

# **Habitat Assessment Guidelines Town of Milan**

Endorsed by the Town of Milan Planning Board  
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## **Prepared for the Town of Milan by:**

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**Message from the Planning Board Chairman**

Milan is committed to maintaining its rural character, protecting its environment, and preserving its natural resources. We believe our goals are compatible with the goals of any land development projects within the Town and will result in higher quality subdivisions. Milan's approach uses Habitat Assessment early in the process to establish the environmental constraints and guide the plan before the applicant invests significant time and money in design and engineering.

## **Habitat Assessment Guidelines Town of Milan**

This planning and development tool for habitat assessments has been developed to foster a cooperative effort between the Town of Milan Planning and Town Boards and project applicants. These Guidelines will:

1. Enable Town boards to better carry out their responsibilities to protect the interests of Milan residents, protect the integrity and value of Milan's natural areas, and protect the Town's watershed and significant biological resources;
2. Streamline the planning process by facilitating New York State Environmental Quality Review (SEQR), site plan review, subdivision review, and other related environmental reviews;
3. Incorporate environmental protection into siting and design of development projects;
4. Provide applicants with notice in advance as to what actions will be required, thus giving them the opportunity to minimize delays and expenses during the review process.

The diverse natural resources of the Town of Milan are vulnerable to the adverse impacts often associated with development and construction. Habitat assessments provide the Town with site-specific baseline information and improve the Town's ability to make better planning decisions, establish consistent standards for development proposals, fulfill regulatory obligations (see below), and protect significant biological resources as development and economic growth occur.

### Environmental Impacts of Development

Land development may affect the environment in many ways. A high degree of biological diversity accompanied by low numbers of invasive species is often indicative of a healthy ecosystem.

Direct loss of habitat eliminates some species and affects the population size of others. Habitat fragmentation leads to isolation (and reduced viability) of small populations, reduced population dispersal, increased edge effects which in turn may lead to increased predation or parasitism, and decreased breeding success. Healthy ecosystems comprise the landscapes we value; ecological imbalances resulting from improperly sited development and its impacts can lead to degraded landscapes and a proliferation of invasive or nuisance species. In addition, habitat loss is often associated with negative impacts to the watershed, which may result in degraded water quality, reduced water supply, increased pollution, erosion and sedimentation, damage to streams and wetlands, poor drainage, and flooding.

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The inclusion of habitat assessment as part of the planning/review process facilitates biodiversity conservation, preserves water resources, helps maintain natural areas, reduces the impact of invasive species, enhances visual resources and recreational opportunities, supports community values, and protects and enhances property values.

It is ultimately more cost effective for the Town to protect significant resources than to attempt to restore them once they have been damaged or lost. This proactive stance intends to guide development--not prohibit it--and influence decisions on how development occurs on a particular site.

### Timing

Habitat assessments must be completed before sketch plan endorsement or initiation of the SEQR process, and before the site's Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan. This approach minimizes project review delays and expenses.

### Regulatory Basis for Habitat Assessments

The federal Endangered Species Act protects ecosystems upon which threatened and endangered species depend. The federal Clean Water Act regulates wetlands and may require a permit to alter any wetland that is connected to a surface water system.

The Environmental Conservation Law (ECL) of New York State regulates wildlife habitat protection. Section 9 of the ECL is designed to protect rare plants; sections 11-0535 and 11-0536 protect at-risk fish and wildlife. Article 24 gives the NYS DEC authority to regulate wetlands; article 15 regulates disturbance to protected streams.

In addition, New York State law allows communities to use home rule to protect wildlife and habitats when considering zoning ordinances, subdivision regulations, and site plan reviews.

As part of the SEQR review process, Parts 1 and 2 of the Environmental Assessment Form (EAF) contain questions pertaining to potential impacts of a project on both protected species (threatened and endangered) and non-protected species (EAF Part 2). To answer the questions as to whether a project will have significant impacts on these resources, the Planning Board needs a description of habitat types (and their condition) found on or in the vicinity of the site and species (protected and unprotected) that are associated with those habitats.

The N.Y.S. Natural Heritage Program (NYNHP) maintains records of known occurrences of rare species and significant natural communities throughout the state. Because most sites have never been surveyed by biologists, however, the presence or absence of rare species or significant communities is unknown. NYNHP issues letters to applicants in response to inquiries regarding the presence of protected species on, or in the vicinity of, a particular site. If no records exist for that site, the letter states:

The absence of records does not necessarily mean that endangered or threatened species do not exist on or adjacent to the site, but rather that our files currently do not contain any information on the presence of these species. . . . In most cases, site-specific or comprehensive surveys have not been conducted. For these reasons, *we cannot provide a definitive statement on the presence or absence of species. Therefore, this information should not be substituted for on-site surveys that may be required for environmental impact assessment* [italics added].

Even if a record for a protected species occurs on or near the project site, the NYSNHP letter will state:

For most sites, comprehensive field surveys have not been conducted: the enclosed report only includes records from our databases. *We cannot provide a definitive statement on the presence or absence of all rare or state listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.*

Habitat assessment guidelines are designed to assist applicants in providing additional information necessary for impact assessment in compliance with SEQ. R.

Because stormwater management activities may have a significant effect on water resources, including wetlands and streams, compliance with the new DEC Phase II Stormwater Management regulations also will affect, and be affected by, the vegetation and soil characteristics of certain habitats, particularly wetlands, ponds, lakes and streams.

#### Role of Habitat Assessments in Environmental Review

The purpose of a habitat assessment in subdivision and site plan review process is to assess the existing environmental conditions, identify any areas of ecological sensitivity, and determine what the impact of the proposed development will be.

Specific areas of concern are:

- water resources (including aquifers, streams, wetlands, and vernal pools, *whether or not they are protected by state or federal regulations*)
- vegetation
- soil types
- elevation, aspect and slope (including rocky outcrops, steep slopes and ridgelines)
- wildlife of conservation concern, including but not limited to breeding birds, reptiles, amphibians, and mammals
- presence of protected species of plants or animals

The habitat assessment uses standard methods to define the various habitat types (e.g., shrubby oldfield, cool ravine, mature mesophytic forest, intermittent woodland pool) found on the property and estimate their extent, condition, and ecological sensitivity. It analyzes the presence or potential presence of plant and animal species of conservation concern on the property and estimates the impact the development will have on all plants and wildlife found in the area. The habitat assessment also analyzes the water resources of the property and estimates onsite as well as downstream impact of the development.

When completed, the habitat assessment will be a valuable tool for planning land use that is compatible with the existing habitat, minimizing the possible impacts to habitat, and mitigating unavoidable impacts.

## Guidelines

The habitat assessment includes identification of habitats on and adjacent to, the site, identification of species of conservation concern that use, or may use, the habitats, and evaluations of habitat quality for those species.

1. Existing habitats **on the entire site.**

**The Habitat Assessment should not be limited to only the areas of disturbance.**

Assessment of habitats includes two perspectives: site specific and the context, or surrounding landscape. The habitat assessment must first describe existing conditions onsite, and observable habitats on adjacent and nearby properties. Though decisions are made on a site-by-site basis, some of the ecological information that informs those decisions is on the landscape scale. Many species utilize a complex of habitats within the course of their life cycles; development that attempts to avoid disturbance of breeding habitat, for example, may unintentionally destroy foraging, roosting or winter habitat.

Habitat assessment requires the following:

- Soils and bedrock geology
- Habitat descriptions, including approximate acreage for each habitat type, dominant vegetation, and connections with adjacent habitat
- Assessment of habitat quality/condition for each habitat
- Approximate acreage for each habitat type that will be impaired or lost as a result of the project activity
- Quality/condition of each habitat
- Habitat evaluation of all wetlands and streams (perennial and intermittent) onsite *regardless of regulatory status or jurisdiction.*
- To clarify development impacts on the larger landscape and facilitate siting of conservation easements, habitat assessment includes both onsite and adjacent areas. Offsite areas can be assessed using map and air photo analysis.

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For purposes of habitat description, the Hudsonia *Biodiversity Assessment Manual* or the latest edition of *Ecological Communities in New York State* must be used (see Resources). A list of some expected habitats in the Town of Milan is appended to these guidelines.

### 2. Species associated with habitat types

Since the minimum habitat area required to sustain a population will vary according to species, probable species present onsite must first be determined. A habitat patch can then be evaluated as to whether or not it is large enough to sustain that species (see *Conservation Thresholds for Land Use Planners* in Resources).

Description of probable plant and animal species present should be based on field visits (formal surveys are not required at this stage) and existing information (see Resources list). The possible presence of local, state, or federal threatened, endangered, special concern or rare species is identified based on these lists. Invasive species and their extent onsite must also be identified.

Certain birds, reptiles and amphibians, and plants are often good indicators of quality habitat for a variety of other species. Plant species commonly associated with the above described habitat types must be listed, in addition to species actually observed onsite. Assessment of habitat quality or condition must be included. Quality measures, depending on habitat type, may include:

- Extent (e.g., for forests or meadows)
- Connectivity with other habitats or corridors
- Age or size of trees
- Abundance of downwood, standing snags, rocks, organic debris, woody hummocks, and other microhabitat features
- Level of human disturbance (e.g., from logging, ATVs, foot traffic, etc.)
- Abundance of non-native or invasive species
- Diversity of native plant species
- Observable quality of surface water and substrates (for streams)

### 3. Species of conservation concern

For purposes of habitat assessment, species of conservation concern include those listed as:

- Endangered or Threatened under the federal Endangered Species Act
- Endangered, Threatened, Rare, or Special Concern under the New York State Environmental Conservation Law
- S1, S2, or S3 by the New York Natural Heritage Program
- Regionally rare, scarce, declining, or vulnerable in Kiviak and Stevens (2001)

Many of the species of conservation concern are restricted to specialized habitats with particular physical or biological features. *If the appropriate habitat is present onsite, it is*

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*assumed that species known to use that habitat are present or could be present in the future.*

### 4. Evaluation of onsite habitat

The assessment includes the value of the habitats for non-protected as well as protected species. This includes habitat for breeding, nursery habitat, foraging, seasonal movements, nesting, overwintering, and population dispersal. **The entire site, not just areas of disturbance, must be evaluated.**

Some criteria for evaluating these natural resources (both species and habitat) include:

- Rarity
- Diversity
- Size (critical habitat areas)
- Naturalness (level of disturbance)
- Productivity
- Fragility (susceptibility to disturbance)
- Representativeness (high-quality habitat for a variety of species)
- Importance to wildlife
- Local importance (e.g., only site in the Town with certain undisturbed habitat features)
- Connectivity to adjacent habitats and wildlife corridors
- Habitat fragmentation, both onsite and within the landscape context

The observed presence of habitat specialist species (e.g. wood vernal pool amphibians, interior forest birds) may indicate high-quality habitats where development-related impacts must be avoided, minimized or mitigated. The presence of species that are associated with disturbed habitat, along with the absence of habitat specialists, indicate lower quality habitat that may be more suitable for development.

## **Habitat Assessment Report**

The following format for habitat assessment reports must be followed.

### 1. Title page

Name of subdivision, report date, applicant, name and contact information for report preparer

### 2. Introduction

Project description; location map using USGS topographic base map.

### 3. Methods

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Sources of information (existing studies, maps); agency inquiries; aerial photographs; field visits. All onsite field observations must be accompanied by the date, time of day, and general temperature/weather conditions, locations, methods of observation, and seasonal considerations. Please list scientific names for all species mentioned in the report.

### 4. Results must include

- Site overview with descriptions of bedrock geology and soils
- Habitat descriptions (see attached list)
- Indicators of habitat quality (e.g., size of trees, degree of disturbance, invasive species, abundance of species or groups, vegetation characteristics, relationships to offsite or adjacent habitats, extent of habitat)
- Habitat map of the site including roads, existing structures, habitat labels, contours, topographic features, and soils
- Soils map
- Vegetation/Wildlife List with specific locations wherever possible.

Use tables to present results for habitat types and species of special concern, as illustrated in the following examples.

#### Example 1: Habitat Types

<b>Habitat Type</b>	<b>Size*</b>	<b>% of Total Site Area*</b>	<b>Dominant Vegetation</b>
Mature mesophytic lowland forest	3 Acres	20%	Sugar maple, oaks (red, white, black, chestnut)
Shrubby oldfield	5 Acres	33%	Grey dogwood, orchard grass, goldenrods, bluestem
Intermittent woodland pool	¼ Acre	<2%	Buttonbush, hummocks, duckweed, algae
Perennial stream	Average width: 6 ft.; length 1000 ft.	N/A	Submerged vegetation; vegetation on bars or low banks (see text for details)
*Approximate			

#### Example 2: Species of Special Concern

We recommend that some of the basic information on species of conservation concern be presented in a table such as the one below. The list of species in the table need not be comprehensive, but it must include representatives of the groups of species that may use the habitats. For example, black-throated blue warbler or ovenbird could represent the interior forest-breeding songbirds; small-flowered crowfoot or blazing-star could represent the rare forbs of calcareous crests, and northern copperhead could represent the snakes of low-to-moderate elevation crests and ledges. More complete lists of potential species should be included in the narrative discussion. Any species of conservation

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concern that are *known to occur* (recently or historically) on or near the site must be listed in the table.

<b>Species of Conservation Concern</b>	<b>Habitat(s)</b>	<b>Quality</b>
Jefferson salamander, marbled salamander, spotted salamander, wood frog	intermittent woodland pool	High
(same)	upland hardwood forest (15 ac)	moderate (soils in eastern half disturbed by selective logging 15 years ago)
red-shouldered hawk	upland hardwood forest and floodplain hardwood swamp (total = 30 ac)	moderate (too small?)
yellow lady's-slipper	upland hardwood forest (15 ac)	low to moderate (soils in eastern half disturbed by selective logging 15 years ago; invasion of garlic-mustard)

5. Discussion

- Includes species of conservation concern that would use the site
- Overview of biodiversity
- Ecological impacts of the proposed development in the context of the larger landscape
- Relationship of existing or proposed conservation easements to habitats onsite. Conservation easements should include significant habitat and avoid incorporating small or isolated (disconnected) patches of habitat.

6. Potential impacts of proposed project activity

Include cumulative, primary and secondary impacts and stormwater management impacts. Considerations include magnitude, spatial extent, duration, probability of occurrence.

7. Recommended mitigation measures

Include mitigation measures that will minimize impacts to species of conservation concern, maintain biodiversity, limit habitat fragmentation, minimize impacts to water resources, reduce edge effects, and minimize impacts to the surrounding landscape, viewsheds, and adjacent property owners.

8. Summary

9. References cited

**Quality Control and Follow-Up**

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A site visit(s) by representatives of the CAC, Planning Board, and Town Planner will be conducted after the habitat assessment is submitted. Mitigation measures for impacts on habitats/plant and animal species will be evaluated.

The Town may require peer review of the Habitat Assessment Report at the expense of the applicant.

### **Habitat List**

Suggested habitat types for general habitat and biodiversity assessments. Habitats on any particular site in the Town of Milan may include but are not necessarily limited to these types.

#### **STREAM, POND, & WETLAND HABITATS**

<u>Habitat</u>	<u>Comments</u>
stream	Includes intermittent and perennial streams and rivers
open water	Natural ponds and lakes (i.e., undammed, unexcavated)
constructed pond	Dammed or excavated ponds and lakes
intermittent woodland pool	Vernal pool in a forested setting
wet meadow	
wet clay meadow	
fen	Calcareous low-shrub or sedge fen
kettle shrub pool	
circumneutral bog lake	
acidic bog	
marsh	Includes emergent and floating-leaved marshes
hardwood swamp	Includes forested and shrub swamps
conifer swamp	
springs and seeps	

#### **UPLAND HABITATS**

<u>Habitat</u>	<u>Comments</u>
upland meadow	Includes inactive agricultural land, herbaceous oldfields,

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	farmed meadows, pasture, hayfield, and cropland
upland shrubland	Includes shrubby oldfield and other shrub-dominated habitats
orchard/plantation	For example, Christmas tree farm; fruit orchard; young (seedling-sapling size) plantations
cool ravine	Very deep, very narrow ravine, with rocky slopes flanking rocky stream at bottom; creating very cool, shaded environment with unusual plant and animal community
upland hardwood forest	≥ 75% hardwood cover
upland mixed forest	
mature upland conifer forest	≥ 75% conifer cover; includes spontaneous conifer stands and mature plantations
crest, ledge, and talus	Includes noncalcareous CLT, as well as CLT of unknown bedrock chemistry
calcareous crest, ledge, and talus	
waste ground	Abandoned soil or rock mines, active private dumps, unreclaimed landfills, post-industrial or commercial sites, other areas with stripped topsoil and little vegetation
cultural	Manicured areas lacking structure, pavement, etc.; e.g., ballfields, campgrounds, large lawns, mowed park-like areas under trees

### **Additional Information**

For procedural questions regarding these guidelines, contact Lauren Kingman, Planning Board Chair, at (845) 758 1027 or [kingman@webjogger.net](mailto:kingman@webjogger.net). For technical questions, contact Sheila Buff, CAC Chair, at (845) 758 3035 or [sheilabuff@frontiernet.net](mailto:sheilabuff@frontiernet.net).

### **Document History**

These Guidelines for Habitat Assessments were adopted by the Milan Planning Board in March 2005. They were prepared by Karen Schneller-McDonald, Greenplan Inc., CAC members Sheila Buff and Frank Margiotta, and Planning Board Chair Lauren Kingman. Gretchen Stevens of Hudsonia Ltd. provided invaluable guidance.

*Karen Schneller-McDonald* is an environmental consultant to Greenplan, Inc. She holds a BS in Conservation of Natural Resources from North Carolina State University at

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Raleigh. Her professional training includes jurisdictional delineation of wetlands, functional assessment of wetland and riparian systems, wetland identification, raptor identification, and rare plant surveys.

*Sheila Buff* is a freelance writer specializing in both medicine and natural history. She is the chair of the Milan CAC. She holds a BA with high honors from Washington Square College at New York University.

*Frank Margiotta*, MST, MS, was appointed to the Milan CAC in 2004. His professional experience includes science teaching at the secondary and graduate school levels and biological studies of wetlands. The Towns of Huntington and Northport, the Village of Asharoken, and SUNY Stony Brook graduate biology department have utilized his research.

*Lauren Kingman* was a member of the 2000-2001 Milan Master Plan Committee and joined the Milan Planning Board in 2001. He chaired the Zoning Board of Appeals in 2003. From January 2004 to the present he has chaired the Planning Board. Mr. Kingman holds a BS in engineering from Cornell University and a Certificate in Landscape Design from the Institute of Ecosystem Studies. He has participated in several workshops of the Pace University Land Use Law Center and recently completed the Pace Land Use Leadership Alliance Training Program.

*Gretchen Stevens* is a botanist with Hudsonia Ltd., and director of Hudsonia's Biodiversity Resources Center (BRC). Gretchen has 25 years' experience in habitat assessments, rare plant surveys, and other field biology in the Northeast and elsewhere in the U.S. She is co-author of the Biodiversity Assessment Manual for Hudson River Estuary Corridor, and has authored numerous technical reports and other publications on biological subjects. Gretchen manages the GIS laboratory at Hudsonia, curates the Bard College Field Station Herbarium, and supervises the Habitat Mapping and the Biodiversity Education programs of the BRC.

## Resources

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