEC Natural Heritage Program indicates that there are no known occurrences of rare or unusual habitat types on this parcel. A copy of this letter is included in Appendix B. This was confirmed during a number of site visits conducted during 2003.

However, this same correspondence indicates that a rare plant species, shining bedstraw (*Galium concinnum*, reported in 1938) once existed in the area. Populations of *Galium concinnum* in New York State are at the Northeastern extent of this species range, which extends westward from New York into Ontario Canada and Minnesota and southward to Oklahoma and Virginia. This species is, however, more common in the westward part of its range. This fact may account for shining bedstraw's listing as an endangered species in New York.

This species' habitat is "dry woods". In the mid-western portion of its range, shining bedstraw is commonly associated with what may be classified as the oak-hickory forest community. Canopy cover is typically near 85% with the dominant species being red oak (*Quercus ruba*), white oak (*Q. alba*), black oak (*Q. velutina*), pignut hickory (*Carya glabra*), and shagbark hickory (*C. ovata*).

Shining bedstraw seems to prefer well drained soils, and heavily shaded conditions over those of partial to full sun. While the Gateway Summit and Fairways parcels meet the criteria for canopy density, these sites do not support applicable soils, and do not meet the habitat requirements for this species.

According to the New York Natural Heritage Program, this species has been found in New York within Hemlock-northern hardwood forests, oak-hickory forests and along dry, sandy roadsides. None of these forest or habitat types are present on the Gateway Summit or Fairways parcels. A detailed field survey of the Camarda Park site in the town of Carmel in 2003, did not reveal the presence of Shining Bedstraw. Based on this habitat assessment it appears highly unlikely that shining bedstraw is growing on the Gateway/Fairways site.

3.3.1.2 Wildlife

Known and Expected Wildlife Species

According to the NYS Department of Environmental Conservation, there are no rare or endangered wildlife species known to inhabit the site. (See letter in Appendix B) On-site observations are consistent with this assessment with one exception.

An eastern box turtle (*Terrapene carolina*) was found at the edge of the cleared area north and east of the existing Town garage. Recently listed as a State species of special concern, the box turtle is likely to wander the wooded areas of this site. 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 pesticides and collection as pets.

On this property, the box turtle would potentially utilize any of the wooded areas on the parcel, along with the wetland/watercourse corridor along the eastern portion of the Gateway Summit property.

A variety of small terrestrial animals have been sighted on the project site during the course of site surveys by biologists working on this DGEIS. These small animals include rabbits, raccoons, squirrels and chipmunks. Deer also utilize the property. The project site is used by numerous species of songbirds, particularly those that make the most use of the open meadow and shrub areas that exist. There was also evidence of coyote use of the property.

A list of species common to the area which could reasonably be expected to utilize the site or the surrounding environment is provided at the end of this chapter (Wildlife List, Gateway Summit - The Fairways). This list identifies common species that are likely to utilize the given habitat type. It is noted that this list is a compilation of observations at the site and those that have occurred throughout the County in similar habitat conditions. The list also includes an identification of species that were observed on site during site surveys.

Wildlife Habitat

Table 3.3-1 represents a list of available wildlife habitat types that are currently existing on this site:

Table 3.3-1 Existing Habitat Types - Combined Properties	
<i>Habitat Type</i>	<i>Approximate Acreage</i>
Successional woodland with open understory	146.80
Wooded wetland	1.5
Old Field / Meadow	13.6
Stream Corridor	2,300 lf
Open water/marsh	25.0
Stone walls	12,400 lf
<i>Source: Tim Miller Associates from 2001 aerial photography</i>	

Successional Woodlands

The canopy in the areas of successional forest is relatively dense, and in combination with deer predation has resulted in the lack of a well developed shrub layer (photos 1 and 2). Without the fruit and twigs for wildlife browsing, these woods generally support smaller populations of wildlife, although acorns and some hickory nuts were noted during site surveys. Hollows were observed in a number of trees, providing potential habitat for cavity nesting birds and flying squirrels.

In some locations, trees have been toppled by wind gusts . This allows the development of occasional thickets, which are valuable to smaller mammal species and many species of

birds. These thickets are typically made up of raspberry, blackberry and multiflora rose, which provide cover and food sources for a variety of smaller woodland species. Indicators of higher predatory species (i.e., coyote, fox) were found during several site surveys, and habitat does exist that would encourage use by red fox. Food sources for these species are readily available. These windthrows also provide potential cover and hollows for mammal and reptile species.

In some areas of the site, especially the wooded slope in the southeast corner of the Gateway property, rock outcroppings dominate the substrate, and provide a change in habitat type that is likely to support small mammals include skunks, chipmunks, foxes, and coyotes, as well as snakes and salamanders (photo 10).

Old Field/Meadow

The old field portion of the site are located closest to Route 6, around the existing Town garage (photo 4). 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 very poor soil substrate, a result of past soil mining and regrading 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 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.

Wetland

The New York State wetland on The Fairways parcel provides potential habitat for a number of species, including fish, waterfowl, amphibians and reptiles. It is likely that a number of amphibian and reptile species utilize this wetland, including snapping turtles, painted turtles, northern water snakes, green frogs, pickerel frogs, bull frogs and spring peepers.

Based on signs of recent activity, it is also likely that the site is still actively used by beavers (*Castor canadensis*). Historic aerial photos show this area as a wooded swamp with a central stream corridor. Due to the beaver activity, the wetland is now completely submerged, as shown in photos 6, 11 and 12. Based on the vegetative cover seen in the 1954 aerial, this wetland has been converted from a wooded swamp to open water/marsh over the past few decades. It is noted that this area existed as deep marsh in 1995, according to the DEIS prepared for the Centennial Golf Club. This wetland also supports a fish population, and based on evidence in the marsh bottom includes at a minimum a population of bass, bluegills and yellow perch.

The small wetland area on proposed Lot 8 of the Gateway Summit parcel provides a different condition than the remainder of the property. With a moist substrate and occasional standing water, this area represent a different habitat than the surrounding woodland, including habitat for reptiles and amphibians. Because of drainage patterns in the area, this wetland becomes saturated within narrow drainage channels, which may become seasonally flooded in the spring, potentially providing breeding habitat for amphibians. Species that may be utilizing this wetland are indicated on the Wildlife List included at the end of this

chapter. These species are indicated as utilizing the “forested wetland” (FW) habitat on this site. Evapotranspiration then allows for drying out of the substrate and the growth of vegetation that acts as cover for small species. This wetland is approximately 1.5 acres in size.

Stream Corridor

An un-named stream corridor runs perennially and drains the site from the north to the south along the eastern property boundary, ultimately discharging to the Middle Branch Reservoir (photos 8, 13 and 14). The stream has a stony substrate, and in several places passes through stone walls that provide some additional habitat. Stream gradient alternates between low gradient flat reaches and steeper riffle and pool sections. Fish, small reptiles, crustaceans and amphibians living within the stream corridor offer additional food source to some of the larger omnivorous mammals that may be present (i.e., raccoons, fox), and the relatively undeveloped nature of the watershed draining to the watercourse system ensures good water quality both for the aquatic and semi-aquatic species and the larger mammals that feed on them.

Good tree coverage provides shade for the watercourse and moderates temperature fluctuations. Although no fish species have been observed on site, moderation of stream temperatures is important to fish survival in downstream areas.

Stone Walls

There are numerous stone walls distributed throughout the property (photos 2, 15 and 16). 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. Review of available survey and topographic information shows that there are at least 12,400 linear feet (2.4 miles) of stone walls on the Gateway Summit property. The largest trees on the property, some in excess of 36 inches in diameter, are located along the stone walls (photo 15). These trees were growing on this site when it was open pasture, along hedgerows and as shade for the livestock.

3.3.2 Potential Impacts

3.3.2.1 Vegetation Impacts

Gateway Summit

Upland Areas

Upland forest and meadow vegetation would be removed as a result of the proposed project. For the construction of the proposed commercial subdivision, approximately 52.0 acres of woodland and 10.9 acres of meadow habitat would be disturbed.

Ultimate development of the Gateway site would result in the alteration of portions of this site from successional forest and meadow to impervious surfaces and managed landscaped



SW - Successional Woodland
 WW - Wooded Wetland
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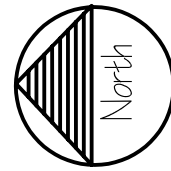


Figure 3.3-6: Vegetation Following Site Development
Gateway Summit/The Fairways
 Town of Carmel, Putnam County, New York
 Source: Putnam Engineering, PLLC., Revised 08-25-04
 Scale: 1 inch = 400 feet

areas. Approximately 23.3 acres of woodlands would remain (See Figure 3.3-6). These woodland areas would occur in blocks ranging in size from .75 to 11.2 acres; two of the preserved areas are larger than 10 contiguous acres. The preservation of Lot 9 alone for open space results in the preservation of 7.36 contiguous acres of woodland habitat and rocky hillside.

TABLE 3.3-2 Disturbance Calculations - Gateway Summit		
	Existing Acreage	Estimated Post-Development Acreage, Conceptual Build-out
Impervious Surfaces	0.9	22
Woods (Upland)	75.3	23.3
Old Field / Meadow	12.5	1.6
Town/ACOE Wetlands	1.5	1.5
Turf & Landscaped Areas	0	36.4
TOTAL	90.2	90.2
Source: Putnam Engineering		

Wetland and Watercourse Areas

The existing stream corridor would not be significantly impacted by this proposal, although there would be disturbance associated with the proposed stream crossing for the road. Approximately 1,900 square feet (.04 acres) of the stream bed would be affected by the crossing. This activity would require a permit from the Army Corps of Engineers and the New York City DEP. No direct wetland impacts are expected.

As part of the master plan for the parcel, the applicant is proposing the preservation of an area that encompasses the delineated wetland, the stream corridor and a minimum 50 foot buffer to these areas.

3.3.2.2 Wildlife Habitat Impacts

Gateway Summit

The proposed Gateway Summit subdivision would result in the clearing and disturbance of 63.6 of the 90.2 acres on this parcel and its associated easement. Full build out of this site, as indicated on the site plans for each parcel, would result in the loss of wildlife habitat as described below.

Successional Forest

Conversion of woodland to commercial and residential use would result in the loss of approximately 52 of the 75 acres of forest habitat on this site, with 23.3 acres of woodland remaining. The loss of these woodlands could potentially affect species that are dependent solely on woodland habitat. These species may include the milk snake, eastern racer and various bats and other small rodents. Few of the species that were observed or expected are solely dependent on one type of forest. Species that may be displaced by this project could

include gray fox, turkey, ruffed grouse and other species that are dependent on large, closely connected tracks of woodland.

Approximately 11 acres would remain in one large unit within and adjacent to Lot 5, preserving a large contiguous area of forest. This is contiguous with a large tract of County owned woodland to the west, which includes the western slopes of Mount Pisgah. Other units of woodland to be preserved would range in size from 0.75 to 10.7 acres. The preservation of 7.4 acres within an open space parcel on Lot 9 is also proposed. This unit is also adjacent to a portion of The Fairways parcel that will also remain undeveloped. These remaining areas would thus serve as habitat for many of the existing species that are dependent on woodland habitat.

Some of the species present prefer the areas of successional woodland that may be lost to this proposal, due to the dense understory and bramble thickets that are available in these areas of relatively open canopy. These species may include cottontail rabbit, striped skunk, eastern chipmunk and red fox. However, because contiguous areas of woodlands would remain, and these species tend to be more tolerant of human activity, actual population losses are not expected to be significant for many of the noted species.

Numerous studies have been conducted in recent years to evaluate the effects of "fragmentation" on bird species, particularly those species such as ovenbird, veery, and the thrushes, that are dependent on large contiguous blocks of mature forest for nesting. If present on this site, these species would be affected by the proposed development plan. However, it is clear from the aerial photographs presented with this DGEIS that the woodlands on this site are recent in nature, and are therefore not likely to meet the criteria of mature, well developed forest with large trees and well developed strata needed to support significant populations of deep forest birds.

Old Field/Meadows

The small areas of open field that exist on this site would be eliminated under the current development plan. Those species that are dependent on this cover type are likely to be displaced as a result of this proposal. No rare or unusual species were identified that meet this criteria, as this property and the surrounding areas are generally wooded have not been maintained as open lands for a number of years. Up to 36 acres of maintained grassland, ballfields and landscaped areas will exist at full buildout, as well as the proposed water quality basins, which cover large, contiguous areas and could serve as habitat for displaced species.

Stream corridor

The proposed activities within and adjacent to the stream channels would not impact existing wildlife to a significant degree. The lower section of this corridor will become isolated from the adjacent woodlands due to development to the east and west, but the large box culvert that is proposed for the stream crossing will allow the continued movement of wildlife from north to south.

Stone walls

Stone walls will be removed for the construction of the proposed road, buildings and parking areas. This will result in an incremental loss of this microhabitat for use by reptiles, amphibians and macroinvertebrates. Stone walls will be preserved within the two large blocks of undisturbed land on the east and west side of the project area as well as along the perimeter of the property. In many instances, stone walls will be rebuilt as part of the landscaping treatment.

The Fairways

Upland Areas

Upland forest vegetation would be removed as a result of the proposed project. Approximately 39.2 acres of woodland would be affected; 12.8 acres would be converted to impervious surfaces. This represents 12.8 percent of the overall site and its access easement. Approximately 2.3 densely wooded acres of the site will be cleared for the construction of stormwater quality basins. A total of 42 percent of the site will be disturbed under the current proposal, all in one contiguous area on the western side of the property.

Ultimate development of the site would result in the alteration of the western portion of the site from successional forest to impervious surfaces and managed landscaped areas. Approximately 32 acres of woodlands would remain, in one contiguous block adjacent to DEC Wetland LC-27. (See Figure 3.3-6). The site disturbance area will occur between these preserved woods and the open areas of the Centennial Golf Club to the west.

TABLE 3.3-3 Disturbance Calculations - The Fairways		
	Existing Acreage	Acreage following construction
Impervious Surfaces	0.2	12.8
Woods (Upland)	71.5	32.3
Old Field / Meadow	1.1	1.1
DEC Wetlands	25	25
Turf & Landscaped Areas	2.4	26.7
Water Quality Basins	0	2.3
TOTAL	100.2	100.2
Source: Putnam Engineering		

Wetland Areas

No impacts, direct or indirect, are expected to occur at DEC Wetlands LC-26 or LC-27. All construction of the senior residences will be a minimum of 300 feet from the wetland boundary. The water quality basins at the base of the hill still maintain a 100 foot setback. Some activity within 100 feet of a small lobe of Wetland LC-26 (approximately 0.63 acres) is necessary for the site access road and a water quality basin designed to treat runoff from this road. This impact is considered unavoidable due to limited alternatives for site access. These activities will be temporary, with the re-graded slopes and water quality basin being

re-planted following construction and stabilization. At its closest point, this activity will be within 50 feet of Wetland LC-26.

Successional Forest

Conversion of woodland to residential use would result in the loss of approximately 39 of the 71 acres of forest habitat on this site, with 32 acres of upland woods remaining. All of the remaining woodland would remain in one large tract, between the development area and the large marsh/open water wetland at the eastern edge of the property. This area would continue to serve as habitat for many of the existing species that are dependent on woodland habitat and will remain connected to other wooded areas to the south on the Gateway parcel. As discussed for the Gateway Summit project, few of the species that exist in this area are solely dependent on forest, but are more adapted to suburban development considering the existing development to the north, east and west. Species that may be displaced by this project could include gray fox, turkey, ruffed grouse and other species that are dependent on large, closely connected tracks of woodland.

Some of the species present prefer the areas of successional woodland that may be lost to this proposal, due to the dense understory and bramble thickets that are available in these areas of relatively open canopy. These species may include cottontail rabbit, striped skunk, eastern chipmunk and red fox. However, because contiguous areas of woodlands would remain, and these species tend to be more tolerant of human activity, actual population losses are not expected to be significant for many of the noted species.

Shallow Marsh Wetland

The existing area of shallow marsh wetland on the site would not be affected by this proposal. A large buffer from the residential area and a minimum 100 foot buffer from the proposed water quality basins will ensure that wildlife that is using the wetland and is dependent on its existence for their life cycle requirements will continue to use this property. Discharge of pre-treated stormwater from the detention basins on these parcels should serve to maintain wetland hydrology and water quality. This runoff will already be managed for quantity and quality prior to discharge. In general, as a project site is developed, some species will temporarily relocate to similar habitats off-site. As habitat is eliminated, populations of some wildlife species may eventually be reduced. The composition of the wildlife population on the project site may be altered somewhat following development, as species that are more suited to suburban areas with high human activity will increase. The woodlands that would remain will continue to provide habitat for many typical woodland species, as few species that are solely dependent on large, dense woodlands currently utilize this site. Remaining meadow and landscaped areas would continue to support some small mammals, reptiles and songbird species. As described previously, no State listed animal species are known to utilize this site.

3.3.3 Mitigation Measures

As previously described, large blocks of woodland habitats would be preserved under the proposed plans. Lot 9 of the Gateway subdivision will be dedicated as open space. These plans represent a realistic approach to development of each of these parcels, and as such can be construed as a reasonable overall future plan for this subdivision in a Commercial/Business Park zone (Gateway Summit) and for a residential use (The Fairways). During this SEQR and site plan review process, it is also likely that significant landscaping and screening vegetation would be required for each parcel, and if approached in an ecologically sensitive way, can further mitigate the loss of habitat, cover and food sources for wildlife. Cleanup and future maintenance of the perennial stream and town yard areas on site also represents mitigation provided with development of this property.

As part of this DGEIS, the applicant has also provided alternative lot configurations for both The Fairways and Gateway Summit parcels. In some cases, these alternatives represent reduced impacts to terrestrial habitats, but do not provide the socioeconomic benefits provided by the primary proposal.

The applicant is proposing to landscape the proposed stormwater basins for both projects as wetland/transitional areas. Appropriate plantings with aesthetic and wildlife values, chosen based on basin hydrology, will be used to provide additional water quality treatment, provide visual relief and create new wildlife habitat opportunities when the vegetation has matured and the site activities have stabilized after construction. In many instances, stone walls will be rebuilt as part of the landscaping treatment. Additional mitigation as it relates to wetland and buffer impacts is discussed in Section 3.2, Wetlands.

Wildlife List Gateway Summit - The Fairways								
Mammals		Habitat Type						
		U	M/ OW	OF	SC	SW	FW	Ed
white-tail deer*	<i>Odocoileus virginianus</i>	X	X	X	X			
coyote*	<i>Canis latrans</i>	X						
raccoon	<i>Procyon lotor</i>	X	X	X	X			X
red fox	<i>Vulpes vulpes</i>	X	X	X	X			X
gray fox	<i>Urocyon cinereoargenteus</i>	X		X	X			X
opossum	<i>Didelphis virginiana</i>	X						
eastern chipmunk	<i>Eutamias sp.</i>	X		X		X		
gray squirrel*	<i>Sciurus carolinensis</i>	X						
flying squirrel	<i>Glaucomys volans</i>	X						
cottontail rabbit*	<i>Sylvilagus floridanus</i>	X	X	X				X
striped skunk	<i>Mephitis mephitis</i>	X		X				X
white-footed mouse	<i>Peromyscus leucopus</i>	X		X				X
New York weasel	<i>Mustela frenata</i>	X	X	X	X			
deer mouse	<i>Peromyscus maniculatus</i>	X		X		X		X
house mouse	<i>Mus musculus</i>			X		X		X
meadow vole	<i>Microtus pennsylvanicum</i>		X	X		X		X
star-nosed mole	<i>Codylura cristata</i>	X	X	X				
eastern mole	<i>Scalopus aquaticus</i>	X		X				
woodchuck	<i>Marmota monax</i>	X						X
short-tailed shrew	<i>Blarina brevicauda</i>	X		X				X
common shrew	<i>Sorex cinereus</i>	X		X				X
little brown bat	<i>Myotis lucifugus</i>	X		X				X
red bat	<i>Lasiurus borealis</i>	X		X				X
beaver	<i>Castor canadensis</i>		X		X		X	
Reptiles								
garter snake	<i>Thamnophis sirtalis</i>	X	X	X	X			X
milk snake	<i>Lampropeltis triangulum</i>	X		X				X
hognose snake	<i>Heterodon pletyrhinus</i>	X	X	X				
brown snake	<i>Storeria dekayi</i>	X	X	X				
ringneck snake	<i>Diadophis punctatus</i>	X						
eastern racer	<i>Coluber constrictor</i>	X		X				X
copperhead	<i>Agkistrodon contortrix</i>	X	X	X				
spotted turtle	<i>Clemmys guttata</i>	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	X	X	X	
Jefferson salamander	<i>Ambystoma jeffersonianum</i>		X	X	X	X	X	
slimy salamander	<i>Plethodon glutinosus</i>		X	X	X	X	X	
spotted salamander	<i>Ambystoma malculatum</i>	X	X	X	X	X	X	
newt	<i>Notophthalmus viridescens</i>	X	X	X	X	X	X	
American toad	<i>Bufo americanus</i>	X		X	X	X	X	
gray treefrog	<i>Hyla versicolor</i>	X			X		X	

Terrestrial and Aquatic Ecology

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wood frog	<i>Rana sylvatica</i>	X	X		X	X	X	
green frog*	<i>Rana clamitans</i>		X		X		X	
spring peepers	<i>Hyla crucifer</i>		X		X		X	
pickerel frog	<i>Rana palustris</i>		X		X		X	
Birds								
turkey*	<i>Meleagris gallopavo</i>	X					X	X
ruffed grouse	<i>Bonasa umbellus</i>	X						
wood thrush	<i>Hylocichla mustelina</i>	X					X	X
pileated woodpecker	<i>Dryocopus pileatus</i>	X					X	
hairy woodpecker*	<i>Picoides villosus</i>	X					X	
downy woodpecker*	<i>Picoides pubescens</i>	X					X	
yellow shafted flicker	<i>Colaptes auratus</i>	X					X	
red-headed woodpecker	<i>Melanerpes erythrocephalus</i>						X	
ovenbird	<i>Seiurus aurocapillus</i>	X					X	
eastern bluebird*	<i>Sialia sialis</i>	X		X				X
yellow-billed cuckoo	<i>Coccyzus americanus</i>	X	X					X
red-tailed hawk*	<i>Buteo jamaicensis</i>	X	X	X			X	X
robin	<i>Turdus migratorius</i>	X	X	X			X	X
catbird	<i>Dumetella carolinensis</i>	X		X			X	X
mockingbird	<i>Mimus polyglottos</i>	X	X	X			X	X
flycatchers	<i>Empidonax sp.</i>	X	X	X	X		X	X
eastern phoebe	<i>Sayornis phoebe</i>	X		X	X		X	
common yellowthroat	<i>Geothlypis trichas</i>		X	X			X	
American redstart	<i>Setophaga ruticella</i>	X		X			X	X
red-eyed vireo	<i>Vireo olivaceus</i>	X					X	
crow*	<i>Corvus brachyrhynchos</i>	X	X	X			X	X
blue jay*	<i>Cyanocitta cristata</i>	X		X			X	X
scarlet tanager	<i>Piranga olivacea</i>	X	X					
American goldfinch	<i>Carduelis tristis</i>	X	X					X
cardinal	<i>Cardinalis cardinalis</i>		X	X				X
chipping sparrow	<i>Spizella passerina</i>			X			X	X
towhee	<i>Pipilo erythrophthalmus</i>	X	X					X
junco*	<i>Junco hyemalis</i>	X	X				X	X
mourning dove*	<i>Zenaida macroura</i>	X		X				X
chickadee*	<i>Parus spp.</i>	X	X	X			X	X
nuthatch*	<i>Sitta spp.</i>	X		X				X
turkey vulture	<i>Cathartes aura</i>	X		X				
E. screech owl	<i>Otus asio</i>	X		X				
Barred Owl	<i>Strix varia</i>	X					X	
great horned owl	<i>Bubo virginianus</i>	X		X				X

Habitat type: U - Forested upland, M/OW - Marsh/Open Water, FW - Forested Wetland, OF - Old Field, SC - Stream Corridor, SW - Stone walls, Ed - Edge Habitat

*** Species observed on site during site surveys**

This list represents many species that could potentially inhabit this site. It is not, however, an exhaustive list, particularly relative to migratory bird species.

Source: Tim Miller Associates, Inc., 2003