

Wildlife Habitat Assessment of the Durand Glass Property

Property: Durand Glass

Block: 578 Lot: 19

Municipality: City of Millville

County: Cumberland

The property in question is known as the Durand Glass site. This site consists of 79.75 acres of presently undeveloped habitat and is bordered by Route 55 to the west, an active freight railroad tract and Gorton Road to the south and undeveloped forest to the north and east (See Figure One).



Figure One: Durand Glass site.

Endangered Species Information

A review of the Department's Landscape mapping shows the site to feature habitat patches that are ranked 4 (for the present of potential endangered species habitat) and rank 3 (for the presents of potential threatened species habitat). Patches ranked 4 have been identified as featuring potential habitat for the state endangered Cope's Gray Treefrog, and state threatened Northern Pine Snake and Barred Owl. Patches ranked 3 are identified as featuring potential habitat for the state threatened Barred Owl and/or Northern Pine Snake (See Figure Two). Overall, the entire property is identified as potentially featuring suitable habitat for one or more state listed species. The onsite habitat is also contiguous with approximately 5000 acres of mapped Northern Pine Snake habitat between Route 55, Route 47, and the Manumuskin River.

Review of more specific information relating to the locations of threatened or endangered species habitat on the site reveals that there are three records proximate to the property. Two Northern Pine Snake sightings from the 1989-90 time period occur proximate to the property. Barred owls and Cope's Gray Treefrog locations are more distant.

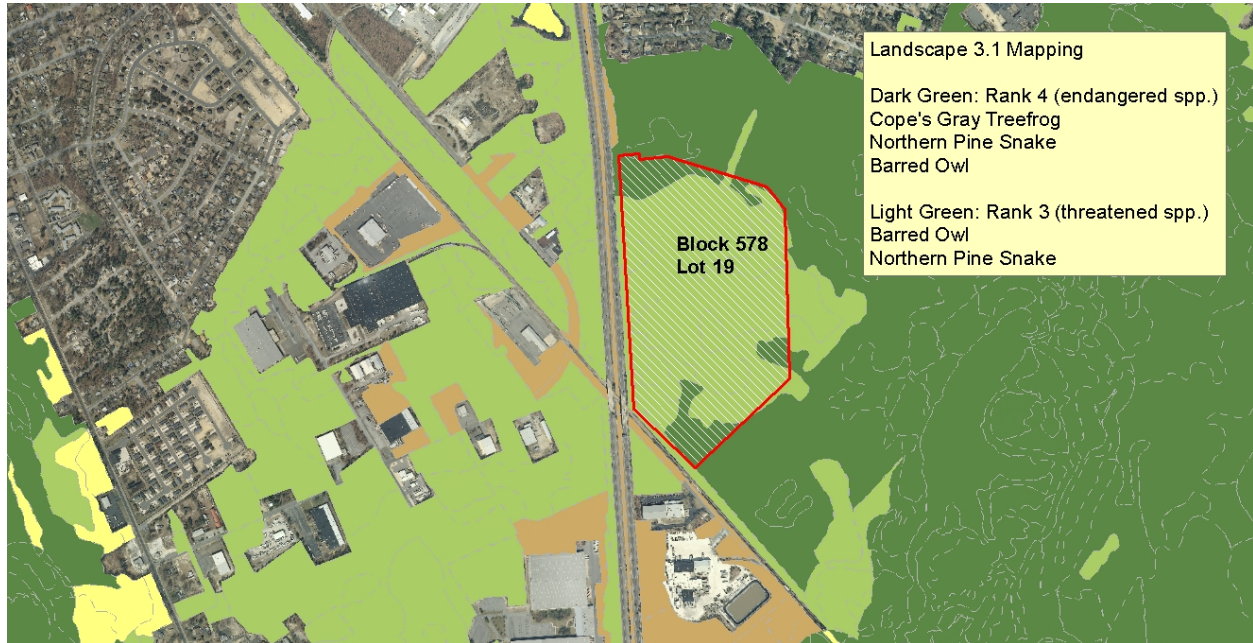


Figure Two: NJDEP Landscape mapping for the Durand Glass site.

Onsite Characteristics

A review of the 2007 Land Use Land Cover (LULC) mapping shows the site to be predominantly classified as forest (See Figure Three). The dominant community onsite is labeled as Coniferous forest with a 50% or greater canopy closer. Other habitat types identified

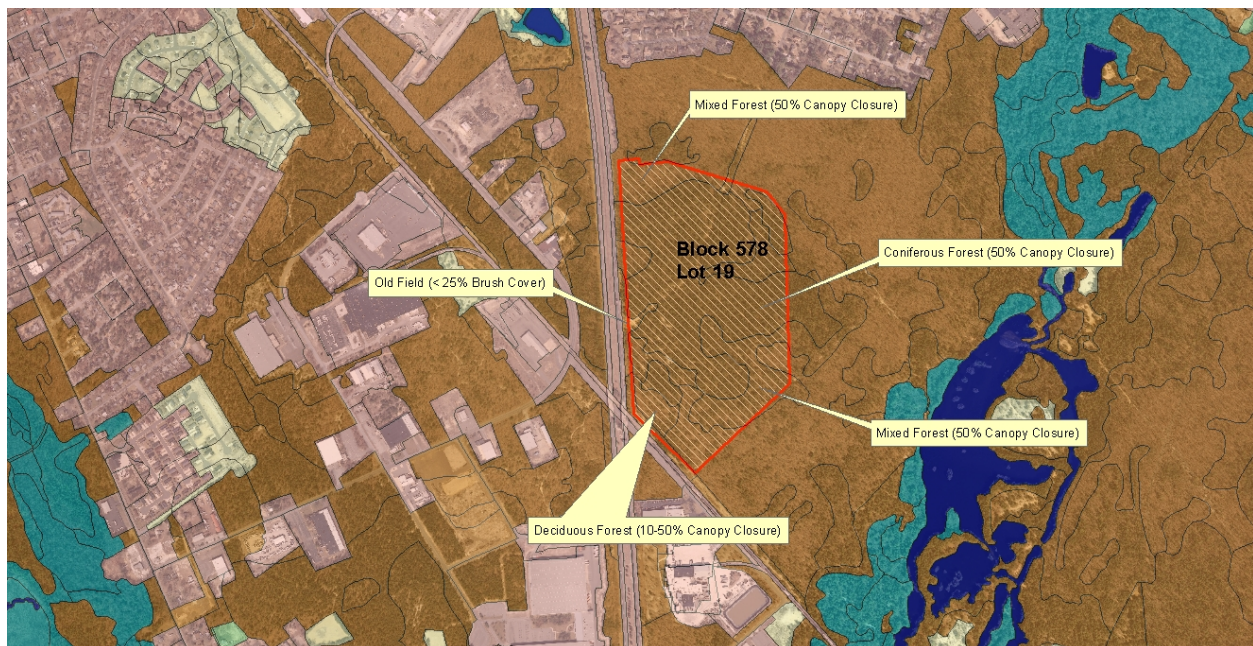


Figure Three: Onsite Vegetative Communities.

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Species Habitat Suitability Discussion.

1. Cope's Gray Treefrog: Cope's Gray Treefrogs will normally breed in small ephemeral ponded habitats though they may also occur in shallow areas of more permanent waterbodies. Such wetland features are usually a component of a larger wetland forested wetland system or bordered by upland forest. Most frogs stay in areas proximate to the breeding pond during the non-breeding season but some frogs have moved as much as a 1/4 mile during this dispersal period (D. Golden, unpublished report, 2004). As noted above, the nearest documented treefrog location is approximately 1/2 mile away from the subject property. No wetlands are mapped on site nor were any observed during a January 18, 2013 site investigation. Based on the distance to the nearest sighting and the absence of any wetland habitat onsite or proximate to the property, it is unlikely that the Durand Glass property currently provides habitat for this species. A similar finding was made by Trident Environmental Consultants (2011) based on their habitat assessment of the property.
2. Barred Owl: This species is commonly associated with mature hardwood swamps featuring trees of sufficient size to provide suitable breeding cavities. The species is also known to use evergreen stands for roosting during the summer and winter and upland wooded habitats or woodland trails featuring an open understory for foraging. Based on the habitat characteristics observed during our January 2013 site inspection, the subject property offers marginal roosting and foraging habitat due to the density of onsite vegetation and the overall age of the onsite forest. This factor compounded with the

characteristics of surrounding offsite forest, proximity to Route 55 and distance from known breeding habitats to the east suggest that the onsite habitat does not play a major role in supporting regional barred owl populations.

3. Northern Pine Snake: Northern Pine Snakes are primarily an upland species associated with Pine-Oak/Pine forest communities in the Pinelands region of New Jersey. Critical habitats for the species include open sandy areas for nesting and den/hibernacula areas that are usually associated with denser shrub and overstory treed habitats. As noted above, the Department has two older records for this species near the subject site. Based on home range size estimates, it is likely that at least one of these snakes was associated with the property.

In regard to the suitability of the onsite habitat, as also noted above, the site features Evesboro and Lakewood soils and a forest community of coniferous and mixed species forest. In an assessment of the status of the pine snake, the NJ Division of Fish and Wildlife (2009) identified soil types typical of those found in suitable pine snake habitats and also those vegetative communities defined by the LULC commonly associated with suitable pine snake habitat. A comparison of these lists and the soil types and community classifications occurring on the Durand Glass site reveals complete overlap for both soil type and vegetation. This relationship suggests that the property features habitat characteristics strongly associated with other suitable documented pine snake habitats.

This relationship is further strengthened by the habitat features observed during a site investigation conducted in January 2013 (See attachments). As presented in these photos, the site features open sandy areas along the railroad tracts with scattered lumber piles interspersed with vegetation. This configuration of habitat features appeared highly similar to known nesting habitat in Manchester Twp., Ocean County where pine snakes were recently captured. Additional open sandy areas occur on the property but these seem to be of a lesser quality than the habitat within and adjacent to the railroad ROW due to overall size and shading effects. In regard to the potential for the site to feature overwintering hibernaculum, this is often a difficult aspect to evaluate visually. Trident (2011) suggests some site factors that may limit the overall quality of the onsite habitat to support hibernaculum, but notes that favorable habitat characteristics are also present on the site. Overall, the habitat characteristics observed during the site investigation appeared to be structurally consistent with other known pine snake habitats observed over the years. In conclusion, lacking information suggesting to the contrary, the existing wealth of scientific evidence regarding the onsite habitat conditions along with the two nearby sightings would support the conclusion that the property presently features suitable habitat for the Northern Pine Snake.

From a landscape perspective, as noted above, the Durand Glass site is located on the edge of a 5000 + acre forested habitat patch valued on the Department's landscape mapping as potential habitat for the Northern Pine Snake (See Figure Five). As shown in this graphic, the Durand Glass site occurs along the edge of the regional pine snake habitat patch in an area bordered by Route 55 to the west and development to the north and south. In addition, aside from the older sightings associated with the subject site,

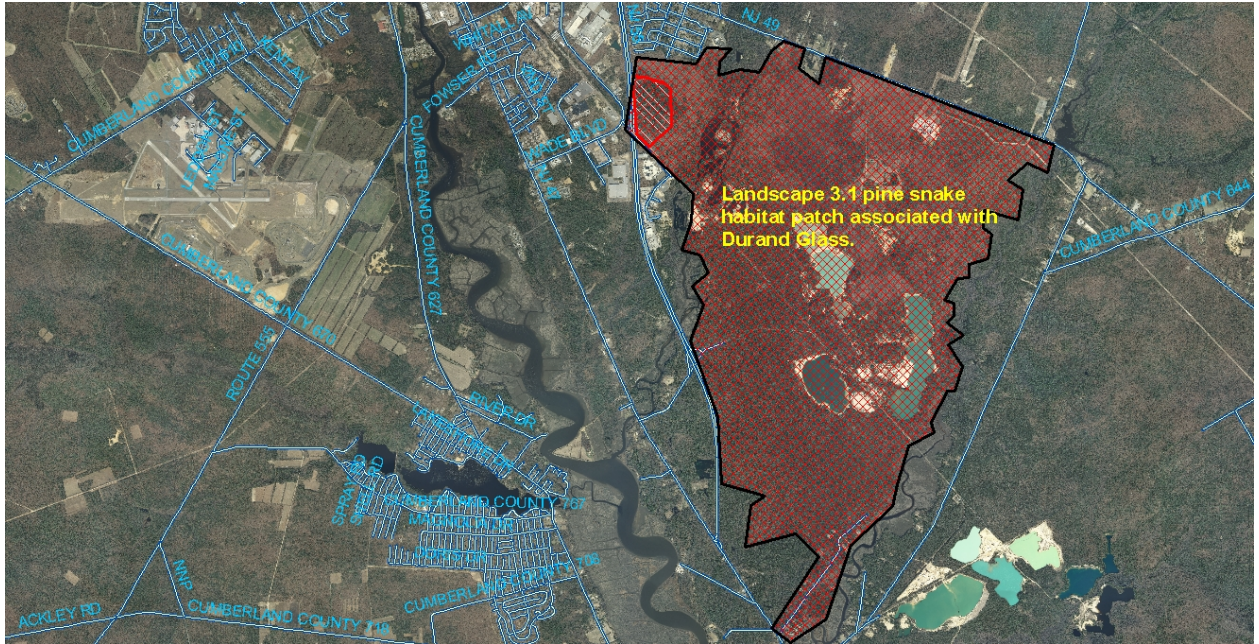


Figure 5: Regional Northern Pine Snake habitat mapping.

Northern Pine Snakes and Corn Snakes have been documented more recently and extensively on Nature Conservancy and private holdings (Holly Farm) to the east. Based on this landscape location, the site, while featuring suitable habitat, is neither located in a “core” habitat location nor proximate to documented pine snake populations occurring to the east.

Literature Cited:

New Jersey Division of Fish and Wildlife. 2009. Status Assessment of the Northern Pine Snake (*Pituophis m. melanoleucus*) in New Jersey: An Evaluation of Trends and Threats. New Jersey Department of Environmental Protection, Trenton, NJ. 53pp.

Trident Environmental Consultants. 2009. Habitat Suitability Determination Report N.J.A.C. 7:15-5.26. Block 578. Lot 19, City of Millville, Cumberland County, New Jersey. Prepared for Durand Glass Manufacturing Company, 901 South Wade Blvd., Millville, NJ 08332. September 2011. 20 pp.

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December 23, 2013