

Summary Report of the Biodiversity and Wildlife Habitat Assessment for Pittsboro, NC

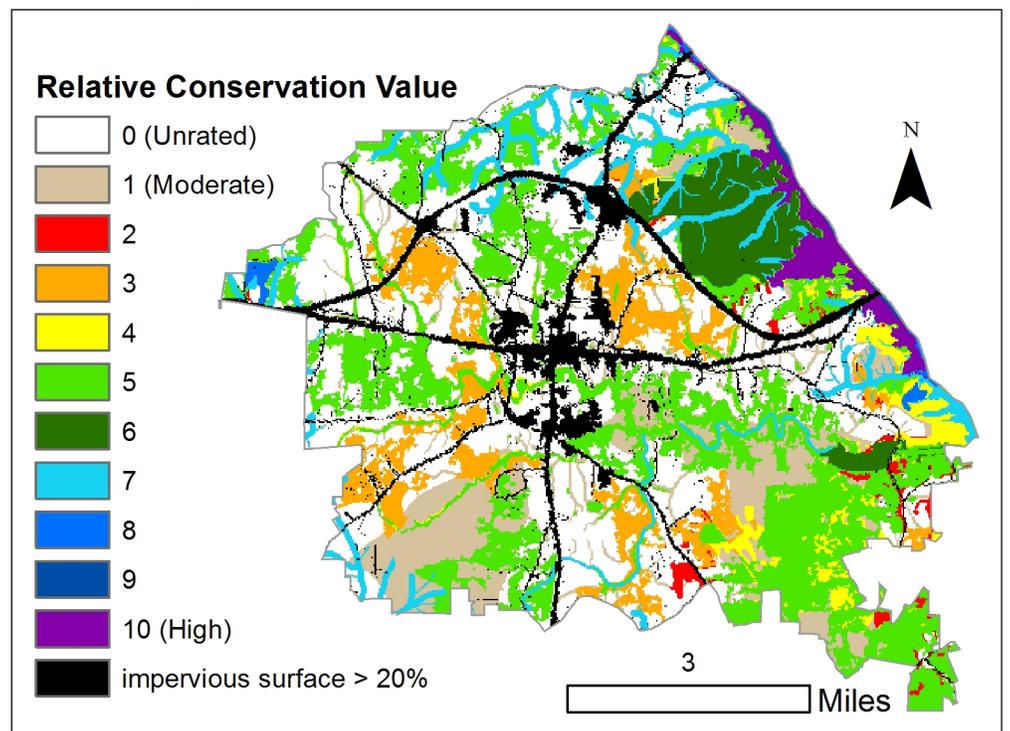
The Biodiversity and Wildlife Habitat Assessment (BWHA) is a method for compiling and prioritizing conservation data in order to identify essential high-quality natural resources required to maintain healthy ecosystems. The tool helps highlight areas of significant natural resources. The BWHA conducted for the Town of Pittsboro follows the methodology outlined in the *Comprehensive Conservation Plan for Chatham County, Appendix E-Methods: Conservation Ranking and Analyses* (www.chathamconservation.wikispaces.com). The Chatham BWHA is modeled after the assessment used in the N.C. Conservation Planning Tool. The primary goals of this assessment are the preservation of aquatic and terrestrial habitats, landscape function, and connectivity. The result of the assessment is a map that represents the highest priority areas for conservation of wildlife habitat and biodiversity.

Conservation Layers and Assessment Map

The BWHA is a geographic information systems (GIS) map layer that is a composite of 30 x 30 meter pixel grid comprised of 8 conservation layers categories and a impervious surface category. Each layer included has a conservation value and has been ranked on an ordinal scale from 1 to 10 representing areas with a moderate to high conservation value. A description of each layer and its relative

conservation value is provided in a table on the next page. The relative conservation value is based on resource rarity and distinctiveness; resource function; and data precision, accuracy, and completeness. In addition to conservation layers, impervious surface layers were included with a ranking of (-1) to reflect negative impacts on biodiversity and wildlife habitat. Detailed information about the data used, the conservation value ranking, and methods used for the BWHA can be found in *N.C. Conservation Planning Tool, Chapter 4: Biodiversity/Wildlife Assessment* (www.conservationtool.nc.gov).

Biodiversity and Wildlife Assessment for Pittsboro, ETJ



Date: 7/15/2015

Mapped by Biocenosis LLC for the Planning Tools for Pittsboro Project

Table 1 Ranking of Conservation Layers for BWA for Pittsboro

| Category | Value | Individual Input Layers | Date | Description |
|---|---------|---|---------|---|
| Rare species and high quality communities | 10 | NHPNA - National or State Significance | 10/2014 | NC Natural Heritage Program (NCNHP) data - Natural Heritage Areas - includes terrestrial and aquatic NHAs; based on NCNHP data in the NC Conservation Planning Tool (NCCPT) |
| | 8 | NHPNA - Regional Significance | 10/2014 | |
| | 6 | NHPNA - Local Significance | 10/2014 | |
| | 5 | EOs - High ranking | 10/2014 | Based on NCNHP data in the NCCPT- locations of Element Occurrences (EOs) (rare or protected species, high quality communities, and animal assemblages); high ranking includes overlapping EOs, those with Global (G1/G2) and State ranks (S1/S2), and those considered current (and last observation less than 30 years ago) and remaining EOs ranked as other. |
| | 4 | EOs - Other | Oct-14 | |
| Guilds | 10-1 | Landscape Habitat Indicator (LHI) Guilds | 2013 | Based on NCNHP's most current analysis of conservation priorities for the NC Piedmont; Guilds represent groups of indicator wildlife species that rely on unfragmented habitat and are closely associated with particular habitats. |
| Watersheds | 7 | Streams - Rare Species (Priority Watersheds) | 1/2014 | Based on NCNHP data - 12-digit HUCs in which federal- and state-listed rare species are known to occur; USGS stream segments buffered by 200 and soil streams by buffered by 50 ft. that intersect with HUCs ' |
| Streams | 7/9 | BioClass - benthos: Excellent / Good | 2012 | Based on NC Department of Water Quality (DWQ) hydrography and bioclassification (benthic and fish) as of 2012; stream segments buffered by 100' |
| | 7/9 | BioClass fish: Excellent / Good | 2012 | |
| | 1 | Streams - USGS | 2007 | Based on USGS blue-line streams; streams buffered by 100' |
| | 1 | Streams - Soil Streams | 2010 | Based on digitized streams from Chatham soil survey maps (NRCS 2005); verified by soil scientist; streams buffered by 50' |
| Wetlands | 5 | Wetlands - High Confidence | 2010 | Based on union of NWI, Chatham soils data (NRCS 2005 - hydric soils and "wet spots"), and flood hazard areas; depicts high likelihood for wetland habitat |
| | 3 | Wetlands - Medium Confidence | 2010 | Based on Chatham soils data (NRCS 2005) - Riverview map unit (not included in High Confidence Wetlands); verified by soil scientist; depicts moderate likelihood for wetland habitat based on soils |
| Important bird areas | 2 | Important Bird Areas (IBAs) | 2014 | Based on Audubon Important Bird Areas (IBA) data to depict areas vital to birds and other biodiversity |
| Forest | 3 | Hardwood Forest Blocks 75 acres+ | 2011 | Deciduous forests blocks defined by the National Land Cover Data (NLCD) that are ≥ 75 acres. |
| | 5 | Hardwood Forest Blocks 500 acres + | 2011 | Deciduous forests blocks defined by the NLCD that are ≥ 500 acres. |
| | 4 | Floodplain Forests | 2011 | Select all forest defined by the NLCD that are within the PBO_floodplain.shp |
| Managed Areas | 4 | Conservation Lands (No Buffer) | Oct-14 | Based on NCNHP data for Managed Areas (MAREAs) ; not buffered with a 1/4 mile as in the CCP |
| Impervious surface | (-1) | Impervious surface above 20% (land use/cover) | 2011 | Based on NLCD 2011 impervious surface data |
| | 99 (-1) | Roads | 2014 | Based on Chatham centerline data with addition of US15-501 expansion; roads buffered by 15 feet each side (30 feet total) |
| | 99 (-1) | Buildings | 2011 | Based on building footprints digitized from 2007 aerial photos for Risk Assessment by NC Dept. of Environmental Management (NCDem) |



For further information on the BWA for Pittsboro or to download a map of the assessment visit the Chatham Conservation Partnerships wikispace: <http://www.chathamconservation.wikispaces.com>