

Final Project: Habitat Suitability Analysis

Metadata

Find below details regarding the datasets to be used to complete the project.

There are a total of five vector data layers (studysites, roads, habitat, ownership and boundary), two raster data layers (elevation and landuse) and one table (speciesrich) that are required to complete this analysis. Several of the data layers have been provided, a couple will have to be acquired online. These data contain all of the information you will need to complete this analysis. In addition to using the raster data for analysis, the elevation layer should be used as a base layer for displaying the candidate areas. Relevant information about each of these data sets is listed below.

Provided Data:

Studysites:

- Description: Survey plots used for collecting bird and mammal species richness data
- Feature Type: Polygon
- Important Attributes:
 - AREA- in square meters
 - BLOCK_ID

Habitat:

- Description: Habitat quality information for Centre County
- Feature Type: Polygon
- Important Attribute:
 - HABITATPOT- contains one of two values: High or Low

Ownership:

- Description: Land ownership information for Centre County
- Feature Type: Polygon
- Important Attribute:
 - OWNERSHIP- contains one of two values: Public or Private

SpeciesRich:

- Description: Bird and mammal species richness values for Centre County
- Feature Type: N/A (external attribute table)
- Important Attributes:
 - BLOCK_ID (also found in StudySites)
 - BIRDS- bird species richness (count)
 - MAMMALS- mammal species richness

Data to be acquired:

Boundary:

- Description: Centre County political boundary
- Feature Type: Polygon
- Important Attribute:
 - County_Name -Name of the county (Centre)
- Source: National Map (<https://www.usgs.gov/programs/national-geospatial-program/national-map>)
 - Data: Boundaries (state level)
 - File: GOVTUNIT_Pennsylvania_State.zip

Elevation:

- Description: Elevation values for Centre County
- Feature Type: Raster
- Attribute:
 - VALUE- elevation in meters.
- Source: www.pasda.psu.edu
 - Search term: National Elevation Dataset 30m County Mosaics for Pennsylvania
 - File: Centre_30m_dem.zip

Landuse:

- Description: Landuse values for Centre County
- Feature Type: Raster
- Attributes:
 - VALUE -landuse codes (forest codes = 41, 42, 43)
- Source: National Landcover Database (<https://www.mrlc.gov/>)
 - File: 2019 CONUS Landcover
 - Only download Central PA region (See NLCD tutorial)

Roads:

- Description: Detailed roads data for Centre County
- Feature Type: Line
- Important Attributes:
 - *Interstate* field – Identifies Interstates in county.
 - *US_Route* field – Identifies Highways in county.
 - *State Route* field – Identifies Highways in county.
 - All remaining features counted as Roads.
- Source: National Map (<https://www.usgs.gov/programs/national-geospatial-program/national-map>)
 - Data: Transportation (state level)
 - File: TRAN_Pennsylvania_State.zip