

TOWN OF YORKTOWN, NEW YORK

Wildlife and Plant Biodiversity Assessments

Statement of Purpose:

The Town of Yorktown exhibits a remarkable diversity of plant and animal species. Yet today, we are facing the prospect of losing much of our rich biological heritage to suburban sprawl which is fostered, in part, by a lack of formal information needed to make land-use decisions. In Westchester County as a whole, nearly 40 percent of native wetland vertebrate species have been lost over the last 30 years. Biodiversity assessments will provide the Town with baseline, site-specific biological information, and will enhance the Town's ability to make more informed planning decisions and maintain biodiversity as growth proceeds.

Development (including residential, commercial, industrial and infrastructure improvements) impacts wildlife and plant species in many ways. For example, direct loss of natural habitats eliminates some species and reduces population sizes or others. Fragmentation of remaining habitats leads to isolation of remnant populations, reduced dispersal capabilities and increased edge effects (such as increased predation and parasitism and decreased breeding success). Site-specific designs such as curbing and catch-basins can have dramatic effects on the survival and movement patterns of amphibians and reptiles. Land development which disturbs soils, removes vegetation and alters natural drainage patterns can adversely impact both native plant and wildlife species. Adequate plant life is required for survival of all animals as habitat, food and shelter for birds, mammals, reptiles, amphibians and insects.

Target Areas:

Surveys are required for development applications located within areas identified as rich in biodiversity by the Croton-to-Highlands Biodiversity Study conducted by the Metropolitan Conservation Society (MCA Technical Paper Series #7, 2004). In addition surveys are required throughout the Town where development applications are located along river and stream corridors, in the vicinity of lakes, ponds, vernal pools and jurisdictional wetlands, adjacent to areas of open space and adjacent to areas of obvious corridors of open space. At the discretion of the Planning Board, Planning Department, Town Board, Conservation Board or Open Space Advisory Committee other properties may be targeted.

Species to be Assessed:

Surveys must be conducted for the entire range of species that are known to respond to development. Species must include those listed as development sensitive focal species

within the MCA study as well as Federal and State listed endangered, threatened and special concern plant and animal species. At a minimum, surveys should be conducted for amphibians, reptiles, birds, fish, mammals, plants and fungi. The presence of focal species indicates habitat quality. The presence of habitat specialists (e.g. wood frogs, spotted salamanders, box turtles, wood turtles, oven birds, Canada warblers) may indicate high-quality habitats where development-related impacts should be avoided, minimized or mitigated. The presence of certain “subsidized” species (e.g. those that are often affiliated with landscape disturbances) coupled with the absence of more specialized taxa, indicates previously disturbed habitats that may be more suitable for development.

Methods:

Biodiversity assessments must be conducted and interpreted by biologists trained in the concepts of conservation biology and landscape ecology, and who have demonstrated a competence in surveying target species within Westchester County. They will be paid for by the applicant and contracted as consultants to the Town of Yorktown.

Initial surveys must consist of a complete habitat assessment to develop a comprehensive list of possible endangered, threatened, special concern and focal species that could utilize the site during all or a portion of their life-cycle. The life cycle habitat requirements of the potential species on the site must be developed with appropriate references cited. Information from the NYS Natural Heritage Program must also be obtained prior to species surveys. Field surveys of the species listed as potentially found or using the site must be conducted during appropriate seasons and in the appropriate habitats in accordance with their life-cycles of the species. Surveys must follow standard protocols to ensure that detectability is maximized and results are reliable. For example, bird surveys must occur during the spring breeding season (mid-May through early July) in the early morning hours (within ½ hour of dawn through 9:30 a.m.) under relatively fair weather conditions. Results of such breeding bird surveys reveal the suitability of on-site habitat: surveys which are conducted at other times or in poor weather are much less informative. Reptile and amphibian surveys must be conducted between March and October, with concentrations in March-April, May-June, mid summer, and September. Survey techniques include night searches, minnow/turtle traps, turning of cover, objects, and larval dip-netting and identification. For all taxa in question, surveys must be conducted within all habitats on site (e.g. grasslands, vernal pools, forested uplands, wetlands), regardless of where the proposed construction activities would take place. Many species utilize a complex of habitats within the course of their life-cycles; therefore developments may attempt to avoid disturbance of breeding habitat, but destroy foraging, roosting, or wintering habitat. Attention should be given to timing and seasonal constraints such as breeding, migration and germination. The landscape ecology of the site must also be detailed regarding the effect of development on the undisturbed range requirements of the identified species.

Reports:

A final report must be submitted containing a description of current on-site habitats for wildlife and vegetation, the value and condition of those habitats for wildlife, and a discussion of the potential impacts of the proposed development on wildlife and vegetation resources. Data collection methods should be detailed in the report. Wildlife and vegetation occurrence data must be location-specific; lists of probable species occurrence along are not acceptable. The final report must include identification of critical habitat areas that are proposed to be permanently or temporarily removed or altered due to site construction. Critical habitat areas are those areas that are found within the construction areas that are required for the life-cycle of an identified specie (s) and can not be found elsewhere on the site or which will be cut off from the remaining site due to the construction. A design of the improvements must be prepared and presented to the Planning Board which avoids impacts to all critical habitat areas. Alternatives should be recommended where the proposed alterations to habitats place wildlife and vegetation resources in jeopardy. The report should also discuss site context (e.g. proximity and connectivity to other habitats), and should relate the importance of on-site habitat relative to other habitats within the Town. The report should contain detailed maps compatible with the Town's GIS system so that the survey information may be quickly incorporated into a Town-wide wildlife habitat data base.