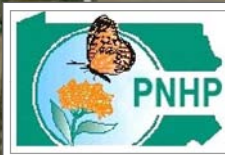
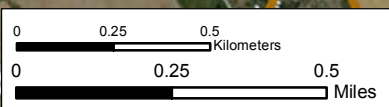
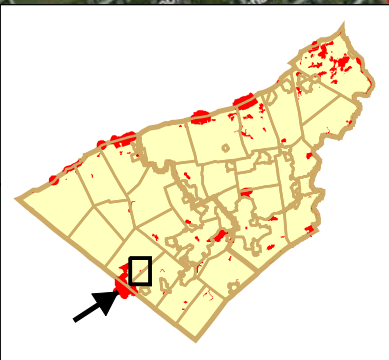
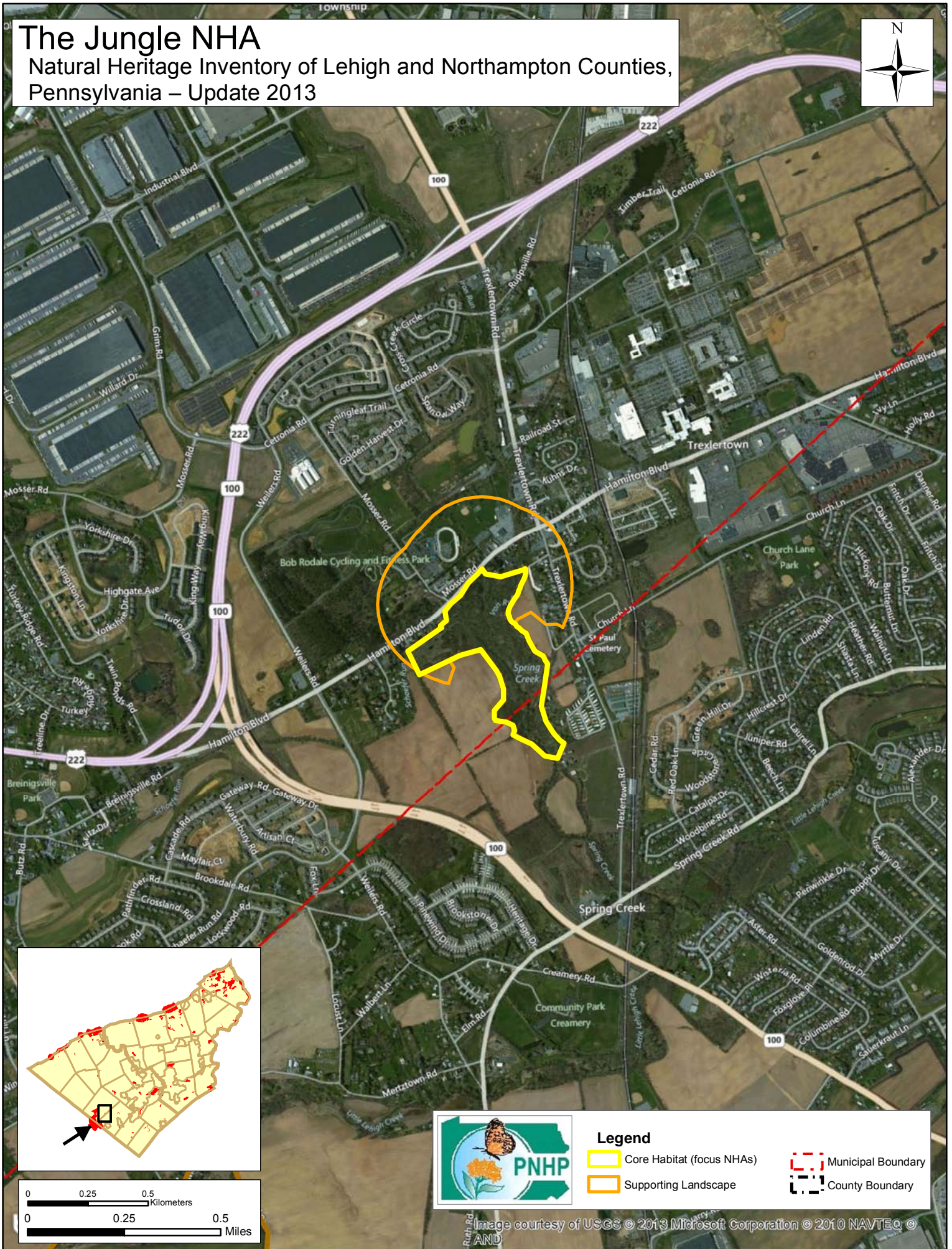


The Jungle NHA

Natural Heritage Inventory of Lehigh and Northampton Counties, Pennsylvania – Update 2013



Legend

- Core Habitat (focus NHAs)
- Supporting Landscape
- Municipal Boundary
- County Boundary

The Jungle NHA – State Significance

Species or natural communities of concern that can be found in this NHA include the following:

Species or Natural Community Name:	Taxa	PNHP Rank ¹		PA Legal Status ¹	Last Seen	Quality ²
		Global	State			
Sensitive Species of Concern ³	S	---	---	---	2012	BC



(Element type: Communities, Sensitive Species, Mammals, Birds, Fish, Amphibians, Mussels, Odonates, Lepidopterans, Plants)

¹See the PNHP website (<http://www.naturalheritage.state.pa.us/RankStatusDef.aspx>) for an explanation of PNHP ranks and legal status. A legal status in parentheses is a status change recommended by the Pennsylvania Biological Survey.

²See NatureServe website (<http://www.natureserve.org/explorer/eorankguide.htm>) for an explanation of quality ranks.

³This species is not named by request of the jurisdictional agency responsible for its protection.

Location: This Natural Heritage Area lies on the southwestern edge of Trexlertown. The area is roughly bounded by Hamilton Boulevard on the northwest, Trexlertown Road on the east, and State Route 100 on the southwest.

o Municipalities:

o Lehigh County: Lower Macungie Township, Upper Macungie Township

o USGS Quadrangles: Allentown West

o Watersheds (HUC 12): Spring Creek

o 1999 Lehigh & Northampton Natural Areas Inventory reference: Includes all or a portion of “The Jungle”

o 2005 Lehigh & Northampton Natural Areas Inventory Update reference: Includes all or a portion of “The Jungle”

Description: A small woodlot on the western edge of Trexlertown includes the wide floodplain of a confluence of small streams and large springs. Iron Run, Schaefer Run and Spring Creek merge here and the site also receives significant input from several very cold large springs. A mix of mature woodlot, floodplain forest, and shrub thicket dominate most of the site although there are several streamside pools which are dominated by submerged aquatic plants. The sparse tree canopy cover in parts of the floodplain is likely a reflection of periodic flooding where most trees fail to survive root submersion. The floodplain is dominated by black walnut (*Juglans nigra*), with occasional stands of black ash (*Fraxinus nigra*) and swamp white oak (*Quercus bicolor*). The herbaceous layer is dominated by thick patches of reed canary grass (*Phalaris arundinacea*), but has a diverse characteristic wet meadow plant assemblage scattered throughout the floodplain. The extremely cold, high pH water of Spring Creek supports a lush growth of aquatic plants which are good habitat and food sources for fish and aquatic insects, which in turn provide food for herons and other bird species. Historic records indicate this general area has supported as many as six plant species of concern in the past.

Element of Concern Considerations:

o The sensitive species of concern, which is not named at the request of the jurisdictional agency overseeing its protection, uses the wooded areas as its primary habitat. A substantial portion of the population of the species of concern at this location is in close proximity to Hamilton Boulevard. Road maintenance activities, especially herbicide application, along this section of Hamilton Boulevard could result in considerable damage to the population. Create a “No Spray Zone” along this section of the road and exercise caution when controlling roadside vegetation. Fragmentation of the woodlot canopy could decrease the suitable habitat available to this species at this location. These woodlands may be detrimentally altered by encroachment of invasive species, over-browsing by deer, and fragmentation. Fragmentation can have a drying effect on the habitat and promote invasive species growth. Creating buffers around fragmented habitat and removal of invasive species will help to maintain populations and encourage new population growth.

Habitat Disturbances:

- Historic –
 - Most of the original forest cover of the area had been removed and converted to agricultural or other uses over the past several centuries, leaving little of the original vegetation in place. Aerial photographs from 1939 however, show a small wooded area on the edge of Trexlertown in a relatively intact condition surrounded by active agricultural fields. Though the woodlot was likely cut repeatedly for fuel wood and timber since colonial times, a small part of the existing woodlot has been standing for over 100 years and individual trees could be much older.
 - An old bridge abutment and remnants of a road occur in the woodlot.
 - Part of the floodplain was used as a mill pond in the past. Milldams frequently trapped many tons of sediment behind them, altering the topography of the floodplain in the process. When the dams were breached, the streams frequently cut a deep channel through the accumulation of sediment. Some portions of the floodplain remain trapped in these deep narrow channels.
- Current –
 - Part of the population of the sensitive species of concern documented at this site is in close proximity to an active roadway. Regular road maintenance activities at this location could unintentionally destroy a significant part of this population.
 - Ornamental conifers were planted along a portion of Hamilton Boulevard.
 - Some of the formerly cleared and modified lands have since reverted to early successional forest. Unfortunately, conversion of agricultural fields to forest often results in a woodlot that is choked with invasive species of plants that can rapidly populate a disturbed habitat. Edge habitats associated with roads, utility corridors, agricultural fields and residential neighborhoods are particularly susceptible to weedy plant invasion and will require a sustained and targeted approach to invasive plant management.
 - Over browsing by white-tailed deer is a serious threat to the overall understory plant diversity. An overabundance of deer can create the effect of park-like forests in which the understory and vertical stratification is greatly reduced. Removal of understory species eliminates habitat for some nesting songbirds as well as increases competition between deer and other wildlife due to reduced food sources. Deer have strong, species-specific feeding preferences. The most highly preferred species are the first to decline or disappear when deer numbers are high. Furthermore, deer have been shown to be prolific seed dispersers for many of the most invasive non-native species. The result is greatly impoverished native species diversity, failure of native tree regeneration, and the rapid proliferation of invasive species.

Conservation Actions:

- A substantial portion of the population of the species of concern at this location is in close proximity to Hamilton Boulevard. Road maintenance activities, especially herbicide application, along this section of Hamilton Boulevard could result in considerable damage to the population. Create a “No Spray Zone” along this section of the road and exercise caution when controlling roadside vegetation or other road maintenance activities.
- Maintaining the current hydrologic regime is critical to the persistence of the habitat of the rare species at this site. The stormwater runoff from development and agriculture should be considered a potential source of significant contamination for the creek and its floodplain habitat. Runoff from these sources have significantly higher levels of sediment, nutrients, pesticides, herbicides and other pollutants than runoff filtered through a natural habitat. Stormwater management measures such as the creation of detention basins or vegetated swales should be implemented to decrease the unfiltered flow into the creek. Drilling, mining, or other disruptions to the bedrock should not be undertaken within half a mile of springs and seeps without a thorough understanding of bedrock layers and groundwater flows. Groundwater flow patterns do not always mirror surface watersheds, and in some cases aquifers may be contiguous over large areas.
- Allow the woodlot to mature. Avoid fragmenting the existing forested areas with additional buildings or infrastructure. Avoid logging in this area except as it relates to invasive species removal.
- Control invasive species to prevent native species from being crowded out by introduced species. High priority for invasive species control at this site should be targeted towards removing invasive shrubs and

trees such as Norway maple (*Acer platanoides*), European privet (*Ligustrum vulgare*), Japanese barberry (*Berberis thunbergii*), Asiatic bittersweet (*Celastrus orbiculatus*), amur honeysuckle (*Lonicera maackii*), morrow honeysuckle (*Lonicera morrowii*), wineberry (*Rubus phoenicolasius*), autumn olive (*Elaeagnus umbellata*), Japanese honeysuckle (*Lonicera japonica*), and winged spindle-tree (*Euonymus alatus*).

Invasive species management needs to be coordinated by individuals familiar with the rare species as well as the invasive species present at this site. Invasive species control efforts should try to maintain weed-free areas first, and then concentrate on removing invasive species in lightly infested areas, continually pushing back the line of invasion. Invasive species removal should be conducted in coordination with native species replacement to avoid denuding the understory vegetation. This needs to be a continual and sustained process of monitoring and control efforts.

- Reduce the deer density in the area. Uncommon species of native plants are particularly susceptible to deer herbivory.
- Take into account the presence of legacy sediments at historic milldam locations and appropriately restore the historic floodplain as feasible. Priorities for restoration of historic floodplain topography should be where the end result would be a wide, functioning floodplain habitat.



Rocky Gleason, (PNHP)

The cold, clear waters of Spring Creek have lush beds of native aquatic vegetation.