

Vernal Pool Distribution in New Jersey

Purpose

This map concept brings awareness to the location of sensitive vernal pool habitats across the State of New Jersey. Aside from considering physical geography, a connection is suggested between vernal pool distribution and population densities among the twenty-one counties which make up New Jersey. The audience of this map may include ecologists, land developers, academic researchers, government environmental commissions and non-profit organizations.

Mapping Techniques

Symbology for the two map layers includes utilizing a white/grey/black color ramp to clearly illustrate population density lending to an easily readable map. Population data in this choropleth map was presented in six classes using a natural-breaks scheme. A medium blue color was selected to represent the vernal pools providing contrast against the population color gradient of the counties. Call-outs provide contextual information on the counties.

Summary

Vernal pools are sensitive habitats filled with water only during certain times of the year. They provide habitat for a variety of flora and fauna – including species classified as endangered or threatened. This map achieves its intended goal as it represents that counties with very low population densities appear to have a greater distribution of vernal pools (ex: Sussex County), compared to counties with extremely high population densities with a lack of vernal pools (ex: Hudson County). There appears to be a total absence of vernal pool habitats in Hudson County which borders New York City which is no doubt related to abundant development and impervious surfaces.

Data

Provided by Rowan University: NJ Counties (shapefile) provided information on county population census data, area, etc.

NJDEP Bureau of GIS: Vernal Pool Habitat (shapefile), provided information of acreage of vernal pools and the geographic regions they occupy. Accessed from: <https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::landscape-3-3-data-for-vernal-habitats-of-new-jersey/about>

