Draft Guidelines for Conservation Analysis
Town of Hillsdale, NY
February 2010

The purpose of a conservation analysis is to provide information that will help the applicant and the Planning Board assess and mitigate potential impacts of proposed land development projects on important biological and water resources.

A conservation analysis must be carried out by biologists familiar with habitats and biota of the region, including 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, ice, recent fire) do not obscure the features necessary for identifying habitats.

The basic components of a conservation analysis are outlined below.

1. **General site description.**
   Describe the general characteristics of the site—the soils, bedrock geology, vegetation cover types, surface water drainage, etc.

2. **New York Natural Heritage Program (NYNHP) data.**
   Discuss the results of an inquiry to the NYNHP about rare elements on and near the site. Append the inquiry letter, map, and the NYNHP response to the report.

3. **Habitats or ecological communities.**
   -- Describe the habitats or ecological communities on and near the site, using the *Draft Ecological Communities of New York State* (Edinger et al. 2002), 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 wetlands communities or habitats. Offsite areas may be assessed using topographic maps, aerial photographs, and other remote sensing resources.

   --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 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, abundance of downwood, standing snags, 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, observable indicators of surface water and substrates (for streams).

   --Explain the timing, duration, and limitations of the field surveys, and make recommendations for further surveys, as needed, at other seasons or in other conditions.

4. **Connectivity.**
   Describe the connectivity (or barriers) between significant habitat areas on and off the site.

5. **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, or that may be affected by the proposed project. Include data from the New York State Breeding Bird Atlas and the New York State Herp Atlas to help determine likely occurrence on the site, but do not limit your assessment to those sources.

   For the purposes of these assessments, "species of conservation concern" include the following:
   -- those listed by the New York State Department of Environmental Conservation (NYSDEC) as Endangered, Threatened, Rare, or Special Concern;

   -- those listed by NYSDEC as New York State Species of Greatest Conservation Need (SGCN) (www.dec.ny.gov/animals/9406.html);

   -- those listed by the New York Natural Heritage Program as S1, S2, or S3; and

   -- those listed by Partners in Flight as of Continental or Regional Concern for this region (www.rmbo.org/pif/jsp/BCRBreedConcern.asp?submit=Show+Only+Regionally+Important+Species).

6. **Potential Impacts**
   Assess the potential impacts of the proposed project on biological and water resources. Consider the effects of habitat loss, fragmentation, and other degradation ,the edge effects of human activities, the effects of impervious surfaces, increased runoff of surface water from the site, and contamination of surface water or groundwater..

7. **Potential Mitigation.**
   Discuss 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.