New Hampshire Fish & Game Department
Spatial Data Notes

DATA LAYER: Hot Spot analysis of the WAP co-occurrence layer
COVER NAME: Waptiers, Wapscores, FocusAreas and Gstat_results
COVER CONTENTS: Results of co-occurrence scoring and Hot Spot analysis (G statistic)
COVER TYPE: Poly
SOURCE: NH Fish and Game Department
SOURCE SCALE: 30-meter
SOURCE MEDIA: digital
COORDINATE SYSTEM: NH State Plane feet, horizontal datum NAD83
TILE: State
AUTOMATED BY: NH Fish & Game Department, GIS Program
STATUS: Complete
LAST REVISION: August 2006

General Description of the Data

This coverage identifies wildlife habitat Conservation Focus Areas within the state of New Hampshire, where high value habitats occur in statistically significant clusters. The habitat land cover polygons are not mutually exclusive, for example, Matrix forests can overlap wetlands and all overlap the aquatic layers that are HUC12 watersheds. A co-occurrence map results from adding up the number of high-ranked habitats in each area. The more habitat features that overlap, the greater the significance to a variety of wildlife. A Hot Spot Analysis Tool was used to calculate the Getis-Ord Gi statistic, which looks at the co-occurrence values within each high-ranked habitat polygon, and neighboring polygons within a 1 km radius, and identifies clusters of high or low values. It considers the density of information in a neighborhood instead of just the simple layering of information at a single point. Any location with a high positive G-statistic value is a focus area, an area where high habitat co-occurrence values tend to be found near each other. Those locations with high scores have higher probability of being most valuable for wildlife.

The spatial data layers include:

waptiers = a raster data set (grid) of the WAP tiers
  Tier 1, Highest Quality Habitat in NH
  Tier 2, Highest Quality Habitat in Biological Region
  Tier 3, Supporting Landscapes
  Tier 4, Habitat not top ranked (scoring habitat of local significance to be determined)
Please refer to WAPhabitatscores.pdf in the Docs folder for a complete explanation.

wapscores = a raster data set (grid) of the co-occurrence of WAP tiers
  Tier 1 features scored 3 points, Tier 2 scored 2 points, and Tier 3 scored 1 point
  (Please note: within matrix forests, if the forest polygon score was elevated to a minimum of Tier 3 solely
   due to the presence of a species of concern, only the immediate landscape area surrounding the wildlife
   occurrence was assigned a point and is displayed in the above data layers, rather than scoring the entire
   forest polygon. Selecting the entire forest habitat polygon, in these particular instances, would greatly over-
   represent the area that would need to be conserved to preserve these elements.)

Gstat_results = a polygon shapefile of the results of a Hot Spot Analysis using the Getis-Ord Gi statistic
  where positive scores indicate high value habitats occur in significant clusters

FocusAreas = a polygon shapefile of the conservation focus areas that encompass all positive values calculated by the G-statistic. BOUNDARYCLEAN was used to smooth edges and between neighboring polygons.

Item definitions for FOCUS_AREAS polygon attributes:

ITEM NAME	WDTH	TYPE	N.DEC	DESCRIPTION
ID	4	I	0	unique sequential ID number
ACRES	19	N	0	polygon area (acres)
COCURMEAN	4	I	0	mean WAP co-occurrence score
COCURMAX	4	I	0	max WAP co-occurrence score
Tier1acres	9	I	0	Acres of Tier 1 habitat (top-ranked state) within the focus area
Tier2acres	9	I	0	Acres of Tier 2 habitat (top-ranked region) within focus area
Tier3acres	9	I	0	Acres of Tier 3 habitat (supporting) within focus area
Dunes	1	C	0	Y or N contains top-ranked or supporting Dunes habitat
Saltmarsh	1	C	0	Y or N contains top-ranked or supporting Saltmarsh habitat
Coastalisl	1	C	0	Y or N contains top-ranked or supporting Coastal islands habitat
Peatlands	1	C	0	Y or N contains top-ranked or supporting Peatlands habitat
MarshShrub	1	C	0	Y or N contains top-ranked or supporting Wet meadow/shrub wetland
Cliff	1	C	0	Y or N contains top-ranked or supporting Cliff habitat
RidgeTalus	1	C	0	Y or N contains top-ranked or supporting Rocky ridge or Talus slope
Alpine	1	C	0	Y or N contains top-ranked or supporting Alpine habitat
FloodFor	1	C	0	Y or N contains top-ranked or supporting Floodplain forest habitat
PitchPine	1	C	0	Y or N contains top-ranked or supporting Pine barren habitat
Grassland	1	C	0	Y or N contains top-ranked or supporting Grassland habitat
HESF	1	C	0	Y or N contains top-ranked or supporting High-elevation Spruce-fir
LOWSF	1	C	0	Y or N contains top-ranked or supporting Lowland Spruce-fir habitat
NORHWDCON	1	C	0	Y or N contains top-ranked or supporting Northern hardwood-conifer
APPOAKPINE	1	C	0	Y or N contains top-ranked or supporting Appalachian oak-pine
HEMHWDPINE	1	C	0	Y or N contains top-ranked or supporting Hemlock-hardwood-pine
S1S2WAPeos	1	C	0	Y or N contains S1, S2 or WAP ranked animal occurrences
NHBadded	1	C	0	Y or N contains priority area(s) identified by NHNHB
Aquatic	1	C	0	Y or N contains top-ranked or supporting Aquatic habitat
Vertrchmax	4	I	0	Max vertebrate species richness in the focus area (NH/VT analysis)
TNCfoblock	1	C	0	Y or N contains TNC top-ranked forest block
CONSACRES	9	I	0	Acres within conservation land
CONSPCT	7	N	2	Percent within conservation land