New Hampshire Fish and Game Department
Spatial Data Notes

DATA LAYER:	DUNES
CONTENTS:	Coastal Sand Dunes
TYPE:	Polygons
SOURCE:	NH GRANIT – from US Geological Survey digital line graph data
SOURCE SCALE:	1:24,000
SOURCE MEDIA:	Digital
AUTOMATED BY:	NH Fish and Game Department
COORDINATE SYSTEM:	NH Stateplane feet, horizontal datum NAD83
TILE:	State
STATUS:	complete
LAST REVISION:	June 2005; attributes revised December 2009

General Description of the Data

- Development of this coverage provides general dune locations within the state of New Hampshire. Analysis was completed for incorporation into the NH Wildlife Action Plan. Funding for the Plan was provided by State Wildlife Grants administered by the US Fish & Wildlife Service.

- The coverage contains coastal sand dunes identified by NHDES as coastal beaches (from USGS 1:24,000-scale DLG data) combined with NHB's data depicting exemplary communities to ensure all areas were captured to the extent possible. NHB natural communities that were included:
  Beach grass grassland
  Bayberry – beach plum maritime shrub land
  Coastal interdunal marsh/swale (no occurrences)
  Maritime wooded dune
  Coastal shoreline strand/swale (no occurrences)

Item definitions for DUNES polygon attributes:

ITEM NAME	DESCRIPTION
FGID	Unique ID number assigned to each polygon
NAME	Name of coastal sand dune
TOWN	Town in which dune is located
STATUS	Known or Potential
PLOVSTATUS	Known or Potential plover nesting habitat
ACRES	Total area (acres)
HECTARES	Total area (hectares)
ELEVAVG	Average elevation (meters)
ELEVMAX	Maximum elevation (meters)
WETAREA	Square meters of wetland (NWI)
WETPCT	Percent wetland
KCSHFKM	# known contamination sources within ½ km, (and at 1, 2, 5 km)
PCSHFKM	# potential contamination sources within ½ km, (and 1, 2, 5 km)
SHELLHFKM	Amount of clam/oyster beds within ½, 1, 2, 5 km (square meters)
DISTAIRPRT	Distance to nearest airport or heliport
DISTSTAGE	Distance to nearest oil spill response staging area
DISTRECFSH	Distance to nearest recreational fishing area
DISTMARINA	Distance to nearest marina
ESIGENSENS	Average GEN_SENS value from ESI shoreline data

Item definitions for DUNES polygon attributes: (continued)

ITEM NAME	DESCRIPTION
ELU30VAR	Variety ecological land units (ELU30 elevation, substrate, landform)
NREL2HA	Natl' Renewable Energy Laboratory wind power class 2
NREL2PCT	hectares, percent (small turbine potential)
NREL4DIST	Distance to nearest NREL4 area that is 4+ acres in size (meters)
AREA_M2	Total area (square meters)
PERIM_M	Total perimeter (meters)
NEARDIST	Distance to nearest neighbor (meters)
SHAPEINDEX	Shape index (1=square)
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 rare and exemplary natural communities in polygon (2009)
IFESMEAN	Integrated Fragmentation Effects Surface score (Zankel 2005)
ECOSUB	Ecoregional subsection
CONS_AC	Conservation (acres)
CONS_PCT	Conservation (percent)
PRIORITY	WAP Priority (state and regional rank)

NOTES:
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

All areas and shoreline lengths are software calculated (based on 1:24,000-scale USGS dlg data source). Count of contamination sources and shellfish bed areas are also provided for 1, 2 and 5 kilometer buffers. Elevation is derived from 30-meter resolution dem provided by GRANIT (downloaded from USGS NED) If exact measurements are required, access to LIDAR or similar high-resolution dataset will be needed.

Known contamination sources are from the groundwater hazard inventory maintained by the NH Dept of Environmental Services. Potential contamination sources are from a combination of groundwater hazard inventory, above ground storage tank sites, underground storage tank sites, RCRA/locations of hazardous waste generators, registered junkyards, local pcs inventory within drinking water protection areas, NPDES outfalls, and Nonpoint potential pollution sources. All maintained by NH Dept of Environmental Services.

Airport point locations provided by NH Dept of Transportation. Heliports, Staging Areas, Recreational Fishing, Marinas, Aquaculture point locations provided by NH Dept of Environmental Services and NOAA's shoreline Environmental Sensitivity Index maps.

General shoreline sensitivity index value weighted average provided for coastal islands units where available (value of zero indicates no data available from the ESI data source).

The GEN_SENS values were derived by NHFGD from the MOSTSENSIT field of the Environmental Sensitivity Index (ESI). ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. More than one ESI value can be assigned to a given stretch of shoreline. The value in the MOSTSENSIT field indicates the greatest ESI value assigned to that stretch. ESI values combine numbers, letters, and symbols to form 23 different possibilities. As such, for ranking local threats, ESI values were generalized to include only the number designation (1-10 from lowest to highest sensitivity).

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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:

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

NOAA Hazardous Materials Response Division. 2004. NH Environmental Sensitivity Index Maps. http://response.restoration.noaa.gov (maps/data CD provided by NH Dept. of Environmental Services)

Sperduto, D.D. and W.F. Nichols. 2004. Natural communities of New Hampshire. The NH Natural Heritage Bureau and The Nature Conservancy. 229pp.

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

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.