

## **D. Natural Resources**

### **1. Additional Technical Studies**

Since the publication of the DEIS, a Phase 1 Bog Turtle Assessment was conducted by Dr. Klemens in order to update the data on the potential bog turtle habitat areas. That report, which is included as an Appendix to this document, concludes that “[t]he results of the 2009 survey indicated that there has been little change in the overall habitat conditions over the five-year period from 2004-2009 except that much of the fringing area of Wetland E has declined in quality as bog turtle habitat with the up growth of woody vegetation at the interface between the wetland and the upland. This is a normal wetland succession and it is anticipated that this trend will continue over time. With the exception of Wetland T, which constitutes extensive and high quality bog turtle habitat, the other wetland habitats on site (E and N) each contain a small patch of bog turtle habitat set into a matrix of wetland areas that are useful primarily as connections between other wetlands.”

The initial habitat assessment provided by Dr. Klemens was factored into the site planning considerations during the layout of the Master Development Plan. (See description of Environmentally Sensitive Areas of Concern below.) While the conceptual plan presented in the DEIS did not impinge on Wetland T, the modified FEIS plan has scaled back development in proximity to Wetland T to provide additional protection for the identified high quality bog turtle habitat.

### **2. Plan Changes and Impact Summary**

In consultation with the Town and the project consultants in 2004 and 2005, Dr. Klemens identified nine areas throughout the site which were designated as Environmentally Sensitive Areas of Concern (ES – 1 through 9). These areas, which are illustrated on Exhibit II -9 of the DEIS included three vernal pool wetland complexes (ES – 1, ES – 6, and ES – 9), two areas of wetland which were found to have potential big turtle habitat (ES – 2 and ES – 3), the State-regulated wetlands associated with the reservoir (ES – 7), an area with several State listed rare and endangered plants (ES – 4), a turtle nesting area (ES – 5) and the ravine below the reservoir dam (ES – 8).

Most of the comments centered on the potential for impact to these sensitive areas. In response to these comments and the findings of the environmental studies, the conceptual development plan has been modified to pull development away from the most sensitive habitats on the site and concentrate development in previously disturbed portions of the site. As detailed earlier, development has been scaled back or altered in areas, such as near the reservoir on the east side and near the fens that are located on the north and south property boundaries on the west side. The environmental planning considerations related to the identified sensitive habitats are listed below.

No development is proposed for the northeast corner of the west side of the property, where a large, relatively undisturbed marble knoll is situated. This will maintain the existing connection between this area and the areas off site to the north of the existing highway, Route 21.

The proposed development north of Wheeler Road has been redesigned and scaled back to provide greater protection of the marble knolls and fen habitat that occur in that area. Specifically, all development has been pulled at least 300' from the fen wetlands on the site, and the stormwater management plan has been revised to further protect the hydrology of these sensitive areas.

Large portions of the site will remain as open space, including those areas which presently serve as important habitat and dispersal corridors for wildlife and migratory birds. The most sensitive vernal pool in the eastern portion of the site will be part of the open space and will be surrounded by unbroken uplands extending well beyond the recommended 750' buffer. No development is proposed within 750 feet of the remaining vernal pools. All of the lowland forests along the Swamp River have been avoided will remain undisturbed. The modified layout for the development provides protection of the entire riparian flood zone adjacent to the Swamp River, as well as expanded buffers around the most sensitive habitats on the site.

The majority of the existing mature second growth forest habitat will be preserved by the proposed layout on the eastern side of the property, adjacent to off-site forests. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north. Keeping these forested areas undeveloped and intact will further protect adjacent woodlands and support the existing biodiversity of plants and animal species. These measures, coupled with the clustering of development in previously disturbed portions of the site will help protect the sensitive habitats and preserve a variety of ecosystems that are present on and off of the site.

### **3. Comments and Responses**

#### *Comment D.1*

We recommend that Road S and the new development associated with it be eliminated from the project. We have heard a couple of speakers address their concerns about the development up near the reservoir. We are concerned with forest fragmentation. The forested land around the reservoir currently extends from Quaker Hill and Sherman, Connecticut north through the Town of Dover and Gaylordsville, Connecticut.

It is impossible to construct miles of roadway and hundreds of houses and not cause forest fragmentation. The adverse effects of forest fragmentation include reduced habitat area, habitat isolation and loss of species from an area, disruption of dispersal, increased edge effects and loss of core habitat, and the facilitation of alien invasive species. Even narrow open corridors through forests, such as roads and rights-of-way, degrade the forest by creating unfavorable habitat for many species of migratory birds because of high rates of nest predation by predators such as foxes, skunks, and raccoons and nest parasitism by brown-headed cowbirds. Furthermore, the effects of such openings extend 300 feet into the forest from the edge. Interior forest, therefore, is defined as forest occurring more than 300 feet from an edge. Interior forest is required for successful breeding by species such as the black-throated blue warbler, the black-throated green warbler, the wood thrush, the ovenbird, and the scarlet tanager.

In addition to decimating interior forest habitat, roads and houses produce edge effects conducive to the spread of alien invasive plants such as multiflora rose, Japanese stiltgrass, Russian olive, Japanese barberry, tree-of-heaven, and Japanese knotweed. Once established on roadsides, these alien invaders infiltrate adjacent habitats, further degrading our forests.

(Elaine LaBella, Director of Land Protection, Housatonic Valley Association, Public Hearing Transcript, Pg. 97-98; Elaine LaBella, Director of Land Protection, Housatonic Valley Association, Letter, 6/3/09, 6)

*Response D.1*

***The development on the eastern side near the reservoir has been designed to utilize portions of the site that were already disturbed when the HVPC was in operation. The road serving the residential house lots follows an exiting roadbed which traverses the hillside and provides access to the reservoir area. The residential lots themselves are planned for former agricultural fields which have reverted to old field habitat. Portions of this area are already vegetated by a number of invasive species, most notably mile-a-minute vine and autumn olive. The proposed road serving the residential lots has been shortened in the revised layout, and only an emergency assess road will be left in the vicinity of the reservoir. The emergency access road will also follow the existing gravel roadbed, and no new disturbance is proposed in the area.***

*Comment D.2*

The insertion of houses by the reservoir will result in increased potential for invasive species and to allow predators to prey on songbird nests.

We would like you to review some of the important habitats that are discussed in the “Hudson River Estuary Wildlife and Habitat Conservation Fieldwork: An Approach for Conserving Biodiversity in the Hudson River Estuary Corridor”, prepared by the New York Cooperative Fish & Wildlife Research Unit, Department of Natural Resources, Cornell University.

(Elaine LaBella, Director of Land Protection, Housatonic Valley Association, Public Hearing Transcript, Pg. 98; Elaine LaBella, Director of Land Protection, Housatonic Valley Association, Letter, 6/3/09, 6)

*Response D.2*

***The Hudson River Estuary Wildlife and Habitat Conservation Fieldwork: An Approach for Conserving Biodiversity in the Hudson River Estuary Corridor recommends that development be clustered in areas already disturbed in order to avoid new “edge” and fragmentation which degrades forest interior habitat. As can be seen from the overlay of the modified FEIS plan on recent aerial photographs of the site (see Exhibits II.D-1 and II.D-2), the majority of the existing mature second growth forest habitat will be preserved by the proposed layout. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north, and includes such sensitive habitats as vernal pools and tallus slopes.***

*Comment D.3*

The wild areas along the Great Swamp are important as buffers for water quality affecting downstream uses and habitat. Sensitive areas and rare species and habitats have been identified by experts in other reports. It is important to have large contiguous undisturbed swaths of land near wetlands to provide sufficient filtration and flood control as well as to sustain the overall ecology. Clustering and siting houses away from sensitive areas should be a goal of the development. The usual 100 feet of totally undisturbed riparian buffer from stream courses and wetland edges should be considered a minimum; more may be needed in some locations. If groundwater or water from the river is needed in the future you want to be sure that it will not be contaminated.

(Margery Josephson, President, Naromi Land Trust, Letter, 6/30/09, Pg. 2)

*Response D.3*

***The modified FEIS plan for the development provides protection of the entire riparian flood zone adjacent to the Swamp River, as well as expanded buffers around the most sensitive habitats on the site. See Exhibits II.D-1 and II.D-2.***

*Comment D.4*

A project of this size will have numerous impacts on the natural environment. The meandering design of the residential areas creates extensive disturbed areas adjacent to areas designated for protection. This not only fragments existing habitats, but also tends to degrade adjacent natural areas. Examples of these effects include the spread of invasive species from maintained landscapes and impacts of pets on flora and fauna, cats and birds in particular.

(Mark King, Director of Protection Programs, the Nature Conservancy, Letter, 6/26/09, Pg. 1)

*Response D.4*

***The site development plan has been modified to pull development away from the most sensitive habitats on the site and concentrate development in previously disturbed portions of the site. A majority of the currently-undeveloped areas of the site will remain as open space, including portions of the site which presently serves as important habitat and dispersal corridors for wildlife and migratory birds. By concentrating development into previously disturbed portions of the site, indirect impacts from domestic animals and invasive plants can also be minimized and controlled.***

*Comment D.5*

The identification of rare species and communities by Dover Knolls consultants attests to the special value of the site. The most important biological resources on the site include the Great Swamp corridor, marble knolls, fen wetlands, and vernal pools. Each of these support important biological diversity that includes rare species, each is sensitive to both direct and indirect disturbance, and each is dependent on its landscape context to maintain biodiversity and its ecosystem functions/services. These valuable resources are acknowledged in the DEIS and in most cases, protective buffers are provided, however, the protection needs to be more complete.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 2)

*Response D.5*

*The site development layout has been modified to provide further protection to the most sensitive habitats identified on the site. Specifically, all development has been pulled at least 300' from the fen wetland along Pleasant Ridge Road, and substantial buffers in excess of the regulatory 100' adjacent area have been provided to the other sensitive habitats. In addition, the stormwater management plan has been revised to further protect the hydrology of these sensitive areas. The most sensitive vernal pools in the eastern portion of the site will be part of the open space and will be surrounded by unbroken uplands extending well beyond the recommended 750' buffer. No development is proposed for the northeast corner of the west side of the property, where one of the largest, least disturbed, marble knolls is situated. Some of the other, smaller areas of marble knolls are located in and around the existing golf course. Proposed grading in these areas has been minimized. Grading within the golf course expansion areas will be limited, and the golf course itself will not impede wildlife movement and dispersal through the site.*

*Comment D.6*

Dr. Klemens report, dated February 2005, seems to be clearly expressed and makes a number of sound and reasonable recommendations based on the results of the on-site studies. Given the scope and complexity of the DEIS, it is not clear if Dr. Klemens advice has been implemented in the proposed development plans for Knolls of Dover.

(Evelyn Chiarito, Public Hearing Transcript, 6/3/09, Pg. 136; Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 4)

*Response D.6*

*Dr. Klemens performed additional field work on the Knolls of Dover site during the summer of 2009 in order to update his 2005 studies. The recommendations of Dr. Klemens were used in designing the proposed development, and the revised layout reflects even greater protection for the most sensitive habitats. Please see response D.40 for details.*

*Comment D.7*

I am happy to note that the DEIS includes very detailed habitat information for the property, including fieldwork completed by both Dr. Michael Klemens and Hudsonia, which clearly establishes that the entire western half of the property taken as a whole represents an extremely unique mosaic of habitat areas with at least 18 known sites of rare or threatened species occurring on the property, large numbers of other unusual or important habitats, such as marble knolls, along with substantial portions of the Great Swamp and Swamp River. Collectively, these provide a critically unique combination of wetland habitats, sensitive areas and rare species.

This is a clear indication that the potential impacts of any proposed development should be considered as a whole and not simply as a series of isolated impacts. Since ecosystems function as whole systems and not on isolated islands of green space, this is especially important because the proposed development is spread out in patches all over the property rather than tightly clustered in one area where the ecosystem remains intact. One hundred foot buffers are simply not an adequate protection method for areas this unique.

I would recommend that the DEIS include an assessment by Dr. Klemens and/or Hudsonia to determine the overall impact of the proposed development as a whole. Then well-grounded recommendations can be implemented to ensure that the property's extremely unique mosaic of habitats is preserved to the greatest degree possible.

(Rebecca Thornton, President of the Dutchess Land Conservancy, Public Hearing Transcript, 6/3/09, Pg. 155-156; Rebecca E. C. Thornton, President, Dutchess Land Conservancy, Letter, 6/3/09, Pg. 1)

*Response D.7*

***The modified FEIS plan attempts to protect the most sensitive habitats on the site by providing expanded buffers (well beyond the regulatory 100') and interconnections between the various ecosystems. As illustrated on Exhibits II.D-3 through II.D-6, development has been concentrated into those portions of the site where previous disturbance is most evident and the ecosystem functions most degraded. Please see Response D.40 regarding Dr. Klemens' recommendations and their implementation in the modified plan.***

*Comment D.8*

The DEIS does not make clear what specific areas were assessed during the initial Phase 1 bog turtle surveys. See Page III.D-22. This section should discuss, at least generally, what areas of the 937-acre site were investigated. A map depicting the assessed areas should be added to the EIS as well. As discussed with the project sponsor during pre-application meetings, those areas identified as potential bog turtle habitats should be protected by 300 foot buffer areas; these buffers should be included on revised drawings in the EIS. Also, as previously discussed with project representatives, the sponsor was to provide the Department an updated habitat map which includes the most recent information for all species studied thus far on the 937-acre site; we continue to await submission of this habitat map. At a minimum, the EIS should include a narrative discussion of the most recent information regarding species.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 12)

*Response D.8*

***A bog turtle habitat survey was conducted by Michael W. Klemens, LLC as part of the 2004 spring/summer amphibian and reptile survey and habitat assessment. The assessment followed the methodology described in "Bog Turtle (Clemmys muhlenbergii) - Northern Population Recovery Plan", Phase 1 Habitat Survey (US Fish & Wildlife Service, May 2001), but a formal Phase 1 Bog Turtle Assessment Report was not prepared at that time. The technical report which was prepared, "Amphibians and Reptiles of the Proposed Dover Knolls Development Site" by Michael W. Klemens, LLC was included in its entirety as an Appendix of the DEIS. The results of the 2004 field studies were summarized in the Conservation Recommendations section of the report, and concluded that "[t]here is no apparent high-quality (or even intermediate quality) bog turtle habitat in the western portion of the site south of Wheeler Road. The major function of these open and grassy wetlands may serve is for the occasional passage of bog turtles." The report goes on to conclude that "[t]he ditched wetlands north of Wheeler Road (near the junction of Hoag's Corner Road) are so altered as to no***

*longer render them viable for any use by bog turtles. This spring fed sloping area is completely ditched, drained and channelized and a large portion of the former wetland is now in agricultural production (i.e., corn)."*

*A formal Phase 1 Bog Turtle Assessment was conducted in August of 2009 by Dr. Klemens in order to update the data on the potential bog turtle habitat areas. That report, which is included as an Appendix to this document, concludes that "[t]he results of the 2009 survey indicated that there has been little change in the overall habitat conditions over the five-year period from 2004-2009 except that much of the fringing area of Wetland E has declined in quality as bog turtle habitat with the up growth of woody vegetation at the interface between the wetland and the upland. This is a normal wetland succession and it is anticipated that this trend will continue over time. With the exception of Wetland T, which constitutes extensive and high quality bog turtle habitat, the other wetland habitats on site (E and N) each contain a small patch of bog turtle habitat set into a matrix of wetland areas that are useful primarily as connections between other wetlands."*

*In consultation with the Town and the project consultants in 2004 and 2005, Dr. Klemens identified nine areas throughout the site which were designated as Environmentally Sensitive Areas of Concern (ES – 1 through 9). These areas, which are illustrated on Exhibit II -9 of the DEIS included three vernal pool wetland complexes (ES – 1, ES – 6, and ES – 9), two areas of wetland which were found to have potential big turtle habitat (ES – 2 and ES – 3), the State-regulated wetlands associated with the reservoir (ES – 7), an area with several State listed rare and endangered plants (ES – 4), a turtle nesting area (ES – 5) and the ravine below the reservoir dam (ES – 8). Please see Response D.38 regarding Dr. Klemens' recommendations and their implementation in the revised plan. In addition, the impacts to the various habitat types have been tabulated as part of the response to Comment D.35 later in this section.*

*Comment D.9*

Two male Indiana bats were apparently found on site, but the DEIS does not discuss whether there are mitigation plans or whether those areas are planned for development. This section of the DEIS must be expanded to discuss potential impacts to the Indiana bat and proposed mitigation measures.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 11)

*Response D.9*

*The two male Indiana Bats that were captured at the site were in nets hung across the existing gravel road on the east side of the reservoir and gravel road south of Wheeler Road just west of the Swamp River forested floodplain wetland. The locations of the captures suggests that the bats use these openings in the forest canopy for moving between roosting areas and feeding areas such as the reservoir, the Swamp River and golf course. The "Discussion" section of the "Summer Woodland Bat Survey Report" states that "A review of the literature about Indiana myotis summer habitat, maternity roost characteristics, and foraging behavior indicates that limited forest clearing is unlikely to significantly impact the quality of habitat for the species. Most maternity colonies for the species are found in disturbed habitat, and in*

*areas fragmented by small widely spaced clearings. Indiana myotis have been shown to be exceptionally adaptable to roost switching and selecting new roosts when old roosts are no longer available. The very ephemeral nature of their preferred roost spaces encourages this type of plasticity. In one study, only 50% of the roost trees identified by radio-tracking were used in the following year.” While development is planned in the vicinity of the areas where the bats were found, that development is concentrated in previously disturbed areas where minimal tree clearing is required (II.D-3 through II.D-6). However, in order to avoid disturbance of potential maternal colonies, tree clearing in these areas will be done during the fall and winter months when the bats are not present on the site. In addition, a majority of mature forest will be preserved and will provide ample roosting opportunities for this species. Bat Conservation and Management, Inc. recommends protecting existing water resources and vegetative buffers along water bodies on the site. Protective measures of water bodies will be implemented during and after construction and vegetated buffers will be maintained. Lastly, no additional surveys are recommended at the site by Bat Conservation and Management, Inc.*

*Comment D.10*

The documentation of Indiana Bat on the property is especially significant, so comments from Al Hicks, the bat specialist at NYSDEC’s Endangered Species Unit, should be sought and incorporated into the record.

Avoidance of disturbance in the reservoir area would contribute to the survival of the Indiana bat.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 2; Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 2)

*Response D.10*

*See response D.9 above. The NYSDEC will have several opportunities to comment on the FEIS and proposed development plan during the SEQRA and permitting process, as will USFWS during the review of the ACOE Wetland Permit Application.*

*Comment D.11*

A serious effort was made to inventory bats, and in doing so, the Indiana bat (a Federal Endangered List species) was identified onsite. However, the report largely fails to discuss the implications of this discovery, or how the proposed project would address the presence of these animals.

Based on a description by Bat Conservation International of associated habitat issues, potential suitable habitat conditions for a maternity colony would appear to be present at DOK. Clearly then further investigation of the site with specific regard to Indiana bats is necessary.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 2-3)

*Response D.11*

*See response D.9 above.*

*Comment D.12*

Not a single group of invertebrate organisms was actively surveyed. No explanation is offered as to whether this was due to time/cost constraint, lack of in-house expertise, or other factors. Given that invertebrates comprise the vast majority of faunal species in any given area, along with the fact that numerous species are of state or regional conservation concern, this seems to be a serious omission.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 2)

*Response D.12*

***The commenter is correct that a formal survey and inventory of invertebrate organisms was not performed. The number of invertebrate species that could potentially be found on a 937 acre property is quite large, and it is likely that some of those species would be rare or species of concern. However, it is also likely that the invertebrate species of greatest concern would be found in the most unique or sensitive habitats on the site, and those habitats were carefully studied and mapped. Therefore, while the scope of the EIS did not specifically require that invertebrate species be catalogued, the habitats which support those species of most concern were carefully studied and documented by qualified experts.***

*Comment D.13*

There is no mention of two rare animal species who present strongholds in New York include portions of Dutchess County: New England cottontail (*Sylvilagus transitionalis*), a candidate for listing under the Federal Endangered Species Act, and the “Northern metalmark (*Calephelis borealis*), a globally rare butterfly recently documented within the Great Swamp vicinity. Based on the biogeography and known habitat requirements of these species, both are potentially present at KOD, and therefore should be addressed.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 2)

*Response D.13*

***The New England Cottontail (*Sylvilagus transitionalis*) is a species which has shown rapid decline in recent decades primarily due to loss of habitat as post agricultural land becomes reforested or developed. The New England Cottontail utilizes dense shrub-scrub habitat for feeding and breeding, while the Eastern Cottontail seems better adapted to the more open fields, meadows and lawns typical of residential areas. In addition, destruction of the native shrub understory in many second growth forested areas by white tailed-deer has further reduced the suitable habitat for this species. The shrub-scrub habitat on the Knolls of Dover site is concentrated in the western portions of the site as part of the wetland complexes, and will be protected under the proposed development plan. If the New England Cottontail is present on the site, it would likely inhabit the shrub-scrub habitat that will remain undisturbed. However, the New England Cottontail and the Eastern Cottontail are very difficult to distinguish in the field, and DNA analysis is often required to confirm the species.***

*According to the New York Natural Heritage Program (March 12, 2009), the northern metalmark (Calephelis borealis) butterfly is unprotected in New York State, and is not listed federally. However, this species is globally uncommon to rare and is very rare in New York. The only documentation of the northern metalmark in New York since the 1860's was one report 2007 in southeastern Dutchess County (by J. Utter). Habitat for northern metalmark includes forested areas, often near limestone outcrops or cliffs, along with fen, meadow, or streamside habitats. Roundleaf ragwort and nectar flowers are also necessary in the vicinity. Disturbed sites, such as powerline rights-of-way have also been noted as acceptable habitat for the northern metalmark butterfly. Loss of habitat or host plants through deer browsing, development, vegetational changes (increased tree or shrub cover), or competing species such as invasive plants, are all threats to the survival of the northern metalmark butterfly.*

*Development will be avoided within the areas of marble knoll that are located closest to wetlands, thereby preserving the potential habitat for this butterfly species. Also, buffering around state-regulated wetlands is provided at, or in excess of, 100 feet. In addition, several faunal corridors remain on the site, in order to limit the potential of isolation for any species. Therefore, if the northern metalmark species is present on the property, it is unlikely that its habitats will be compromised.*

*Comment D.14*

Some of the "Conservation Considerations" and other remarks in the Hudsonia report are noteworthy, for their specificity. For example, in the section on "Shrubby oldfield":

"Rare butterflies such as Aphrodite fritillary (Speyeria Aphrodite), dusted skipper (Atrytonopsis hianna), Leonard's skipper (Hesperia leonardus), and, at higher elevations, cobweb skipper (H. metea) may occur where their host plants are present."

Presented with this information, why then was no effort made to look for any of these species? In Oblong's experience at the Slocum-Mostachetti Preserve, when an effort was made to look, we often found – in the case of the butterflies, not only the Dusted skipper, but at least two other state/regional rarities. It is only reasonable to believe that these species also occur across the road at KOD. The fact that experts were brought in and called specific attention to certain things, yet no one then bothered to look for them makes this a peculiar and corrupt process; in the business world such practice would be regarded as a lack of due diligence. While the confirmed presence of one or even several lower-ranked state rare species such as Dusted skipper might not, in the Town's view, be sufficient by itself to alter the course of the review process, it represents another piece of a multi-part ecological picture that, when viewed on whole, undeniably raises the site's biological richness, its ecological complexity, and therefore its environmental significance. Whether through indifference or deliberate suppression, such information is not being brought to bear in consideration of this application.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 2)

*Response D.14*

*As with other large development projects throughout Dutchess County, much effort has been put towards identifying the various habitats and species of concern that are found on the 937 acre Knolls of Dover site. The habitats present on the property have been studied and mapped by experts retained by the Town as a first step in the development review process. Lack of similar attention to invertebrate species is neither from indifference or any intent to suppress information that might be germane to the review of the potential impacts of the proposed development. Rather, it is assumed that invertebrate species of concern, like other faunal and floral species are associated with specific habitats that have been identified and mapped on the property. Given the other challenges associated with redevelopment of this site, the level of effort expended at the Slocum-Mostachetti Preserve to inventory resident invertebrates was not warranted for the Knolls of Dover property.*

*Comment D.15*

While it appears that a reasonably complete avian survey was done, no significant species are reported, and the results presented by Evans Associates downplays any aspect of state or regional status – in contrast to comments on regional status included for plants – thus ignoring the ranking of New York Natural Heritage Program, NYSDEC Species of Greatest Conservation Need, Partners in Flight, and other organizations, which tend to be more frequently updated, and indicating only whether or not species appear on the State Endangered/Protected species list. This dichotomous approach neglects to acknowledge that once or even recently secure species may be declining, or that lack of data on some species may preclude more definitive ranking. Red-shouldered hawk would be an example of a bird species that, while not officially “Endangered”, merits conservation interest.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 1)

*Response D.15*

**NYSDEC Listed Species** *As stated in the DEIS no State or Federally listed endangered or threatened species of birds were documented on the site during the breeding bird survey. In addition to legally protected endangered and threatened species NYSDEC also maintains a list of species of special concern (SC). Species of special concern warrant attention and consideration but current information, collected by the NYSDEC, does not justify listing these species as either endangered or threatened. Bird species of special concern documented on the site include Cooper’s hawk, red-shouldered hawk and cerulean warbler.*

**Audubon Society Watch List 2007** *The Audubon Society developed a watch list of bird species of conservation concern based on population size, range size, threats, and population trend. The watch list categorizes birds as either “red” or “yellow” species. Red species are declining rapidly, and/or have very small populations or limited ranges, and face major conservation threats. These typically are species of global conservation concern. None of the species that were documented as breeding or occurring on the Site are listed as red species. Yellow species are either declining or rare and typically are species of national conservation concern. The wood thrush, blue-winged warbler, prairie warbler and cerulean warbler were documented as breeding on the site and are listed as yellow species on Audubon’s Watch List 2007.*

***New York Natural Heritage Program Rare Animal Status List (May 2007)*** The New York Natural Heritage Program (NYNHP) keeps two lists of rare animal species: the Active Inventory List and the Watch List. Species on the Active Inventory List are ones that are currently tracked in their database and are species that are considered to be the rarest or most imperiled in the state. Species on the Watch List are those species that could become imperiled enough to warrant being actively inventoried. The NYNHP also assigns a global rank (G) and state rank (S) based on the rarity of the species. Species with a rank of “1” are the rarest while species with a rank of “5” are considered to be demonstrably secure species. The NYNHP ranks for the birds documented on the site are listed in Table II.D-1. “AI” refers to Active Inventory List species and “WL” refers to Watch List species. As can be seen on Table II.D-1 the only species of bird on the NYNHP Active Inventory List that was documented on the site was the great blue heron. The four species of birds on the NYNHP Watch List include double-crested cormorant, Cooper’s hawk, red-shouldered hawk and cerulean warbler.

**Table II.D-1  
Bird Species Documented on the Site and their Conservation Status**

Common Name	DEC Status	Audubon Status	NYNHP
Double-crested cormorant			WL, G5, S3
Mallard			
American black duck			
Wood duck			
Canada goose			
Great blue heron			AI, G5, S5
Green heron			
Killdeer			
Ruffed grouse			
Wild turkey			
Rock dove			
Mourning dove			
Turkey vulture			
Cooper’s hawk	SC		WL, G5, S4
Red-tailed hawk			
Red-shouldered hawk	SC		WL, G5, S4B
American kestrel			
Barred owl			
Eastern screech owl			
Yellow-billed cuckoo			
Black-billed cuckoo			
Belted kingfisher			
Hairy woodpecker			
Downy woodpecker			
Yellow-bellied sapsucker			
Pileated woodpecker			

**Table II.D-1  
Bird Species Documented on the Site and their Conservation Status**

<b>Common Name</b>	<b>DEC Status</b>	<b>Audubon Status</b>	<b>NYNHP</b>
Red-bellied woodpecker			
Northern flicker			
Chimney swift			
Ruby-throated hummingbird			
Eastern kingbird			
Great crested flycatcher			
Eastern phoebe			
Eastern wood-pewee			
Willow flycatcher			
Blue jay			
Common raven			
American crow			
Fish crow			
European starling			
Brown-headed cowbird			
Red-winged blackbird			
Black-capped chickadee			
Eastern meadowlark			
Baltimore oriole			
Common grackle			
Purple finch			
House finch			
American goldfinch			
Chipping sparrow			
Field sparrow			
Song sparrow			
Swamp sparrow			
Eastern towhee			
Northern cardinal			
Rose-breasted grosbeak			
Indigo bunting			
Scarlet tanager			
Barn swallow			
Tree swallow			
Bank swallow			
Northern rough-winged swallow			
Cedar waxwing			
Red-eyed vireo			
Warbling vireo			
Yellow-throated vireo			
Blue-headed vireo			

**Table II.D-1  
Bird Species Documented on the Site and their Conservation Status**

<b>Common Name</b>	<b>DEC Status</b>	<b>Audubon Status</b>	<b>NYNHP</b>
White-eyed vireo			
Black-and-white warbler			
Worm-eating warbler			
Blue-winged warbler		Yellow List	
Northern parula			
Yellow warbler			
Black-throated blue warbler			
Yellow-rumped warbler			
Cerulean warbler	SC	Yellow List	WL, G4, S4B
Chestnut-sided warbler			
Blackpoll warbler			
Prairie warbler		Yellow List	
Ovenbird			
Northern water thrush			
Louisiana water thrush			
Common yellowthroat			
Hooded warbler			
American redstart			
House sparrow			
Northern mockingbird			
Gray catbird			
Carolina wren			
House wren			
Brown creeper			
White-breasted nuthatch			
Tufted titmouse			
Black-capped chickadee			
Golden-crowned kinglet			
Blue-gray gnatcatcher			
Wood thrush		Yellow List	
Veery			
Swainson's thrush			
American robin			
Eastern bluebird			

*Comment D.16*

This site contains a large, high quality wetland that supports an exceptional representative bird community. This site is also important for migrating shorebirds. Reductions in water quality and/or changes to the hydrological flow into the Great Swamp are threats to the valuable wildlife habitat it provides.

In addition to the community found on-site, the report by Hudsonia and Dr. Michael Klemens identified 18 rare or threatened species on the site. We strongly encourage the town to consider the recommendations of that report, including buffers larger than 100 feet, minimizing roads and clustering the development to help ensure that the Great Swamp, Swamp River, associated wetlands, and rare or threatened species are protected. We also ask the town use the strictest guidelines in managing water withdrawals and stormwater runoff.

(Jillian Liner, Director of Bird Conservation, Audubon New York, Letter, 6/30/09. Pg. 1-2)

*Response D.16*

***As outlined in responses to similar comments above, the plan has been modified to provide greater protection to the sensitive resources identified on the site, in many cases providing buffering that goes well beyond the regulatory 100' adjacent area to wetlands and watercourses. These measures, coupled with the clustering of development in previously disturbed portions of the site will help protect the sensitive habitats which support the rare and threatened species and preserve the mosaic of ecosystems, both natural and man-made, that make up the Knolls of Dover property.***

*Comment D.17*

The list of species (Tables III.D-3, D-4 and D-5) do not contain much useful information regarding potential impacts to these species by the proposed development. These list need to be revised to contain additional information such as the specific areas of the project site that these animals inhabit. This information is important in order to assess what the impacts will be, especially as some components of the project will have greater impacts to certain species. For example, the development on the east side of the property in the currently un-fragmented (forested) portion of the site may have more of an impact on certain species than new development in the currently developed (and disturbed) areas of the site.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 11)

*Response D.17*

***The information on the habitats in which species were found on the site is included in the technical reports that were prepared by Michael W. Klemens LLC that were included in the appendix of the DEIS. This information is also summarized in the body of the DEIS. Many of the development-sensitive species that are found on the site utilize the rarer habitats such as fens and vernal pools as well as the larger areas of unbroken forest in the east portion of the site. The site development plan has been modified to pull development away from the most sensitive habitats on the site and concentrate development in previously disturbed portions of the site. As can be seen from the overlay of the revised plan on recent aerial photographs of the site (See Exhibit II.D-3 and II.D-4 – Overlay of Proposed Development on Developed or Previously Disturbed Areas map), the majority of the existing unfragmented mature second growth forest habitat will be preserved by the proposed layout in the vicinity of the reservoir. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north, and includes such sensitive habitats as vernal pools and talus slopes. All development has been pulled at least 300' from the fen wetlands on the site, and the stormwater management plan has been revised to further protect the hydrology of***

*these sensitive areas. The most sensitive vernal pool in the eastern portion of the site will be part of the open space and will be surrounded by unbroken uplands extending well beyond the recommended 750' buffer. The modified layout for the development provides protection of the entire riparian flood zone adjacent to the Swamp River, as well as expanded buffers around the most sensitive habitats on the site.*

*Comment D.18*

The section which discusses proposed mitigation measures must include discussion of specific mitigation measures the sponsor intends to utilize, as well as a discussion of those measures which will not be used. See page III.D-27. This section should also include an explanation of their choice(s) of mitigation measures to be implemented. Further, this section of the DEIS does not discuss how wildlife impacts will be mitigated during the construction phase, which according to the DEIS, will be phased over a ten-year period (e.g., turtles moving overland during the April/May nesting season will be vulnerable to heavy equipment). Please expand this discussion to include mitigation proposed during the construction phase of the project. We are particularly interested in any proposed mitigation measures which allow for free movement of reptiles and amphibians across roads from wetlands to potential nesting sites or other elements of critical habitat complexes.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 6)

*Response D.18*

*Detailed mitigation plans will be developed once the project layout has been determined and SEQRA findings have been issued by the Lead Agency. Efforts to avoid and minimize impacts to wetlands and other sensitive site features are reflected in the revised site plans, and have resulted in elimination of 1.3 acres of previously proposed wetland impacts. Unavoidable impacts such as loss of wetlands due to road widening to meet traffic safety standards will be mitigated using a variety of approaches, including restoration and replanting of the wetlands and wetland buffer areas on the western portion of the site and along the Route 22 corridor have been degraded over time. Restoration and replanting of degraded wetlands and wetland adjacent areas will be proposed as the principal form of mitigation in order to restore habitat value in these important wetland systems. Potential impacts from construction will be evaluated as part of the Site Plan approval process and actual wetland permitting for the project by the various regulatory agencies, and detailed mitigation programs will be developed for each environmentally sensitive area.*

*Comment D.19*

The DEIS states "The roads across, and around, the wetlands could also potentially impact the movement of amphibians and other wildlife that may utilize the wetland." See Page III.E-35. As DEC had indicated during pre-application meetings with the sponsor, any road improvements that are planned for the development must be designed with both hydrology and habitat concerns in mind, and must allow for the free movement of amphibians and reptiles through and cross the site. The EIS and project plans must be revised to indicate that all necessary design considerations (such as roadway curb modifications) will be implemented so that free movement of amphibians and reptiles will not be impeded as a result of project construction, and that road-kills of such species will be avoided to the maximum extent in the post-construction phase.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 5)

*Response D.19*

***The statement in the DEIS that “The roads across, and around, the wetlands could also potentially impact the movement of amphibians and other wildlife that may utilize the wetland.” is not specific to the project but is a generic statement regarding the potential impacts from road crossings to wetlands. As stated in the response to Comment D. 18 the potential impacts from construction will be evaluated as part of the Site Plan approval process and actual wetland permitting for the project, and detailed mitigation programs will be developed for each environmentally sensitive area. The DEIS identified potential impacts to wetlands, which is the first step in developing a comprehensive mitigation plan designed to avoid or minimize those potential impacts based on the habitat requirements of the species utilizing the wetland.***

*Comment D.20*

Catch basins tend to trap small amphibians and other small critters leading to loss of life. This contributes to the local extinction of bio-diversity. The area in question is still intact woodland and is near identified important breeding areas.

(Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 1)

*Response D.20*

***Measures to avoid entrapment of amphibians and reptiles will be incorporated into the design of roads in sensitive areas. See response to Comment D.19***

*Comment D.21*

The FEIS should include more information on the preservation of existing trees. A color-coded figure that identifies the follow should be provided: (1) existing trees to remain, (2) existing tree canopy to remain; (3) proposed evergreen trees; (4) proposed deciduous trees; and (5) proposed shrubs.

(Town of Dover Planning Board, Letter, 7/20/09, Pg. 7)

*Response D.21*

***An analysis of the previously disturbed areas of the site was done using recent and historical aerial photographs, the Habitat Maps prepared during the 2004 / 2005 ecological studies, and the most recent topographical surveys of the property which showed the maintenance roads and trails on the property. Features which were associated with the past land uses, including the Hospital, the golf course and agricultural areas were compiled on a map depicting existing developed and disturbed areas on the site. The proposed development was then overlaid onto this map so that areas of impact can be compared to areas which will be left undisturbed (see Exhibits II.D-3 and II.D-4). As part of the Site Plan approval process a detailed Landscape Plan will be prepared which will detail the proposed plantings.***

*Comment D.22*

Any disturbance of the areas of the Mile-A-Minute Vine, which were up on the hill and near the reservoir, could result in a spread of an ecologically invasive species, both into the forested areas of the CEA and downslope to the Great Swamp.

(Constance DuHamel, Deuell Hollow Conservation Association, Letter, 6/30/09, Pg. 2)

*Response D.22*

***The Applicant is well aware of the presence of Mile-a-Minute vine and other invasive species on the site, and has been in contact with NYS DEC about control and elimination of this species. In fact, areas where Mile-a-Minute Vine is currently found on the Knolls of Dover Site are proposed for development, which will help to control and eliminate this invasive species from the site.***

*Comment D.23*

The fen habitat on Pleasant Ridge Road (CR 21) and the wetlands that are immediately north and south of Wheeler Road should have an undisturbed biotic connection (except for proposed Road C) to allow travel of animals between the two. The several houses in this corridor should be moved or eliminated. This action would also protect the largest marble knoll on the site.

(Graham Trelstad, AKRF, Letter to Town Board, 7/30/09, Pg. 2)

*Response D.23*

***The proposed development north of Wheeler Road has been modified and scaled back to provide greater protection of the fen habitat and the marble knolls that occur in that area. The biotic connection referred to has been expanded by this redesign, although many species which utilize the various specialized habitats on the site do not actually move across the landscape in any significant way other than for dispersal to new patches of suitable habitat. Species utilizing the fen habitat are more likely to move north, to wetlands across Pleasant Ridge Road than they are to move in a southerly direction across the site.***

*Comment D.24*

We have made observations from the roadside of this fen. Vegetation is good, with a limited patch of phragmites at the roadside. Some rare birds are present. The interspersion indicates potential bog turtle habitat, and there is an extensive wet meadow across the road, which could harbor bog turtles.

As indicated above, in regards to fens in general, the existing hydrology must be maintained. We are concerned about the proximity of the housing proposed adjacent to this area. The rear yards of these residents would expose the fen to dumping of junk and yard debris, which pollutes with excessive nutrients and introduces weeds. We recommend that rear yard setbacks be increased to a maximum to increase the buffer around the fens.

(Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 3)

*Response D.24*

***As discussed in Response D.23, the development north of Wheeler Road has been redesigned to provide greater protection to the fen habitat. A 300-foot buffer has been proposed around this wetland. No development will occur within that buffer.***

*Comment D.25*

During the course of last year's studies taking place at our recently acquired 106 acre Slocum-Mostachetti Preserve, our professional consultant, Christopher Mangels, Botanist/Ecologist, identified an occurrence of a very rare fen at the southern end of our marsh (in the Great Swamp, DP-22). These sloping fens harbor rare plants and fauna and they are fed by small springs or groundwater seepage. A Rich Sloping Fen is ranked by the NYS Natural Heritage Program as G3 (very rare throughout its range, globally) and S1 (5 or fewer occurrences, very few remaining acres, in NY State). The fen continues onto the neighboring "Yeno" property, and wetlands of the Great Swamp continues on the southern side of Pleasant Ridge Road, on land forming part of the north-west quadrant of the Dover Knolls development.

This wetland area of the proposed development requires further study, particularly in view of the proposed recreation area that extends into or adjacent to it. We are most concerned that the hydrology not be changed in this area. In that case, the essential water to the Preserve's fen may be prejudiced and it may cease to exist. The wetland on the Dover Knolls site may be important as well, and the proposed development can be adjusted and moved to the south. The rare Kentucky warbler was observed in this area and it has been confirmed to be breeding at the Slocum-Mostachetti Preserve. This is new information that was not available at Scoping.

(Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 3)

*Response D.25*

***The modified FEIS plan has been revised to provide further protection to the most sensitive habitats identified on the site. Specifically, all development has been pulled at least 300' from the fen wetlands on the site, and the stormwater management plan has been revised to further protect the hydrology of these sensitive areas. As shown on Exhibits II.D-5 and II.D-6, the majority of the undeveloped areas of the site will remain as open space, including portions of the site which presently serve as important habitat and dispersal corridors for wildlife and migratory birds.***

*Comment D.26*

Access to the Project Site has not been granted to the Oblong Land Conservancy in relation to the possible hydraulic connectivity to the Slocum Mostachetti site to the north of the Project Site. Hopefully the DEIS will be able to address the queries raised by the Oblong Land Conservancy.

(Michael Purcell, Letter, 6/30/09, Pg. 5)

*Response D.26*

***Comment noted.***

*Comment D.27*

Marble Knolls are an important natural and symbolic feature of the Town of Dover and they support truly distinctive ecosystems with many rare species. Dover Knolls, in fact, touts these special systems as their name and the marble knoll locations are indicated on their habitat maps. The largest marble knoll, situated in the northeast portion of the West Side, is a very high quality habitat and should receive special protection. It also warrants professional management to retain its distinctive biota.

The impact of assigning the management of this and other important natural resources to a Homeowners Association is not addressed. These areas need to be under a conservation easement and their management awarded to a capable conservation organization.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 2)

*Response D.27*

***The modified FEIS plan has been revised to better protect the more sensitive habitats identified on the site. No development is proposed for the northeast corner of the west side of the property, where one of the largest, least disturbed, marble knolls is situated. Some of the other, smaller areas of marble knolls are located in and around the existing golf course. Proposed grading in these areas has been minimized, and grading within the golf course expansion areas will be limited. Currently, the areas of marble knoll are not protected by a conservation easement, and no conservation organization has been approached to manage the marble knolls on the property.***

*Comment D.28*

We are concerned with the road that goes across the south end of the large highest quality knoll. Eliminating the road would be the most protective strategy, but mitigation could be achieved by moving it south of the knoll.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 3)

*Response D.28*

***The new road that was proposed for the northeast corner of the west side of the property has been reconfigured. The new roads that are proposed in this area are no longer connected and therefore no longer pass through the area of marble knoll or through Wetlands Q and R. The existing unpaved road will remain unimproved.***

*Comment D.29*

We are also concerned with the apparent development over the several knolls west of the largest. Creative efforts to protect the other knolls and their rare plants need to be exhausted before current plans proceed.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 3)

*Response D.29*

***No development is proposed for the northeast corner of the west side of the property, where one of the largest, least disturbed, marble knolls is situated. Some of the other, smaller areas of marble knolls are located in and around the existing golf course. Proposed grading in these areas has been minimized, and grading within the golf course expansion areas will be limited.***

*Comment D.30*

The plan should specifically protect the linkages of the significant marble knolls on site with those to the north on Slocum-Mostachetti Preserve, Cedar Lake, Nellie Hill, and areas to the south. This should preclude the road and other alterations to the sites identified on the Habitat maps.

It is not clear if the conservation of the Marble Knolls has been addressed.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 3; Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 4)

*Response D.30*

***No development is proposed for the northeast corner of the west side of the property, where one of the largest and least disturbed marble knolls is situated. This will maintain the existing connection between this area and the areas off site to the north. The existing highway, Route 21, bisects the site and the property to the north. Some of the other, smaller areas of marble knolls that are located in and around the existing golf course appear to be isolated. Currently, the areas of marble knoll are not protected by a conservation easement, however, no roads or buildings are proposed within the majority of these areas.***

*Comment D.31*

Avoid disturbance to marble knolls and any other unusual natural features.

(Mark King, Director of Protection Programs, the Nature Conservancy, Letter, 6/26/09, Pg. 2)

*Response D.31*

***No development is proposed for the northeast corner of the west side of the property, where a large, relatively undisturbed marble knoll is situated. The proposed development north of Wheeler Road has been redesigned and scaled back to provide greater protection of the marble knolls and fen habitat that occur in that area. Specifically, all development has been pulled at least 300' from the fen wetlands on the site, and the stormwater management plan has been revised to further protect the hydrology of these sensitive areas. A majority of the undeveloped areas of the site will remain as open space, including portions of the site which presently serve as important habitat and dispersal corridors for wildlife and migratory birds. The most sensitive vernal pool in the eastern portion of the site will be part of the open space and will be surrounded by unbroken uplands extending well beyond the recommended 750' buffer. Little to no development is proposed within 750 feet of the remaining vernal pools. All of the lowland forests along the Swamp River have been avoided will remain undisturbed. These measures, coupled with the clustering of development in previously disturbed portions of the***

***site will help protect the sensitive habitats and preserve a variety of ecosystems that are present on the site.***

*Comment D.32*

Maintaining the intact forested habitat block on the East Side will ensure maximum wildlife value there.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 2)

*Response D.32*

***Please see Responses D.1 and D.2.***

*Comment D.33*

Undisturbed forest along the eastern ridge also serves as a privacy buffer for any new homeowners, and it part of a much larger ecological area encompassing the Appalachian Trail land and private properties. This section of unfragmented forest should be kept intact.

(Margery Josephson, President, Naromi Land Trust, Letter, 6/30/09, Pg. 2)

*Response D.33*

***Please see Responses D.1 and D.2.***

*Comment D.34*

The forested slopes of the eastern portion of the site are well documented as being valuable resources. This forested area acts as watershed protection.

(Michael Purcell, Letter, 6/30/09, Pg. 2)

*Response D.34*

***Please see Responses D.1 and D.2.***

*Comment D.35*

The development of this land creates an intrusion into what is now interior forest, and important resource that is being rapidly destroyed in this region. The maintenance of forest cover is the best use of this sensitive land, and it helps to maintain bio-diversity. Its location so near to the Pawling Nature Reserve threatens the integrity of that resource. Development here also results in more human problems with roaming pets and illegal ATVs, which are already the most serious threat to the Nature Reserve, currently associated with the limited homes now existing in the Johnson Road area.

(Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 2)

*Response D.35*

***The majority of the existing mature second growth forest habitat will be preserved by the proposed layout on the eastern side of the property, adjacent to off-site forests. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to***

*the south, east and north. Keeping these forested areas undeveloped and intact will further protect adjacent woodlands and support the existing biodiversity of plants and animal species.*

*Comment D.36*

Minimize habitat fragmentation through a more compact design and reduction in the scale of the project.

(Mark King, Director of Protection Programs, the Nature Conservancy, Letter, 6/26/09, Pg. 2)

*Response D.36*

*The modified FEIS plan concentrates development mainly in areas that are currently developed or disturbed, thereby reducing the potential for fragmentation. Development has been scaled back or altered in other areas, such as near the reservoir on the east side and near the fens that are located on the north and south property boundaries on the west side.*

*Comment D.37*

A table summarizing total area, total disturbance, and percentage of disturbance within each habitat type would be useful.

(Graham Trelstad, AKRF, Letter to Town Board, 7/30/09, Pg. 4)

*Response D.37*

*The total area of The Knolls of Dover site is ±937 acres. The total proposed area of disturbance is ±286 acres, or approximately 31 percent of the property. A table summarizing the areas and percentages of disturbance by habitat is shown below. This information is illustrated on Exhibits II.D-1 and II.D-2, entitled Habitat Impact Map-West Side, and Habitat Impact Map-East Side, respectively.*

*Of the ±286 acres that are proposed to be disturbed on the property, ±226 acres, or approximately 79 percent, are proposed within previously disturbed or currently developed areas. These areas are described as cultural (c), developed (d), shrubby old field (sof), upland meadow (um), and waste ground (wg).*

**Table II.D-2  
Habitat Disturbance Summary Table**

<b>Habitat</b>	<b>Map Designation</b>	<b>Area in Acres</b>	<b>Percent of Total Proposed Disturbance</b>
<b>Cultural</b>	c	33.13	11.58
<b>Developed</b>	d	105.72	36.94
<b>Emergent Marsh</b>	em	0.15	0.05
<b>Marble Knoll</b>	mk	5.72	2.00
<b>Red Cedar Woodland</b>	rcw	0.69	0.24
<b>River</b>	r	0.01	<0.01
<b>Shrubby Old Field</b>	sof	32.71	11.43
<b>Swamp (Hardwood/Shrub)</b>	sw	1.76	0.61
<b>Upland Coniferous Forest</b>	ucf	8.05	2.81

<b>Upland Deciduous Forest</b>	udf	42.54	14.86
<b>Upland Meadow</b>	um	53.22	18.60
<b>Upland Mixed Forest</b>	umf	1.59	0.56
<b>Waste Ground</b>	wg	0.90	0.32
<b>Total</b>		<b>286.19</b>	<b>100</b>

Note: Trails not considered as habitat disturbance for purposes of calculation.

*Comment D.38*

Open-bottom culverts should be considered where appropriate to avoid damage to stream beds.

(Graham Trelstad, AKRF, Letter to Town Board, 7/30/09, Pg. 4)

*Response D.38*

***The bridge over the Swamp River will be replaced, but otherwise the site plan does not require the crossing of any perennial streams that would necessitate the use of an open-bottom culvert. However, all road crossings through wetland areas will be engineered to minimize the grading and disturbance footprint.***

*Comment D.39*

The Habitat Impact Map – West (Exhibit III.D-3), which shows the limits of disturbance, appears to be lacking proposed changes to the golf course and the resultant impacts to the Marble Knolls. This plan should be revised to include proposed golf course modifications and potential impacts to the marble knolls. The plan should also include any proposed restoration of previously disturbed areas, as noted above. The Department prefers that disturbance to the marble knolls be avoided.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 5)

*Response D.39*

***The proposed changes within the existing golf course were inadvertently not included in the habitat impacts in the DEIS. The revised habitat impact map (Exhibits II.D-1 and II.D-2) includes the proposed changes within the existing golf course and limited impacts to marble knolls. The proposed development north of Wheeler Road has been redesigned and scaled back to provide greater protection of the marble knolls that occur in that area. Also see Responses D.28, D.29 and D.30.***

*Comment D.40*

Several sections of the DEIS which discuss the protection of important habitat areas are unclear and are apparently contradictory, and must be corrected. For example, Page III.A-24 states the following, “In order to protect these features and habitats, the Project provides buffer areas required by applicable regulations, as well as those recommended by the Town’s consultant for environmentally sensitive habitat for turtles and salamanders.” It is not clear whether or not the recommended buffers are proposed in all instances where required. In a later section (Natural Resources), it is noted on pages III.D-26 and III.D-27, respectively, that “The Project also follows many of the conservation recommendations in the natural resources technical reports that

were prepared under direction of Michael W. Klemens, LLC,” and “generally follows the conservation recommendations in the natural resources technical reports that were prepared under the direction of Michael W. Klemens, LLC” (emphasis added). These sections must be clarified to specify which recommendations are being followed and which recommendations are not. In addition, in instances where the recommendations are not followed, those specific areas should be pointed out, and the reasoning for not following the recommendations explained.

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, Pg. 5)

*Response D.40*

*The recommendations of Dr. Michael Klemens were shown on Exhibit II-9, entitled “Environmental Features in Relation to the Proposed Project.” This exhibit was included in the DEIS. It should be noted that this map was prepared using the NYS DEC wetland boundaries that has been verified by that agency in 2004, as those areas differ from the current wetland boundary which is more extensive. However, with regard to the recommendations made by Dr. Klemens the Areas of Concern are labeled ES-1 through ES-9 and are discussed below.*

*Area ES-1 contains both a vernal pool and spotted turtle habitat. Dr. Klemens recommends a 750-foot buffer, with development impacts totaling less than 25 percent of the buffer. A 750-foot buffer for Area ES-1, comprising 38.7 acres, has been incorporated into the revised layout and development within that buffer is less than 13 percent (4.9 acres).*

*Areas ES-2 and ES-3 contain bog turtle habitat. Dr. Klemens recommends a 300-foot buffer around these wetlands, with a suggested 100-foot no-impact zone. No development is proposed within 300 feet of either one of these areas.*

*Area ES-4 is an area that Dr. Klemens described as having State Rare and Endangered Plants. No development is proposed for Area ES-4. In addition, the connection between this area and the Great Swamp will also not be altered under the revised layout.*

*Area ES-5 was described by Dr. Klemens as a turtle nesting area. This area was formerly a picnic pavilion and recreational area, and is proposed to be redeveloped as a community center, leaving ample sandy soils for turtle nesting near the Swamp River. The species of turtles that utilize this are painted turtles and common snapping turtles. Both of these species are very common in New York State and are found in a wide variety of undisturbed to highly disturbed aquatic habitats.*

*Area ES-6 contains a vernal pool. Dr. Klemens recommends a 750-foot buffer, with development impacts totaling less than 25 percent of the buffer. A 750-foot buffer has been preserved adjacent to Area ES-6. This vernal pool will be part of the open space that is proposed for the site, and it will be surrounded by unbroken uplands extending well beyond the recommended 750’ buffer.*

*Area ES-7 is described by Dr. Klemens as an Important Wetland System. This wetland is part of DEC-regulated Freshwater Wetland DP-35, and is therefore protected by a 100-foot*

*adjacent area. No development is proposed within the adjacent area or the surrounding uplands, as no new development is proposed for any of the areas that are located east or south of the reservoir.*

*Area ES-8 is described by Dr. Klemens as a Botanically Important Ravine. No development of, or disturbance to, the ravine is proposed.*

*Area ES-9 contains several vernal pools that are of lower quality than the one in Area ES-6. Dr. Klemens recommends a 750-foot buffer around vernal pools. No development is proposed on the east side of the reservoir, and therefore no development activities are proposed within 750 feet of these wetlands.*

*Comment D.41*

As the consultants indicate, additional exploration of the habitats is likely to turn up additional rare and interesting species and we urge the owners to support such an effort by qualified professionals. The marble knolls, fens, stream gorge, and other key habitats warrant both further exploration and effective protection with management where appropriate.

(James M. Utter, Chairman of Friends of the Great Swamp, Letter, 6/30/09, Pg. 2,4; Christopher Wood, Chair, Oblong Land Conservancy, Letter, Pg. 2)

*Response D.41*

*A thorough and extensive biological survey of the site was conducted by Michael W. Klemens LLC, with over 300 hours of additional field work conducted by Evans Associates. The studies accurately characterized the habitats on the site and documented species usage as well as potential species usage. As discussed in Responses D.5, D.25 and D.26 the site development layout has been revised to provide further protection to the most sensitive habitats identified on the site.*

*Comment D.42*

This section identifies the Great Swamp and Deuel Hollow Critical Environmental Areas (CEAs) and gives only a brief description (several pages later) as to why the Deuel Hollow CEA is considered a CEA. Further, the chapter indicates that potential impacts to each CEA are evaluated in Section III.D, "Natural Resources," but that analysis is missing. The discussion of impacts to CEAs should be expanded to provide additional information relevant to each of the CEAs. The text should also indicate whether any of the adjacent CEAs listed on the map are within the general area and whether together they form a regionally significant resource. This evaluation should also include any of the Nature Conservancy and Oblong Land Conservancy preserves identified in Section III.F, "Community Services."

(Graham Trelstad, AKRF, Memorandum to the Town Board, 7/30/09, Pg. 5)

*Response D.42*

*The proposed development would not encroach upon the Deuel Hollow CEA, which is located in the far eastern portion of the site, east of the reservoir. The portion of the Great Swamp CEA that occurs on the site is within the forested wetland system on the west side of Route 22.*

***The modified layout for the development provides protection of the entire riparian flood zone adjacent to the Swamp River, as well as expanded buffers around the most sensitive habitats on the site. See Exhibit II.E-1.***

*Comment D.43*

The property abuts the 1,050 acre Duell Hollow Area Critical Environmental Area designated by the Towns of Pawling and Dover, also designated by Dutchess County as a Significant Natural Area, defined as having an unusual setting of rare plants and wildlife. Over 54% (509 acres) of the property is wooded and trees contribute greatly to clean air, biodiversity and the mitigation of global warming through reduced carbon inputs. The New York State Natural Heritage Database has listed a NYS threatened and rare species habitat on or within the general vicinity of this property. The wooded land along with the streams, wetlands and neighboring Duell Hollow CEA make the site conducive to hosting large amounts and varieties of important plant and animal habitats.

An assessment of all forestland and habitat should be made including the properties eastern forest where fragmentation is caused by constructing 50+ homes near the reservoir is planned.

(Rebecca E. C. Thornton, President, Dutchess Land Conservancy, Letter, 6/3/09, Pg. 5)

*Response D.43*

***The modified FEIS plan has reduced the number of houses in the vicinity of the reservoir from 49 to 19. The habitats on the property, including the eastern forests have been assessed, and the majority of the existing mature second growth forest habitat will be preserved by the proposed layout on the eastern side of the property, adjacent to off-site forests. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north.***

***The development on the eastern side near the reservoir has been designed to utilize portions of the site that were already disturbed when the Hospital was in operation, thereby preventing the creation of new areas of fragmentation. The road serving the residential house lots follows an exiting roadbed which traverses the hillside and provides access to the reservoir area. The residential lots themselves are planned in and near former agricultural fields which have reverted to mainly old field habitat. Portions of this area are already vegetated by a number of invasive species, most notably mile-a-minute vine and autumn olive. The proposed road serving the residential lots has been shortened in the revised layout, and only an emergency access road will be left in the vicinity of the reservoir. The emergency access road will also follow the existing gravel roadbed, and no new disturbance is proposed in the area.***

*Comment D.44*

We believe the Great Swamp and the Duell Hollow CEAs, along with the Pawling Nature Reserve and Appalachian Trail will continue to bring visitors and permanent residents to Dover to enjoy all that these unique habitats and preserved lands offer, and that the Dover Knolls success will depend in large part on maintaining the natural beauty in which it is sited. You are in a position to ensure the CEAs will continue to be protected by shaping this development to hew to a low impact/low density transit-oriented plan.

(Constance DuHamel, Deuell Hollow Conservation Association, Letter, 6/30/09, Pg. 1)

*Response D.44*

***Protection of the Great Swamp, its watershed, and surrounding areas are priorities of the development plan for the Knolls of Dover property. An important goal of the land-use planning for this property is to create economic benefits for the community while at the same time protecting the wetlands and watercourses that are associated with the Great Swamp. Another goal of the development plan layout is to encourage the use of walking and mass transportation as common means of travel. The site development plan has been modified to pull development away from the more sensitive habitats on the site and concentrate development in previously disturbed portions of the site. The majority of the natural habitats on the property, especially those bordering neighboring properties, will be maintained.***

*Comment D.45*

The reservoir falls within the Duell Hollow Critical Environmental Area. Any degradation of the reservoir would negatively affect and disturb the subsurface waters of the Duell Hollow CEA as the reservoir lands are at the peak of the Duell Hollow Watershed area. Upgrades to and activities around the reservoir (road and housing construction) will have to include plans to protect the forested uplands of the Duell Hollow CEA and watershed.

(Constance DuHamel, Deuell Hollow Conservation Association, Letter, 6/30/09, Pg. 1-2)

*Response D.45*

***The development plan for the houses in the vicinity of the reservoir has been modified to minimize impacts and preserve the existing natural habitats on the property. Please see Responses D.43 and D.44 for details on the proposed layout plan for this area. The majority of the houses (twelve of nineteen) in this area are not located within the reservoir watershed. Best management practices are proposed for stormwater treatment on the property. Please see the Stormwater Management section for more details.***

*Comment D.46*

Recognition of the state wide value of the Great Swamp is evidenced by the designation of the Swamp as a Critical Environmental Area under SEQRA by the Dutchess County Legislature in 1991. Further recognition came from the Audubon Society through its designation as an Important Bird Area in 1997 and a Priority Wetland by the US Fish and Wildlife Service in 1990. The Swamp also provides habitat for 19 rare plant species, 10 rare bird species and 8 rare reptile and amphibian species. In addition, the Swamp is an important ground water recharge area and offers unique recreational and outdoor educational opportunities.

(Mark King, Director of Protection Programs, the Nature Conservancy, Letter, 6/26/09, Pg. 1)

*Response D.46*

***The Great Swamp is recognized as a wetland of great value. Preservation of the Great Swamp, its watershed, and surrounding areas is of great importance and was taken into consideration when the proposed development plan was initiated and throughout its revisions. Please see***

***Response E.5 in the Water Resources and Wetland section for details on how the Great Swamp watershed is being protected and preserved.***

*Comment D.47*

The DEIS contains numerous misspellings and transpositions of species names (e.g., Table III.D-5, entitled “Rare Plant Species Documented on Site” lists “Draba verna” a non-native species; instead it should read “Draba reptans”). These errors are not only confusing but cast doubt on the preparer’s familiarity with scientific nomenclature and general attention to detail.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 1)

*Response D.47*

***A thorough and extensive biological survey of the site was conducted by Michael W. Klemens LLC with over 300 hours of additional field work conducted by Evans Associates. The studies accurately characterized the habitats on the site and documented plant species present as well as animal species usage and potential species usage. A minor misspelling of a species name does not in any way substantively alter the results of the extensive studies.***

*Comment D.48*

My overriding concern with the DEIS is the adequacy of the applicant’s efforts in inventorying the site’s natural features, and consequently, in fully assessing the potential impacts of the proposed actions upon these features.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 1)

*Response D.48*

***The project plan has been re-examined and modified to further reduce impacts on the property. Please see response D.49 for details on these changes.***

*Comment D.49*

Little or no attempt was made in the DEIS to look beyond the parcel boundaries. This myopic approach raises a number of concerns. First, in the case of highly vagile organisms such as birds or reptiles, it is essential to recognize that ranges or habitat patches of species found at one site may extend far offsite; thus it is necessary to view them not as isolated occurrences, but as populations within a landscape or watershed context (e.g., Great Swamp).

It is possibly that communities present on adjacent and nearby properties could extend onto the Project Site and could be adversely affected by actions at DOK. This is particularly true for the fen wetland, which is located at the south end of the preserve with clear hydraulic connection (via a culvert under Pleasant Ridge Road) to a wetland areas along the north side of DOK (which is not identified in the DEIS as part of any larger wetland). Rich fens, which typically support distinctive assemblages of uncommon plant and animal species, are fed by base-rich seepage emanating from adjacent slopes underlain by calcareous bedrock. Changes in the quantity or chemistry of inflowing water may result in irreparable alteration of their character. Although not

sensitive in the same way to upstream physiochemical effects, the marble knolls also support unique flora and fauna assemblages rich in rare species. The availability of nearby patches of outcrop habitat has probably allowed survival of constituent species during natural disturbances such as fire. For this reason, although both the marble knolls and wetlands may appear as discrete features on the landscape, they should be viewed collectively as part of a unique complex of communities restricted in its distribution to the Harlem Valley Region.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 3)

*Response D.49*

*All of the development plans were prepared and later revised in order to better protect the more sensitive communities and habitats that have been identified both on and off of the property. Development has been scaled back or altered in areas, such as near the reservoir on the east side and near the fens that are located on the north and south property boundaries on the west side. These considerations are listed below.*

*No development is proposed for the northeast corner of the west side of the property, where a large, relatively undisturbed marble knoll is situated. This will maintain the existing connection between this area and the areas off site to the north of the existing highway, Route 21.*

*The proposed development north of Wheeler Road has been redesigned and scaled back to provide greater protection of the marble knolls and fen habitat that occur in that area. Specifically, all development has been pulled at least 300' from the fen wetlands on the site, and the stormwater management plan has been revised to further protect the hydrology of these sensitive areas.*

*Portions of the site will remain as open space, including those areas which presently serve as important habitat and dispersal corridors for wildlife and migratory birds. The most sensitive vernal pool in the eastern portion of the site will be part of the open space and will be surrounded by unbroken uplands extending well beyond the recommended 750' buffer. No development is proposed within 750 feet of the remaining vernal pools. All of the lowland forests along the Swamp River have been avoided will remain undisturbed.*

*The majority of the existing mature second growth forest habitat will be preserved by the proposed layout on the eastern side of the property, adjacent to off-site forests. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north. Keeping these forested areas undeveloped and intact will further protect adjacent woodlands and support the existing biodiversity of plants and animal species.*

*These measures, coupled with the clustering of development in previously disturbed portions of the site will help protect the sensitive habitats and preserve a variety of ecosystems that are present on and off of the site.*

*Comment D.50*

I strongly recommend that the Town not accept the KOD DEIS in its present form, but require the applicant to further examine or re-examine important issues before this project can proceed any further towards approval or implementation.

(Christopher R. Mangels, Consulting Botanist/Ecologist for the Oblong Land Conservancy, Letter, 6/30/09, Pg. 3)

*Response D.50*

***The project plan has been re-examined and revised to further reduce impacts on the property. Please see response D.49 for more details on these changes.***

*Comment D.51*

I have noticed that many of us are well intentioned but one of the most serious situations that environmentalists encounter is the common concept that saving land is a good thing but what the general public fails to understand is the concept of niche and biodiversity. What must be understood and what is really most important is to understand the concept of ecosystems. Of course land is important but without proper understanding of the complex interactions between the land and the total concept of niche ultimately results in a sterile environment devoid of any viable fauna or flora. To accomplish biodiversity and produce a true functioning ecosystem conserved land must be continuous and buffered. Fragmented parcels are useless as disconnected beads of a necklace. What must be done to preserve parcels of land that can guarantee a non-fragmented unified area.

(Louis D. Trombetta, Ph.D, Letter, 6/30/09, Pg.1)

*Response D.51*

***The proposed project was developed and later modified to best protect existing habitats by clustering development within previously disturbed or currently developed areas on the site and avoiding those areas of more sensitive habitat. Several areas of the property will remain in their current condition, as no development is proposed, thereby retaining currently-existing open space parcels and habitat corridors.***

***No development is proposed for the northeast corner of the west side of the property, where a large, relatively undisturbed marble knoll is situated. This will maintain the existing connection between this area and the areas off site to the north of the existing highway, Route 21. A connection will also be maintained between this area and the Great Swamp. All of the lowland forests along the Swamp River have been avoided will remain undisturbed.***

***The most sensitive vernal pool in the eastern portion of the site will be part of the open space and will. No development is proposed within 750 feet of the remaining vernal pools.***

***The majority of the existing mature second growth forest habitat will be preserved by the proposed layout on the eastern side of the property, adjacent to off-site forests. This mature second growth forest will remain intact on the Knolls of Dover site and extends well off site to the south, east and north. Keeping these forested areas undeveloped and intact will further***

***protect adjacent woodland corridors and support the existing biodiversity of plants and animal species.***

*Comment D.52*

I strongly suggest that competent environmentalists with expertise in aquatic toxicology join with environmentalist expert in biodiversity to plan a well thought out future for the town.

(Louis D. Trombetta, Ph.D, Letter, 6/30/09, Pg.1)

*Response D.52*

***Comment noted.***

*Comment D.53*

Preservation of critical natural habitat areas are land uses currently being employed by adjacent landowners of the Duell Hollow CEA, the National Park Service along the Appalachian National Scenic Trail and supported by recommendations in the 2009 NYS Open Space Conservation Plan. The 2009 plan also recognizes the Great Swamp Watershed and its uplands as Priority Conservation Areas.

(Michael Purcell, Letter, 6/30/09, Pg. 5)

*Response D.53*

***Comment noted.***