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<u>Wildlife and Plant Biodiversity Assessments</u> <u>Town of Cortlandt Planning Board</u>

adopted 5/7/02

PURPOSE

The Town of Cortlandt exhibits a remarkable diversity of animal and plant species: wood turtles, river otters, great blue herons, spotted salamanders, rare wildflowers. Yet today we are facing the bleak prospect of losing much of our rich biological heritage to suburban sprawl, fostered by a lack of informed land-use decisions. In Westchester County as a whole, nearly 40 percent of native wetland vertebrate species have been lost over the past 30 years. Biodiversity assessments will provide the Town with baseline, site-specific biological information, and will enhance the Town's ability to make better planning decisions and maintain biodiversity as economic growth proceeds.

Development (including residential, commercial, industrial, and infrastructure development) impacts wildlife and plant species in many ways. For example, direct loss of natural habitats eliminates some species and reduces population sizes of 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 animal survival, habitat, food and shelter for birds, mammals, reptiles and amphibians. (And for insects, i.e. monarch butterflies lay eggs only on milkweed)

TARGET AREAS

Surveys are required for development applications located along river and stream corridors, in the vicinity of lakes, ponds, and wetlands: adjacent to areas of open space; and adjacent to obvious corridors of open space (Briarcliff-Peekskill Trailway, Blue Mountain Reservation, other existing preserves, Hillpoint/Hollowbrook, Lakeview Estates/Colabaugh Pond/Valeria/Salt Hill/Abee Rose, etc.). At the discretion of the Planning Division, Planning Board or Conservation Advisory Council, other properties may also be targeted. For example, in the seventies, a NY State-listed endangered bog turtle (*Clemmys muhlenbergii*)was found in the vicinity of Furnace Dock Road and Maple Avenue; therefore it makes good sense to require a Phase 1 survey (habitat identification by a State-licensed biologist) on all development applications in the surrounding area. Likewise, existing plant species in general and those that are endangered, threatened and of special concern should be documented and evaluated.

SPECIES TO BE ASSESSED

Surveys must be conducted for the entire range of species that are known to respond to development. At a minimum, surveys should be conducted for amphibians, reptiles, birds, fish, fungi and plants. These taxa contain species that respond measurably to development-related impacts at varying landscape scales. As time and resources allow, surveys should also be conducted for additional taxa (e.g. benthic macroinvertebrates, area-sensitive mammals) and plant species. Although this includes State- and Federally-listed threatened and endangered species, it also includes a wide array of currently unlisted, "focal" species that indicate 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 (i.e. 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 a demonstrated competence in surveying target species within Westchester County. They will be paid for by the applicant and contracted as consultants to the Town of Cortlandt the same as the <u>Town</u> contracts with wetland consultants.

Surveys must be conducted during appropriate seasons, according to the life cycles of the surveyed taxa. Surveys must also follow standardized 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 1/2 hour of dawn through 9:30am) under relatively fair weather conditions. Results of such breeding bird surveys reveal the suitability of on-site habitat: surveys conducted at other times or in poor weather conditions 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, forested wetlands), regardless of where 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.

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, alone, are not acceptable. Alternatives should be recommended where 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.