

New Hampshire Fish & Game Department Spatial Data Notes

DATA LAYER: Grasslands habitat of New Hampshire
COVER NAME: grasslands
COVER CONTENTS: Grassland habitat polygons greater than 2 acres in size
COVER TYPE: Poly
SOURCE: 2001 NH Land Cover Data
SOURCE SCALE: 30-meter
SOURCE MEDIA: digital
COORDINATE SYSTEM: NH Stateplane feet, horizontal datum NAD1983
TILE: State
AUTOMATED BY: NH Fish & Game Department
STATUS: Complete
LAST REVISION: October 2008; attributes revised December 2009

General Description of the Data

- Development of this coverage provides general grasslands habitat locations within the state of New Hampshire. Analysis was completed for incorporation into the New Hampshire Wildlife Action Plan. Funding for the Plan was provided by State Wildlife Grants administered by the US Fish & Wildlife Service.
- Agricultural land cover was selected from the 2001 NH Land Cover Assessment data (provided by GRANIT at Complex Systems Research Center, UNH). The raster was then expanded across roads (such that agricultural land cover split by a road became a contiguous area). The cleared/ other open land cover class, if immediately adjacent to agriculture, was then added. The resulting raster was then converted to polygons. Only contiguous areas over 25 acres have condition score.

Item definitions for GRASSLANDS polygon attributes:

<u>ITEM NAME</u>	<u>DESCRIPTION</u>
FGID	<i>(unique, sequential ID number)</i>
COUNTY	Name of NH county in which polygon is located
ACRES	area (acres)
HECTARES	area (hectares)
GOLFCOURSE	Y = polygon is contiguous with a golf course
AIRPORT	Y = polygon represents an airport feature
DENSROADS	Density of all DOT roads (km/km ²)
IFESMEAN	Mean Integrated Fragmentation Effects score (Zankel, 2005)
HU00SQMI	Housing units density in 2000 (houses per square mile)
PROXINDEX	Proximity index (1km distance)
WETPCT	Percent wetland (National Wetlands Inventory)
A_RICH_BUF	Species richness of rare animals within their dispersal distances (2009)
A_RICH_POL	Species richness of rare animals within polygon (2009)
P_RICH_POL	Species richness of rare plants in polygon (2009)
C_RICH_POL	Richness of exemplary natural communities in polygon (2009)
BIO	Raw biological score (high score = high quality)
LAND	Raw landscape score (high score = high quality)
HUMAN	Raw human impact score (high score = low impact)
COND	Raw habitat condition score (high score = good condition)
ECOSUB	Ecoregional subsection
CONDITION	WAP Priority based on COND score
PRIORITY	WAP Priority based on COND score with EO add-ins
CONS_AC	Conservation (acres)
CONS_PCT	Conservation (percent)

NOTES:

BIO	Condition score = $(A_RICH_BUF_R*.25) + (A_RICH_POL_R*.25) + (P_RICH_POL_R*.25) + (C_RICH_POL_R*.25)$ where all biological variables are positive indicators of biological quality and subscript R denotes percentile rank, thus “good” sites score high (maximum percentile rank=100) and “poor” sites score low (minimum percentile rank=0).
LAND	Condition score = $(HECTARES_R*.34) + (PROXINDEX_R*.33) + (WETPCT_R*.33)$ where all landscape variables are positive indicators of landscape integrity and subscript R denotes percentile rank, thus “good” sites score high (maximum percentile rank=100) and “poor” sites score low (minimum percentile rank=0).
HUMAN	Condition = $(IFESMEAN_R*.5) + (HU00SQMI_R*.5)$ where deleterious human impact variables have been transformed so that all variables are positive indicators of ecological integrity and subscript R denotes percentile rank, thus “good” sites score high (maximum percentile rank=100) and “poor” sites score low (minimum percentile rank=0).
COND	The condition index = $(BIO+LAND+HUMAN)/3$ as defined above

The list above represents the complete set of attributes developed for the WAP habitat data layer. Only select attributes are distributed in the public release version WAP data layers. For more information, please contact the NH Fish and Game Department, Wildlife Division, 11 Hazen Dr, Concord NH 03301
Phone: (603) 271-2461 E-mail: wildlife@wildlife.nh.gov

The fields: A_RICH_BUF, A_RICH_POL, P_RICH_POL and C_RICH_POL, provide species richness counts (number of different species potentially present in the habitat polygon) from the NH Natural Heritage Bureau as of December 2008. Care must be taken in interpreting these counts as most areas of NH have never been surveyed for biodiversity elements. See *Important Background Information for Interpreting Species Richness Counts based on NH Natural Heritage Bureau Data* for details.

DATA SOURCES:

Complex Systems Research Center. 2001. *New Hampshire land cover assessment – 2001*. 30m raster data. Available from GRANIT, University of New Hampshire. Accessed September 2003.

The Nature Conservancy (J. Tollefson). 2005. GAP Status Assessment of NH Conservation Lands. Unpublished report to the NH Fish and Game Department.

NH Natural Heritage Bureau BIOTICS database January 21, 2009 (species/community richness)

V-LATE 1.1 Vector-based Landscape Analysis Tools (Extension for ArcGIS 9). Dirk Tiede, Stefan Lang, Hermann Klug, Tobias Langanke. The development of V-LATE has been financed by the EU project SPIN (Spatial Indicators for European Nature Conservation, Contract No. EVG2-2000-0512, 2001-2004)

Wind power raster data provided by Massachusetts Technology Collaborative (data finalized June 2003). Developed by TrueWind Solutions, LLC under contract to AWS Scientific, Inc as part of a project jointly funded by the Connecticut Clean Energy Fund, Mass. Technology Collaborative, and Northeast Utilities System.

Zankel, M. 2005. Integrated Fragmentation Surface for the State of New Hampshire. The Nature Conservancy, Concord NH. Unpublished report to NH Fish and Game Department.