



## **Hamilton Township of Mercer County**

### Riparian Corridor - Habitat Conservation Analysis

Developed by Rutgers Cooperative Extension Water Resources Program

Funded by Hamilton Township, Mercer County, New Jersey

April 2015

## Introduction

The purpose of this analysis is to identify riparian areas within Hamilton Township of Mercer County, New Jersey that contain significant habitat value. These areas were evaluated based upon current land cover and land use conditions, previously identified areas of habitat significance, and proximity to water sources. The information within this analysis is intended to be a tool for future municipal planning efforts to visualize riparian areas with significant habitat value. This is not intended to provide site level accuracy, and any site specific planning efforts should consider collecting additional data at a more refined resolution.

## Habitat Analysis Methodology

This analysis used a combination of three indicators of habitat quality: current land use and land cover, significance to species of special concern, and proximity to water (See Table 1). All data used to perform this analysis was gathered from the New Jersey Department of Environmental Protection (NJDEP).

Land use / land cover data was used to identify areas designated by the NJDEP as agriculture, barren land, forest, urban, water, or wetland areas. Forest and wetland areas were given top consideration as an indicator of habitat quality due to environmental services and well established ecological importance. Agricultural and barren lands were given moderate consideration due to the mild disturbance of a natural setting. Urban areas were given low consideration due to high levels of disturbances from natural conditions. Water was given no consideration for this section of the analysis because this study is only concerned with terrestrial or land-based habitats. The information for this segment was gathered from the NJDEP 2012 land use / land cover (LULC) datasets.

Previously identified areas of habitat significance were sourced from the NJDEP Landscape Project Species Based Habitat datasets. The information is classified according to patches of land that have documented presence of significant species. The highest quality consideration was given to areas known to contain species on either the federal or state endangered species list. Moderate consideration was given to areas containing species that are of special concern or on the state threatened list. Consideration was also given to areas not known to contain any of the above species but consist of habitats suitable to these species.

Proximity to water was also taken into account due to the importance of riparian corridors, water as an environmental resource, and state designated importance via the State Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). With respect to the state designated 300 foot riparian corridor, the highest importance was put on areas within 300 feet of water bodies and streams. Moderate importance was put on areas within a quarter mile or 1,320 feet of water bodies and streams.

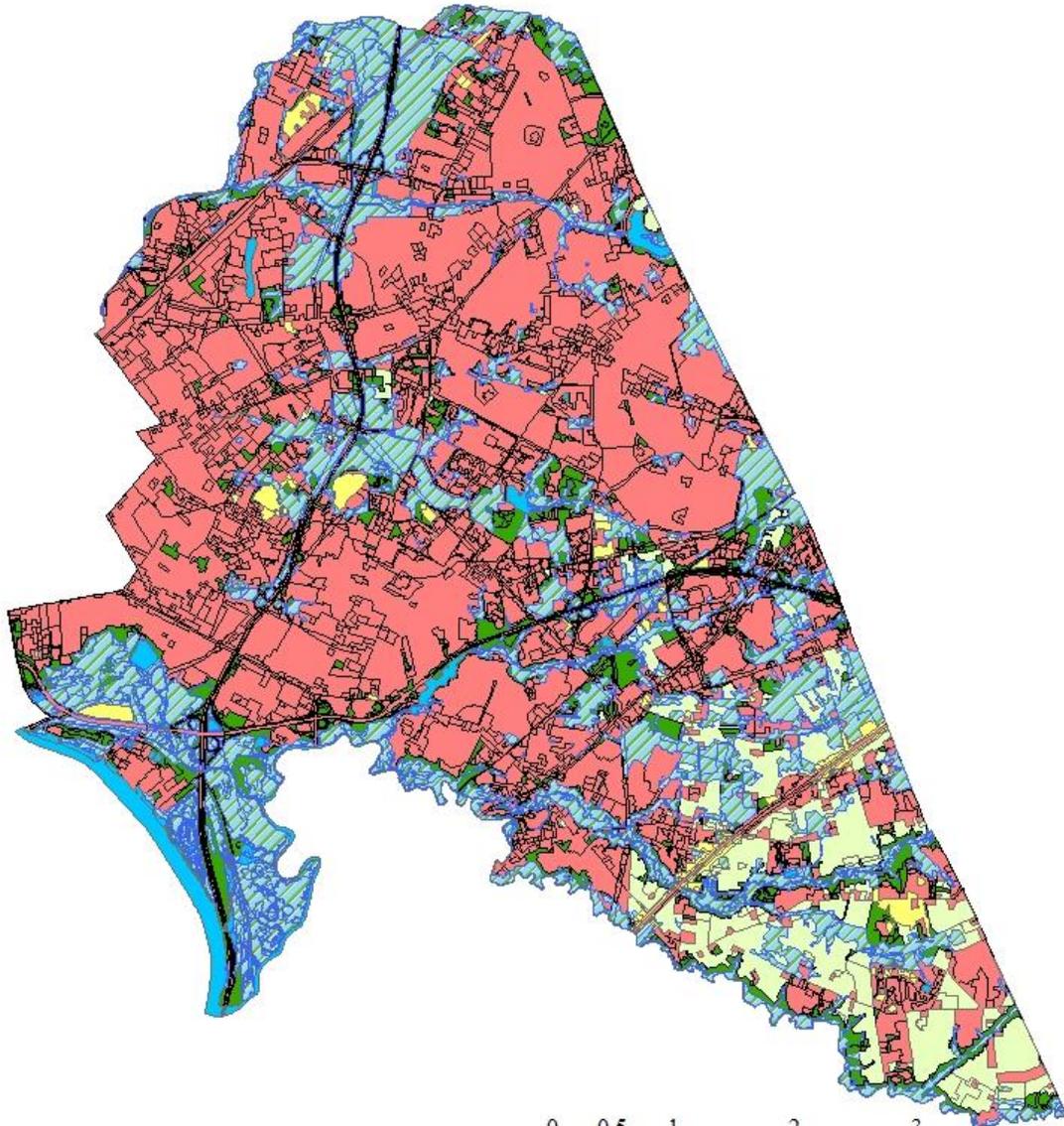
**Table 1: Habitat Ranking for Data Analysis**

<b>Habitat</b>	<b>Rank</b>
Habitat suitable to species of special concern	1
Contains species listed as a special state concern	2
Contains species listed as state threatened	2
Contains species listed as state endangered	3
Contains species listed as federal endangered	3

<b>Land Use / Land Cover</b>	<b>Rank</b>
Water	0
Urban	1
Agriculture	2
Barren	2
Forest	3
Wetland	3

<b>Proximity to Water</b>	<b>Rank</b>
300 feet – 1,320 feet	2
0 - 300 feet	3

# Hamilton Township Land Use / Land Cover



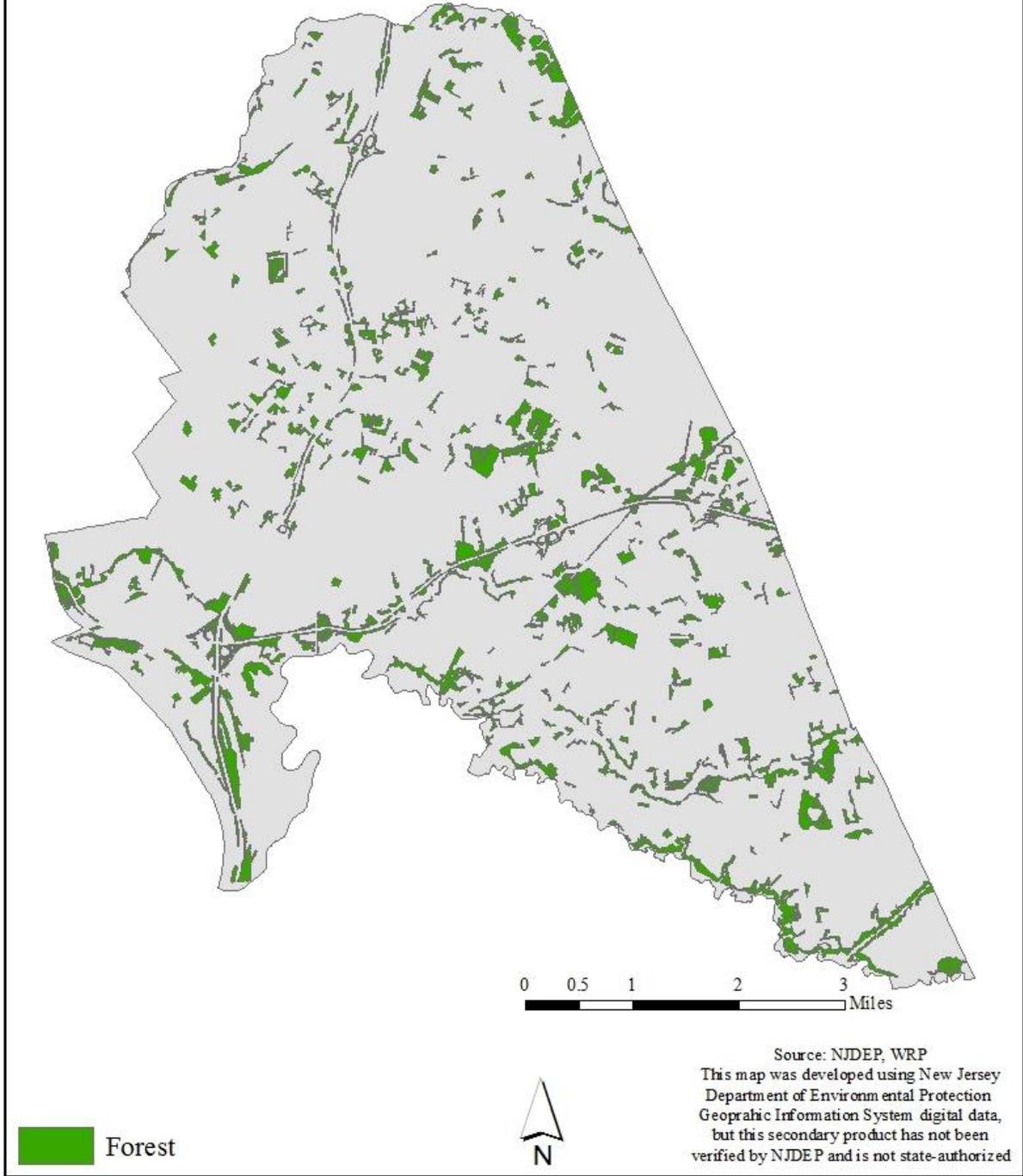
- |   |  |
|---|--|
|  AGRICULTURE |  URBAN    |
|  BARREN LAND |  WATER    |
|  FOREST      |  WETLANDS |

0 0.5 1 2 3 Miles

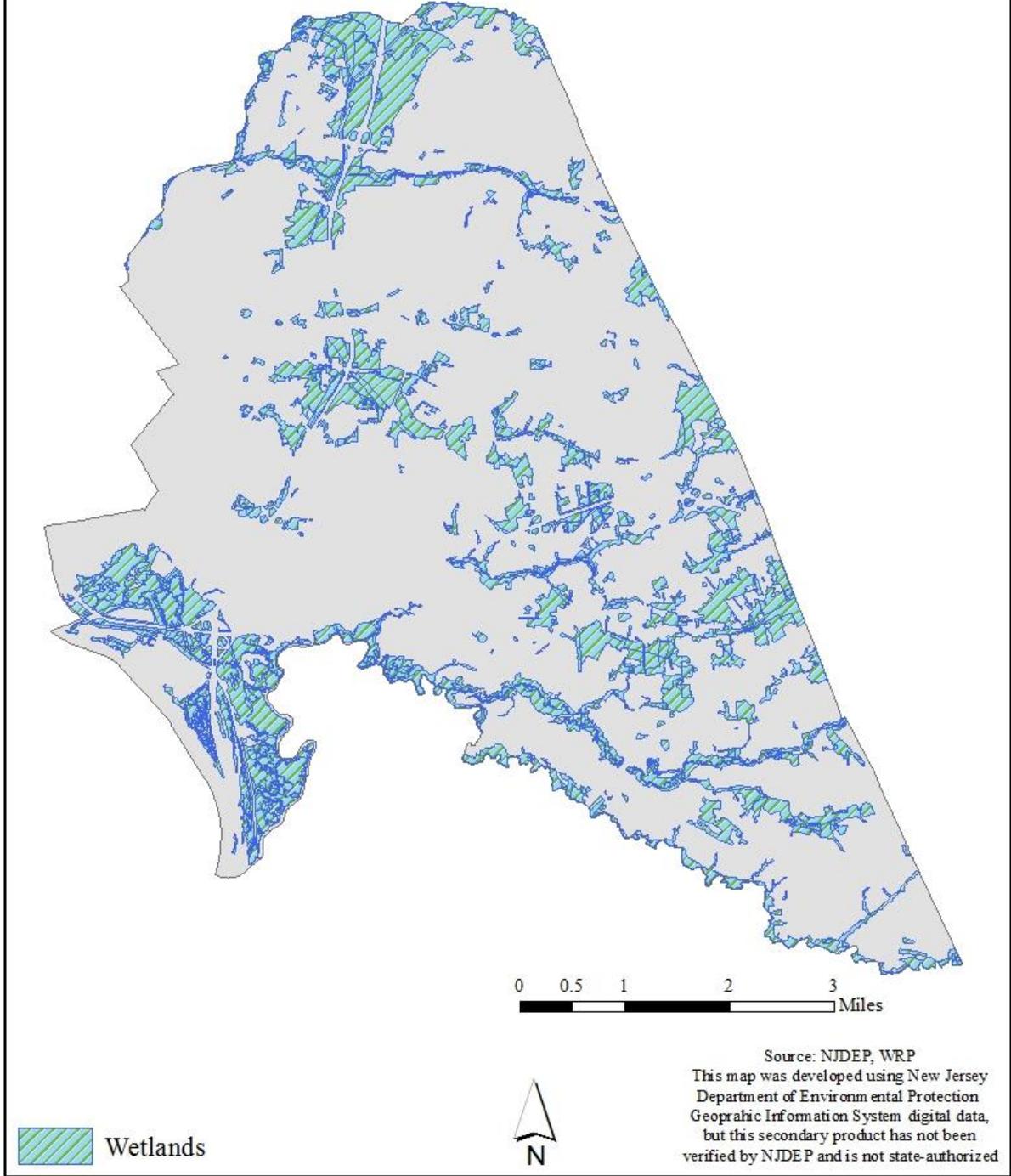


Source: NJDEP, WRP  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized

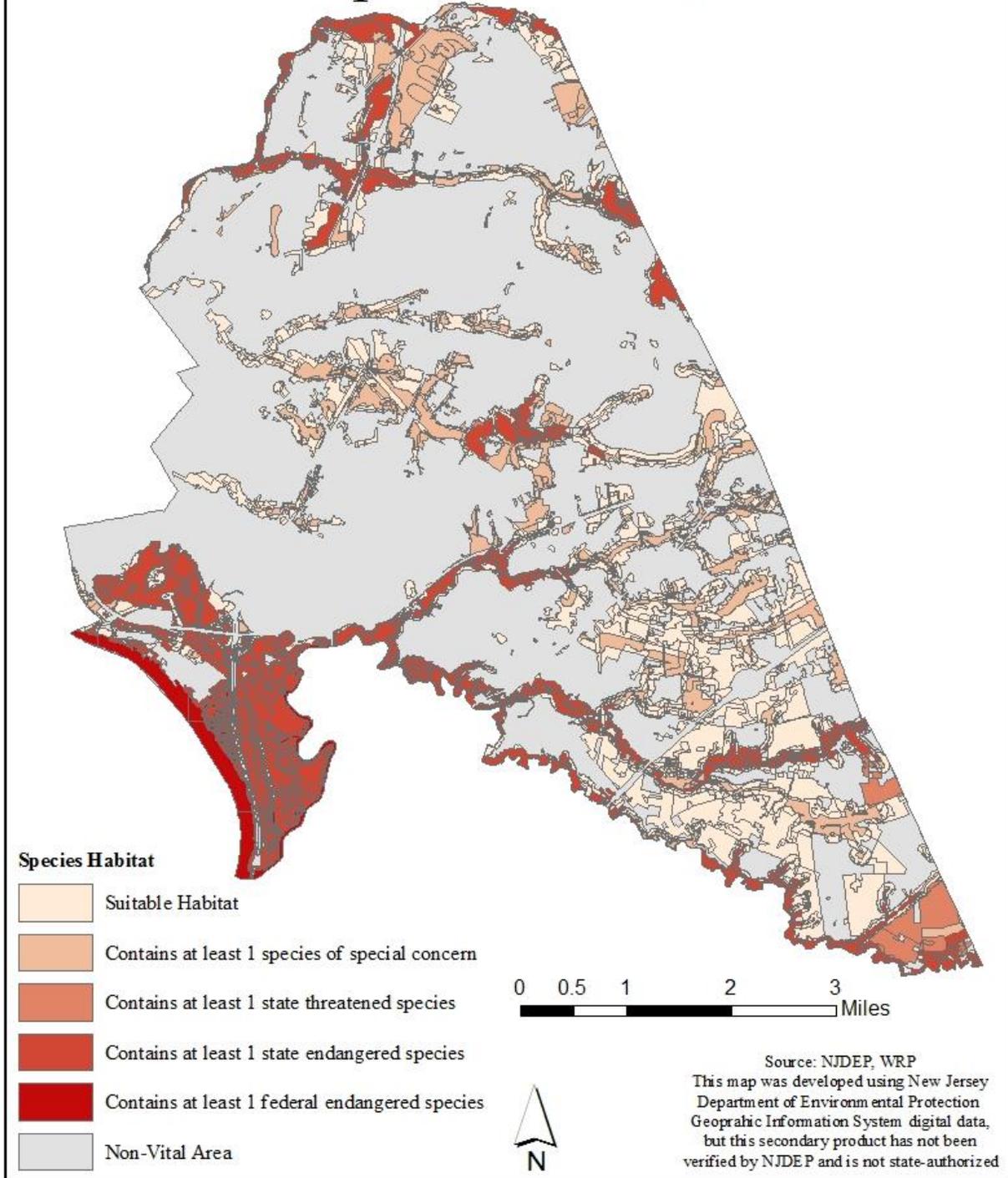
# Hamilton Township Forest Cover



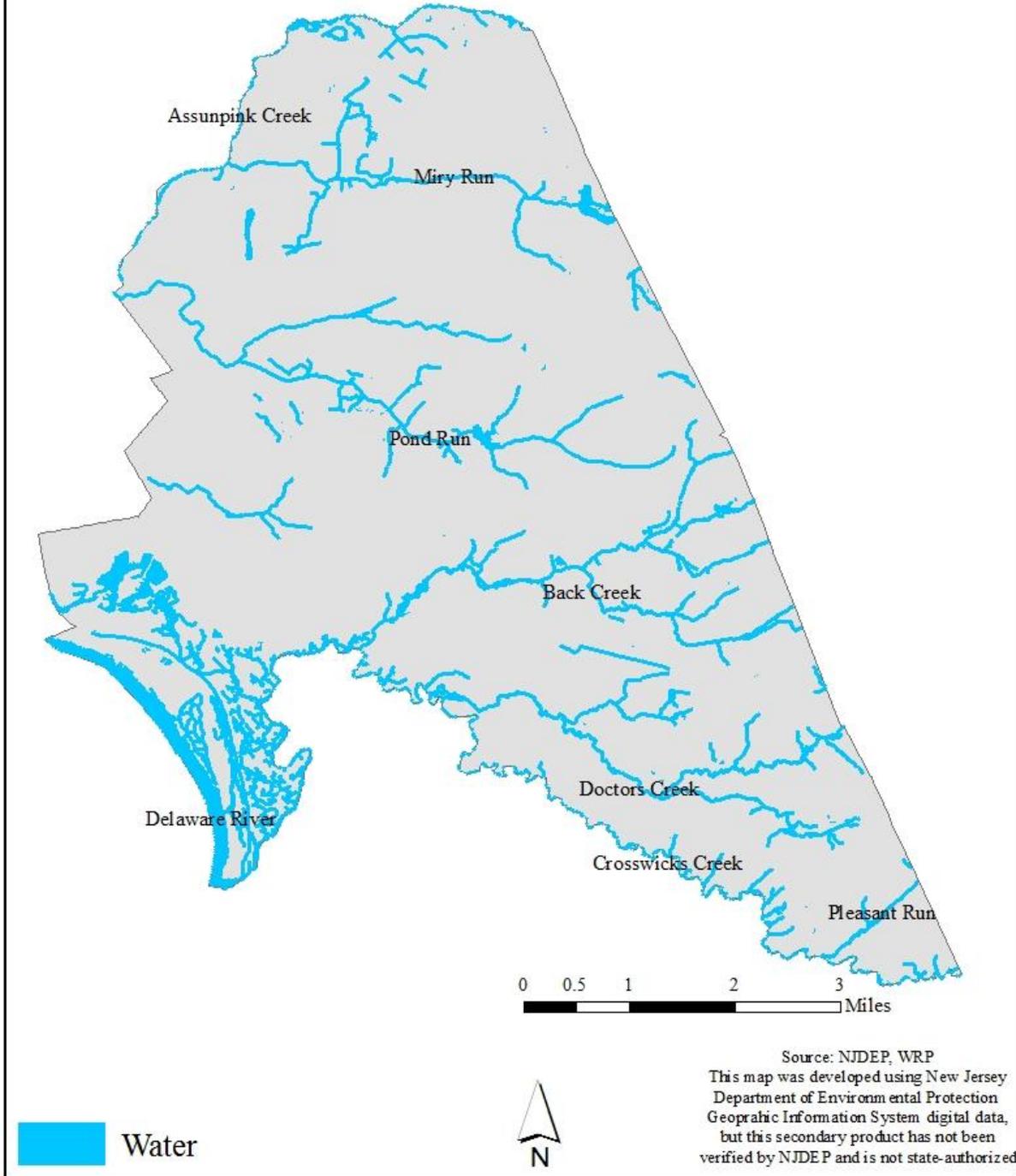
# Hamilton Township Wetland Cover



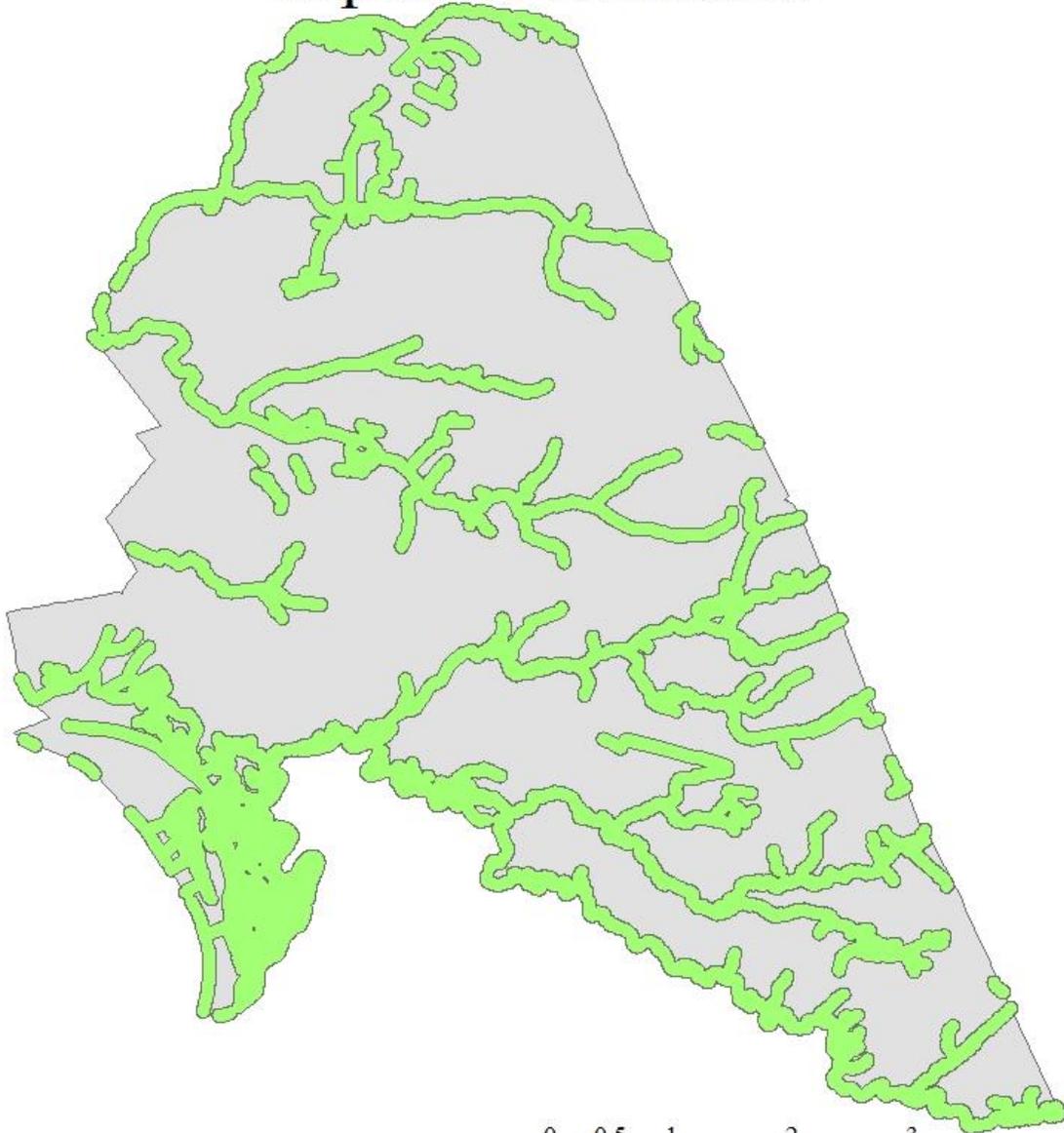
# Hamilton Township Species Habitat



# Hamilton Township Water Bodies



# Hamilton Township Riparian Corridors



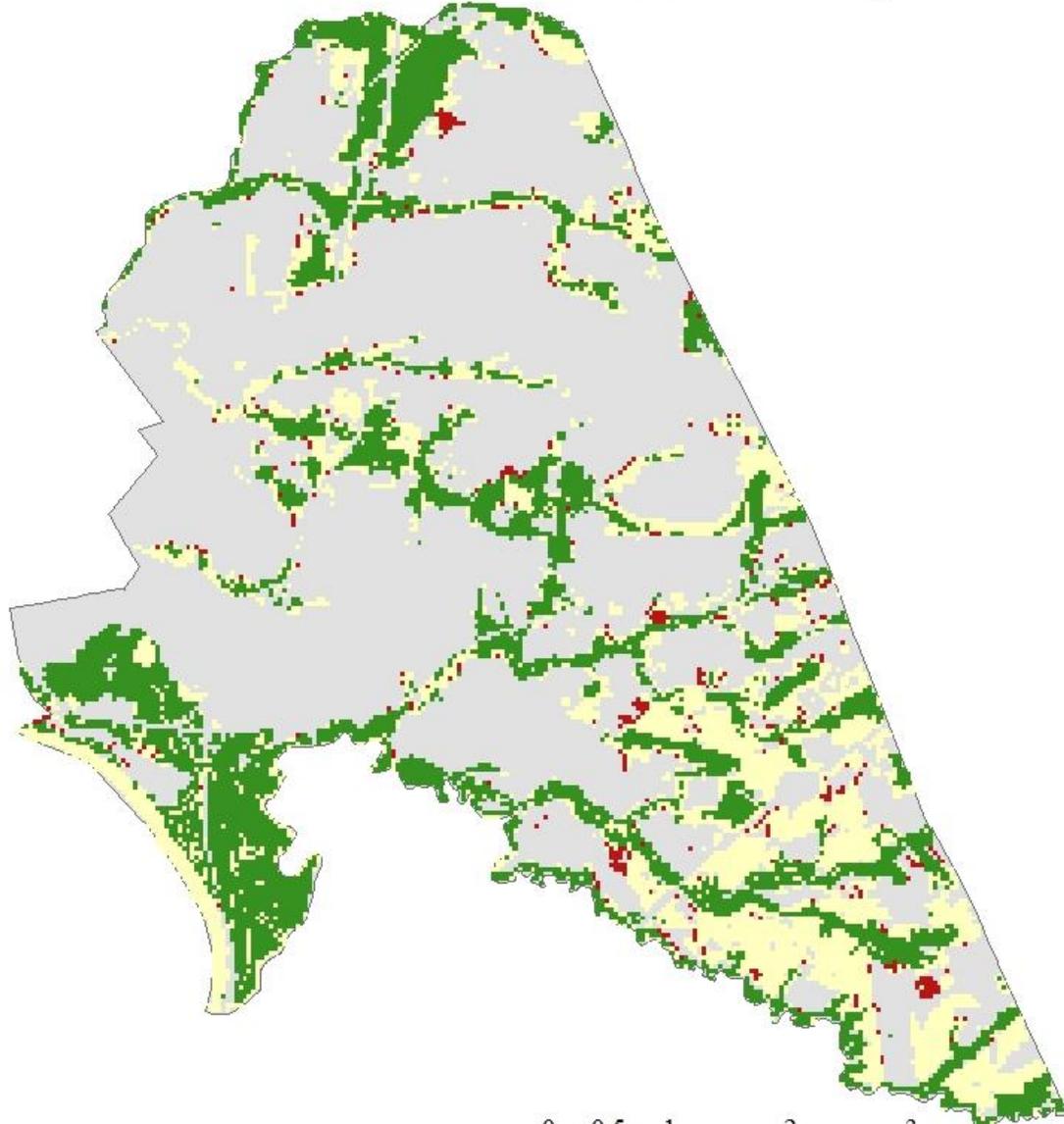
Riparian Corridors are defined as a 300 feet buffer on each side of a stream.

 Riparian Corridors



Source: NJDEP, WRP  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized

# Hamilton Township Habitat Conservation Analysis



## Conservation Priority

-  Low
-  Moderate
-  High

0 0.5 1 2 3 Miles



Source: NJDEP, WRP  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized

**Table 2: Habitat Prioritization**

<b>Conservation Priority</b>	<b>Acres</b>	<b>Percentage of Hamilton Township</b>
Low	353	1.4%
Moderate	4,483	17.4%
High	4,927	19.1%

## **Summary and Conclusions**

The Habitat Conservation Analysis map displayed above identifies areas ranked by the results of combining current land cover, designation of existing habitat, and proximity to water. Areas in green have the largest overlap of the three criteria. These areas represent the highest habitat value areas and comprise 19.1% of Hamilton Township (see Table 2). These areas outlined in green should be given the highest priority in conservation and planning efforts. Areas displayed in yellow as moderate priority are ecologically and environmentally important, but typically are not at the top of all three criteria. Moderate priority areas comprise 17.4% of Hamilton Township (see Table 2). The areas displayed as low priority are lacking the combination of habitat quality criteria listed above and are likely to be less supportive of diverse habitats. These areas could be targeted for restoration or provide opportunities to buffer more valued habitats.