

*Hudsonia created this template for Habitat Assessment Guidelines to assist municipal planning boards in their reviews of land development projects. Obtaining information about biological and water resources from the applicant early in the application process will enable the planning board and applicant to better understand potential impacts to sensitive resources and better design the project to minimize those impacts.*

*Preparation of these guidelines was funded by the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.*

# Habitat Assessment Guidelines

(a model)

Hudsonia Ltd., June 2022

These Guidelines are designed especially for use by applicants who are presenting land development proposals to the local planning board or other reviewing agency.

The purposes of a habitat assessment are 1) to provide information that will help the applicant, the planning board, and other reviewers and decision-makers recognize and assess the biological and water resource features of the site, 2) to help the applicant design the development project in ways that minimize and mitigate potential impacts of the project on important sensitive areas, 3) to help the applicant avoid costly reworking of the project design later on, and 4) to streamline the environmental review.

It is recommended that an applicant conduct the habitat assessment at the “sketch plan” stage, prior to developing any detailed design or drawing for their project.

A habitat assessment must be carried out by biologists familiar with the habitats and biota of the region, and the life history needs of species of conservation concern. The field assessments described below may be carried out at any time of year as long as field conditions (e.g., deep snow, flooding, ice, recent fire) do not obscure the features necessary for identifying habitats.

The findings are to be submitted in a brief written report using the following outline. The annotations in the outline constitute the Habitat Assessment Guidelines recommended by the planning board.

## Habitat Assessment Report – Basic Components

### 1. Executive Summary.

A brief (e.g., one paragraph) summary description of the site, the features of conservation concern, the proposed project, potential impacts on biological and water resources, and proposed mitigation.

### 2. General Site Description.

Describe the general characteristics of the site—the topography, bedrock geology, soils, vegetation cover types, surface water drainage, water bodies, and elevations.

### 3. New York Natural Heritage Program (NYNHP) Data.

Discuss the results of an inquiry to the NYNHP about records of rare species and significant natural communities on and near the site. Append the inquiry letter, map, and the NYNHP response.

### 4. Habitats or Ecological Communities.

Describe the habitats or ecological communities on and near the site, using classifications in the *Ecological Communities of New York State* (Edinger et al. 2014), the *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* (Stevens and Kiviat 2001), or other standard reference relevant to this region. Include intermittent and perennial streams, lakes, and ponds, as well as all upland and wetland communities or habitats. Offsite areas may be assessed using topographic maps, soils maps, aerial photographs, and other remote sensing resources readily available from online sources.

For each habitat or community, list the dominant trees, shrubs, and herbs, and mention any species that are unusual or may be indicative of special habitat conditions. Comprehensive plant lists are not required.

Include general assessments of habitat quality, to the extent possible given the seasonal or other field conditions at survey time. Measures of quality may include, but are not limited to:

- age (e.g., of forests);
  - age or size of trees;
  - size of habitat area (e.g., for forests or meadows);
  - connectivity with other habitat areas, including streams,
  - abundance of downwood, standing snags, bedrock outcrops, loose rocks, organic debris, and other microhabitat features;
  - levels of human disturbance (e.g., from recent or historic logging, ATV use, foot traffic);
  - presence and abundance of non-native or invasive species;
  - diversity of native plant species (a qualitative assessment is adequate);
  - observable indicators of surface water;
- (continued)

(Indicators of quality, cont.)

- (for streams, ponds, wetlands) water depths, clarity/turbidity, substrates, flow at survey time, entrenchment, condition of streambanks, etc.; describe intermittent as well as perennial streams; and
- presence and quality of vegetated buffer zones adjacent to streams, wetlands, other aquatic habitats, and other sensitive habitat areas.

Explain the timing, duration, and limitations of the field surveys, and make recommendations for further surveys at other seasons or in other conditions if needed for an adequate assessment.

#### **5. Connectivity.**

Describe the connectivity and barriers between significant habitat areas, including streams, on and off the site. Barriers include roads, driveways, pavement, curbs, walls, buildings, culverts, dams, and other features that might impede the movement of small and large animals through and between habitats.

#### **6. Map.**

Provide a map of the site and vicinity, illustrating habitats, watercourses (both perennial and intermittent streams, including those not identified on USGS topographic maps), existing developed features (e.g., roads, driveways, structures), and proposed new features. A sketch map drawn with reasonable care is sufficient; it need not be an engineer's or surveyor's drawing at this stage.

#### **7. Species of Conservation Concern.**

Considering the habitats present on and near the site, list and discuss the plants and animals of conservation concern that do or may use the site and nearby areas, and may be affected by the proposed project. Consider data from the New York Natural Heritage Program, the New York State Breeding Bird Atlas and the New York State Herp Atlas to help determine likely or potential occurrence on the site, but do not limit your assessment to those sources.

For the purposes of this assessment, "species of conservation concern" include the following, at a minimum:

- animals listed by the New York State Department of Environmental Conservation (NYSDEC) as Endangered, Threatened, or Special Concern (<https://www.dec.ny.gov/animals/7494.html>);
- animals listed by NYSDEC as New York State Species of Greatest Conservation Need (SGCN) ([https://www.dec.ny.gov/docs/wildlife\\_pdf/sync2015list.pdf](https://www.dec.ny.gov/docs/wildlife_pdf/sync2015list.pdf));
- plants listed in New York State law as Endangered, Threatened, or Rare (<https://govt.westlaw.com/nycrr/Document/121efe775c22211ddb7c8fb397c5bd26b?contextData=%28sc.Default%29&bhcp=1&transitionType=Default>); and
- plants and animals listed by the New York Natural Heritage Program as S1, S2, or S3. ([https://www.nynhp.org/documents/5/rare\\_plants\\_2021.pdf](https://www.nynhp.org/documents/5/rare_plants_2021.pdf) and [https://www.nynhp.org/documents/1/rare\\_animals\\_2017.pdf](https://www.nynhp.org/documents/1/rare_animals_2017.pdf)).

(Species of Conservation Concern, cont.)

Consider habitat uses for breeding/nesting, nursery, foraging, seasonal migration, and overwintering habitat, as appropriate, for the species of concern. The discussion can treat certain groups of organisms (e.g., “forest interior breeding birds” or “fish of coldwater streams” or “spring ephemeral wildflowers”) and need not discuss each species separately.

**8. Potential Impacts.**

Describe the proposed development project, and assess the potential impacts of the project on biological and water resources. Consider the effects of habitat loss, fragmentation, and other degradation, the edge effects of human activities (e.g., lights, noise, predation by pets, etc.), the effects of impervious surfaces, increased runoff of surface water, and contamination of surface water or groundwater.

**9. Potential Mitigation.**

Discuss preliminary site design, engineering, infrastructure features, or other measures that could be employed to mitigate any adverse effects of the proposed project on biological or water resources. Because this assessment is carried out at an early stage of planning, this discussion is expected to be fairly general, and need not be accompanied by engineer’s drawings.

**10. References Cited.**

List the literature and online resources that were consulted for the assessment.