

April 8, 2016

William Root
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NDDB Preliminary Assessment: 201604101

Project: Preliminary Assessment of Potential Commercial/Industrial Development;
Toelles Crossing; Toelles Road & South Colony Road; Wallingford, CT

Dear William Root,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the property near the intersection of Toelles Road & South Colony Road in Wallingford, Connecticut. According to our records, the site contains two Connecticut Critical Habitats and hosts populations of nine State-listed wildlife species. It is anticipated that further biological inventory would yield additional State-listed species which have been documented in the immediate vicinity.

According to our records, the following Connecticut Critical Habitats and State-listed wildlife species have been documented on-site:

Connecticut Critical Habitats

- **Dry Acidic Forest** – Poorly growing deciduous forests often dominated by oaks with various mixtures of pine often with dwarf ericaceous shrubs.
- **Sand Barren** – Dry sandy deposits with woody or grassy vegetation maintained by fire or periodic disturbance. This habitat is also listed as one of Connecticut’s Thirteen Most Imperiled Ecosystems (Metzler and Wagner, 1998).

State-listed Wildlife Species

- **Ground beetle (*Amara chalcea*)**
Protection Status: State Special Concern
Sand barren specialist.
- **Big sand tiger beetle (*Cicindela formosa generosa*)**
Protection Status: State Special Concern
Sand barren specialist.
- **Dark-bellied tiger beetle (*Cicindela tranquebarica*)**
Protection Status: State Threatened
Requires sandy soils.

- **Violet dart moth (*Euxoa violaris*)**
Protection Status: State Special Concern
Sand barren specialist.
- **Ground beetle (*Helluomorphoides praeustus bicolor*)**
Protection Status: State Special Concern
Toelles Road sandplain is one of only three sites in Connecticut where this species has been documented.
- **Yellow-horned beaded lacewing (*Lomamyia flavicornis*)**
Protection Status: State Special Concern
Toelles Road sandplain is one of only three sites in Connecticut where this species has been documented.
- **Grassland thaumatopsis (*Thaumatopsis edonis*)**
Protection Status: State Threatened
Toelles Road sandplain is the only site in Connecticut where this species has been documented.
- **Northern dusk-singing cicada (*Tibicen auletes*)**
Protection Status: State Endangered
Toelles Road sandplain is the only site in Connecticut where this species has been documented. This is the largest cicada species in North America.
- **Spinose flower moth (*Schinia spinosae*)**
Protection Status: State Special Concern
Host plant is associated with sandy soils.

In addition, the following State-listed wildlife and plant species have been documented in very close proximity to Toelles Road and may also occur on-site:

State-listed Wildlife Species

- **Black-eyed zale (*Zale curema*)**
Protection Status: State Endangered
- **Oblique zale (*Zale obliqua*)**
Protection Status: State Special Concern
- **Scribbled sallow moth (*Sympistis perscripta*)**
Protection Status: State Special Concern
- **False heather underwing (*Drasteria graphica atlantica*)**
Protection Status: State Threatened

State-listed Plant Species

- **Low frostweed (*Crocanthemum propinquum*)**
Protection Status: State Special Concern
Habitat: Dry, open, sandy soil. Blooms mid-late Jun.
- **Sickle-leaved golden aster (*Pityopsis falcata*)**
Protection Status: State Endangered
Habitat: Dry, open, sandy fields and dunes. Blooms Jul – Oct.
- **Beach needle grass (*Aristida tuberculosa*)**
Protection Status: State Endangered
Habitat: Coastal sand dunes, sand flats, and sandy woods. Blooms Aug, Sep.

Given the number of rare State-listed species associated with this site on Toelles Road, it is anticipated that any activity resulting in ground disturbance or alterations to the site's vegetation would result in a direct negative impact to, or potential extirpation of, one or more State Endangered or Threatened species.

This site is considered the best preserved and only sizable remnant of the North Haven Sandplains which once stretched nearly fifteen miles between Meriden and New Haven. The unique vegetative communities that once dominated this area on the east side of the Quinnipiac River valley have largely been lost to industrialization and urbanization.

Interest in the ecology of the North Haven Sandplains dates back over a century. In 1903, Wilton Everett Britton, an entomologist and prolific writer, published 'The Vegetation of the North Haven Sand Plains' in the highly-respected *Bulletin of the Torrey Botanical Club*. Aside from providing a description of the region's soils and vegetation, Britton also explored the anatomical and histological features that allowed certain plant species to persist in the sand plain despite its harsh conditions. Later in 1937, Charles Olmsted published the 'Vegetation of Certain Sand Plains of Connecticut,' a classic ecological study in which the author attempted to identify correlations among environmental conditions and the locations of sand plain species. All sites described in Olmsted's work were located in North Haven and Wallingford. Finally, the Connecticut Arboretum included the North Haven Sandplains in its 1956 publication entitled, *Six Points of Especial Botanical Interest in Connecticut*. Even 60 years ago, the author commented on how much of the area's native vegetation had been lost to development.

There has also been considerable conservation and academic interest in this particular site on Toelles Road. Letters submitted in support of preserving this area were penned by Dr. Thomas Siccama of the Yale School of Forestry in 1971, and by Hugo Thomas, Director of the Connecticut Natural Resources Center, in 1976. Even The Nature Conservancy attempted to negotiate a conservation easement over the parcel in the late 1970s and early 1980s when the property was owned by American Cyanamide. This area has been subject to entomological inventories due to the size and quality of the Critical Habitats. Development of this site would mean the loss of the best remaining patch of unfragmented sand barren habitat in the North Haven Sandplain and a loss of the state's biological diversity from the extirpation of multiple sand barren specialists from Connecticut.

For questions regarding State-listed wildlife species, please contact Laura Saucier (laura.saucier@ct.gov). For questions regarding Connecticut Critical Habitats or State-listed plant species, please contact Nelson DeBarros (nelson.debarros@ct.gov).

Please be advised that this is a preliminary assessment and not a final determination. This preliminary assessment letter cannot be used or submitted with permit applications. This letter is valid until **April 7, 2017**.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-

specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

Please contact me if you have any questions (nelson.debarros@ct.gov; 860-424-3585). Thank you for consulting with the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,



Nelson B. DeBarros
Botanist/Ecologist