

Landscape v3.1-Vernal Habitat (NJ)



Tags

Biota, Environment, Inland Waters, Oceans, Conservation, Ecology, Ecosystem, Environment, Exposure, Marine, Natural Resources, Water, Landscape

Summary

The Landscape Project was designed to provide users with peer-reviewed, scientifically sound information that transparently documents threatened and endangered species habitat. Landscape Project data are easily accessible and can be integrated with the planning, protection and land management programs of non-government organizations and private landowners and at every level of government-federal, state, county and municipal. Landscape maps and overlays provide a basis for proactive planning, such as the development of local habitat protection ordinances, zoning to protect critical wildlife areas, management guidelines for imperiled species conservation on public and private lands, and land acquisition projects. Most importantly, the information that is readily available in the Landscape Project can be used for planning purposes before any actions such as proposed development, resource extraction (e.g. timber harvests) or conservation measures occur. The maps help increase predictability for local planners, environmental commissions, and developers and help facilitate local land use decisions that appropriately site and balance development and habitat protection. The Landscape Project maps allow the regulated public to anticipate potential environmental regulation in an area and provide some level of assurance regarding areas where endangered, threatened or species of special concern are not likely to occur, affording predictability to the application and development process. Thus, Landscape Project maps can be used proactively by regulators, planners and the regulated public in order to minimize conflict and protect species. This minimizes time and money spent attempting to resolve after-the-fact endangered and threatened species issues.

Description

In 2001, ENSP partnered with Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA) to develop a method for mapping potential vernal pools throughout New Jersey. Through an on-screen visual interpretation of digital orthophotography, CRSSA identified over 13,000 potential pools throughout the state. A subset of these pools was field verified and confirmed, with an 88% accuracy rate, to meet the physical characteristics to qualify as a vernal pool (Lathrop et al. 2005). In accordance with N.J.A.C. 7:7A-1.4, the term "vernal habitat" includes a vernal pool - or the area of ponding - plus any freshwater wetlands adjacent to the vernal pool. Vernal habitat areas mapped in the Landscape Project rely upon those data developed by the DEP and CRSSA to identify sites that should be field checked for possible identification as vernal habitats areas. DEP staff is in the process of field-verifying these pools. The Department also maps vernal habitat areas based upon on-the-ground assessment of sites not captured by the CRSSA mapping. The Landscape Project includes all of the CRSSA-identified sites, as well as sites identified by on-the-ground reconnaissance, categorized as either "potential vernal habitat areas" or "vernal habitat areas" as defined below: "Potential vernal habitat area - These are areas identified by CRSSA as possibly containing a vernal pool that meets the criteria of a "vernal habitat" pursuant to N.J.A.C. 7:7A-1.4. These sites include sites that have been field inspected and have been found to meet the physical characteristics of a vernal habitat, but for which biological criteria have not yet been measured, as well as sites that have not been checked by DEP staff. " Vernal habitat areas - These are areas that contain pools that have been field-verified by the Department and have been determined to meet both the physical and biological characteristics of a vernal habitat in accordance with N.J.A.C. 7:7A-1.4. All areas mapped as "potential vernal habitat areas" and "vernal habitat areas" are derived from a point location estimated to be the center of an individual vernal pool and include all areas within 300 meters of the point. Note that the occurrence area is not intended to suggest or correspond with any specific regulatory requirement. Rather, the area added around the point accounts for variations in the size of individual vernal pools,

variations in the width of freshwater wetlands adjacent to the pool, plus adjacent habitats sufficient to include the estimated home range for vernal pool obligate species. If there is an overlap between areas mapped around two or more nearby points, the boundaries are conjoined to generate contiguous patches. If the resulting patch contains areas mapped as "vernal habitat area" and areas mapped as "potential vernal habitat areas," the entire patch is labeled as a "vernal habitat area."

Credits

There are no credits for this item.

Use limitations

This data set is a product of the Landscape Project, a pro-active, ecosystem-level approach to the long-term protection of imperiled and priority species and their important habitats in New Jersey. New Jersey Department of Environmental Protection (NJDEP) Data Distribution Agreement I. Description of Data to be Provided. The data provided herein are distributed subject to the following conditions and restrictions: SUBJECT DATA LAYERS For all data contained herein, NJDEP makes no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the digital data layers furnished hereunder. NJDEP assumes no responsibility to maintain them in any manner or form. II. Terms of Agreement 1. Digital data received from the NJDEP are to be used solely for internal purposes in the conduct of daily affairs. 2. The data are provided, as is, without warranty of any kind and the user is responsible for understanding the accuracy limitations of all digital data layers provided herein, as documented in the accompanying cross-reference files (see Section 1.14 CROSS-REFERENCE). Any reproduction or manipulation of the above data must ensure that the coordinate reference system remains intact. 3. Digital data received from the NJDEP may not be reproduced or redistributed for use by anyone without first obtaining written permission from the NJDEP. This clause is not intended to restrict distribution of printed mapped information produced from the digital data. 4. Any maps, publications, reports, or other documents produced as a result of this project that utilize NJDEP digital data will credit the NJDEP's Geographic Information System (GIS) and Site Remediation Program as the source of the data with the following credit/disclaimer: "This (map/publication/report) 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." 5. Users shall require any independent contractor, hired to undertake work that will utilize digital data obtained from the NJDEP, to agree not to use, reproduce, or redistribute NJDEP GIS data for any purpose other than the specified contractual work. All copies of NJDEP GIS data utilized by an independent contractor will be required to be returned to the original user at the close of such contractual work. Users hereby agree to abide by the use and reproduction conditions specified above and agree to hold any independent contractor to the same terms. By using data provided herein, the user acknowledges that terms and conditions have been read and that the user is bound by these criteria.

Extent

There is no extent for this item.

Scale Range

There is no scale range for this item.

ArcGIS Metadata

Citation

TITLE NJDEP Species Based Habitat, Vernal Habitat (Version 3.1, 20120221)

Resource Details

CREDITS

Resource Constraints

CONSTRAINTS

LIMITATIONS OF USE

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Fields

DETAILS FOR OBJECT [vernal_habitat](#)

DEFINITION

Attributes in Landscape Project data.

DEFINITION SOURCE

NJDEP FISH AND WILDLIFE

FIELD FID

FIELD DESCRIPTION

Internal feature number.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

FIELD Shape

FIELD DESCRIPTION

Feature geometry.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Coordinates defining the features.

FIELD REGION

FIELD DESCRIPTION

The Landscape Region where the geographic centrum of the polygon occurs

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE Coastal

DESCRIPTION Coastal Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Delaware Bay

DESCRIPTION Delaware Bay Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Piedmont Plains

DESCRIPTION Piedmont/Plains Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Pinelands

DESCRIPTION Pinelands Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Skylands

DESCRIPTION Skylands Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Marine

DESCRIPTION Marine Landscape Region

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD VPH_ID

FIELD DESCRIPTION

Unique ID to identify vernal habitat

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique ID to identify vernal habitat

FIELD VPH_TYPE

FIELD DESCRIPTION

The type of vernal habitat polygon represents

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE potential vernal habitat areas

DESCRIPTION These are areas identified by CRSSA as possibly containing a vernal pool that meets the criteria of a "vernal habitat" pursuant to N.J.A.C. 7:7A-1.4. These sites include sites that have been field inspected and have been found to meet the physical characteristics of a vernal habitat, but for which biological criteria have not yet been measured, as well as sites that have not been checked by DEP staff.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE vernal habitat areas

DESCRIPTION These are areas that contain pools that have been field-verified by the Department and have been determined to meet both the physical and biological characteristics of a vernal habitat in accordance with N.J.A.C. 7:7A-1.4.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD VERSION

FIELD DESCRIPTION

Number used to track version

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Version 3.1

FIELD Shape_Leng

FIELD DESCRIPTION

Length of feature

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

FIELD ACRES

FIELD DESCRIPTION

acres of feature

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

FIELD HECTARES

FIELD DESCRIPTION

hectares of feature

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

DETAILS FOR OBJECT [species lookup table](#)

DEFINITION

Attributes in Landscape Project data.

DEFINITION SOURCE

NJDEP FISH AND WILDLIFE

FIELD OBJECTID

FIELD DESCRIPTION

Internal feature number.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

FIELD LINKID

FIELD DESCRIPTION

Unique ID used to link polygons with species look-up tables

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique ID used to link polygons with species look-up tables

FIELD COMNAME

FIELD DESCRIPTION

(Common Name) Common name of species present

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique Entry

FIELD SCINAME

FIELD DESCRIPTION

(Scientific Name) Scientific name of species present

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique Entry

FIELD FEAT_LABEL

FIELD DESCRIPTION

(Feature Label) - A label assigned to each occurrence that describes the occurrence type (e.g., nest, den, dead on road, etc.).

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique Entry

Hide Field FEAT_LABEL

FIELD CLASS

FIELD DESCRIPTION

a taxonomic level

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE Amphibia

DESCRIPTION Species belongs to the class Amphibia

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Aves

DESCRIPTION Species belongs to the class Aves

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Insecta

DESCRIPTION Species belongs to the class Insecta

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Mammalia

DESCRIPTION Species belongs to the class Mammalia

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE NA

DESCRIPTION Not Applicable

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Reptilia

DESCRIPTION Species belongs to the class Reptilia

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD RANK

FIELD DESCRIPTION

(RANK) - patches are classified, or "valued," based on the status of the species present

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE 1

DESCRIPTION Rank 1 is assigned to species-specific habitat patches that meet habitat-specific suitability requirements such as minimum size or core area criteria for endangered, threatened or special concern wildlife species, but that do not intersect with any confirmed occurrences of such species (see Appendix V for descriptions of all habitat-specific suitability requirements). Rank 1 habitat patches without documented occurrences are not necessarily absent of imperiled or special concern species. Patches with a lack of documented occurrences may not have been systematically surveyed. Thus, the Rank 1 designation is used for planning purposes, such as targeting areas for future wildlife surveys.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE 2

DESCRIPTION Rank 2 is assigned to species-specific habitat patches containing one or more occurrences of species considered to be species of special concern.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE 3

DESCRIPTION Rank 3 is assigned to species-specific patches containing one or more occurrences of State threatened species.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE 4

DESCRIPTION Rank 4 is assigned to species-specific habitat patches with one or more occurrences of State endangered species.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE 5

DESCRIPTION Rank 5 is assigned to species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the Federal Endangered Species Act of 1973.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD FED_STATUS

FIELD DESCRIPTION

(Federal Status) -Federal status of species present

DESCRIPTION SOURCE

NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE Federally Listed Endangered

DESCRIPTION Listed Federally as Endangered by the US Fish and Wildlife Service

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE Federally Listed Threatened

DESCRIPTION Listed Federally as Threatened by the US Fish and Wildlife Service

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE NA

DESCRIPTION Not applicable

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD NJ_STATUS
FIELD DESCRIPTION

(New Jersey Status) - The New Jersey Status of species present

DESCRIPTION SOURCE
NJDEP FISH AND WILDLIFE

LIST OF VALUES

VALUE Special Concern

DESCRIPTION Nongame wildlife species that warrants special attention by the Department because of inherent vulnerability to environmental deterioration or habitat modification that would result in its becoming threatened if conditions surrounding the species begin or continue to deteriorate. Factors that can lead to classification as special concern include, but are not limited to, species rarity in the State, highly specialized food and/or habitat requirements, low reproductive rate, isolated populations of the species within the State and/or other characteristics that make the species particularly susceptible to environmental or habitat changes. This category includes a species that meets the foregoing criteria and for which there is little understanding of its current population status in the State. Species determined to be "special concern" are so-designated at N.J.A.C. 7:25-4.17.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE State Endangered

DESCRIPTION A species included on the list of endangered species at N.J.A.C. 7:25-4.13 and any species or subspecies of wildlife appearing on any Federal endangered species list. The Endangered and Nongame Species Conservation Act (N.J.S.A. 23:2A et seq.) defines an endangered species (with respect to wildlife) to be a species or subspecies of wildlife whose prospects for survival or recruitment are in jeopardy or are likely within the foreseeable future to become so due to any of the following factors: (1) the destruction, drastic modification, or severe curtailment of its habitat, or (2) its over-utilization for scientific, commercial or sporting purposes, or (3) the effect on it of disease, pollution, or predation, or (4) other natural or manmade factors affecting its prospects of survival or recruitment within the State, or (5) any combination of the foregoing factors. The term shall also be deemed to include any species or subspecies of wildlife appearing on any Federal endangered species list.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

VALUE State Threatened

DESCRIPTION An indigenous nongame wildlife species of New Jersey designated pursuant to the Endangered and Nongame Species Conservation Act, N.J.S.A.23:2A et. seq., and its implementing rules, N.J.A.C. 7:25-4.17, as most recently amended. Threatened species are generally defined to be species that may become endangered if conditions surrounding them begin or continue to deteriorate.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE NJDEP FISH AND WILDLIFE

FIELD MX_YEAR

FIELD DESCRIPTION

(LAST OBSERVATION YEAR) - Year species was last observed

DESCRIPTION SOURCE
NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique Entry

FIELD CNT_SOA

FIELD DESCRIPTION

(SPECIES OCCURENCE AREA COUNT) - count of the number of species occurrence areas that intersect the patch of habitat

DESCRIPTION SOURCE
NJDEP FISH AND WILDLIFE

DESCRIPTION OF VALUES Unique Entry

OVERVIEW DESCRIPTION

ENTITY AND ATTRIBUTE OVERVIEW In Version 3.1 a species-based habitat method is implemented by associating each species with a specific set of LULC classes according to the habitat needs of the species. Detailed LULC class delineations allow for an accurate representation of imperiled and special concern species habitat by providing ENSP biologists with the ability to designate a specific set of LULC classes for each individual species-feature label combination. Each species- habitat association is developed by performing a review of scientific literature and/or from information obtained through ENSP research and expert opinion. In addition, a special analysis of the LULC for species and their feature label components was used to guide the selection of particular LULC classes for the creation of species-specific patches of habitat (Appendix IV). In order to create species-based patches of habitat, the relevant LULC polygons from the Landscape base layer are combined into a potential habitat layer specific to each species-feature label. Spatially explicit species occurrence data that meet the criteria required for inclusion in the Landscape Project are then exported from the Biotics database and a species occurrence area (SOA) is applied for every feature label assigned to a species. SOAs are then overlaid onto species-specific habitat patches and patches are classified, or valued, based on the status of the species present as follows: Rank 5 is assigned to species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the Federal Endangered Species Act of 1973. Rank 4 is assigned to species-specific habitat patches with one or more occurrences of State endangered species. Rank 3 is assigned to species-specific patches containing one or more occurrences of State threatened species. Rank 2 is assigned to species- specific habitat patches containing one or more occurrences of species considered to be species of special concern. Rank 1 is assigned to species-specific habitat patches that meet habitat- specific suitability requirements such as minimum size or core area criteria for endangered, threatened or special concern wildlife species, but that do not intersect with any confirmed occurrences of such species (see Appendix V for descriptions of all habitat-specific suitability requirements). Rank 1 habitat patches without documented occurrences are not necessarily absent of imperiled or special concern species. Patches with a lack of documented occurrences may not have been systematically surveyed. Thus, the Rank 1 designation is used for planning purposes, such as targeting areas for future wildlife surveys. A SOA will value habitat that it overlays only if that habitat is appropriate for the species. Habitat patches ranked 2, 3, 4, or 5 intersect with or contain at least one documented SOA. Since imperiled species are typically not abundant across the landscape, a single occurrence may represent a significant portion of the local population and often indicates the presence of a larger population within a habitat patch. The Landscape Project habitat patch mapping approach is designed to capture and represent the habitat needed to support the local population indicated by the individual SOA. In the delineation of Species-Based Habitat, each species-feature label combination is grouped into a Patch Type, or category that describes the method employed to form the valued habitat area from polygons in the Landscape base layer. In addition, for each LULC class selected for a particular species- feature label combination, a LULC Treatment, or rule, is applied that determines how polygons of a LULC class will interact with a SOA and/or with polygons of other LULC classes in order to construct patches of habitat. The four general patch types are described below and the LULC Treatments are defined in Appendix V. For those species-feature label combinations that utilize variations, or subtypes, of the four general types, an explanation of the subtype is also included within Appendix V. Each species-feature label combination is grouped into one of the following patch type categories. Limited Extent polygons from a select set of LULC classes are valued upon intersection with a SOA. Once the valued habitat area is identified, any internal holes or gaps containing polygons of selected LULC classes are also valued if they are completely enclosed by, and contiguous with, the valued area. Contiguous Area polygons from a select set of LULC classes are dissolved/combined into contiguous areas and valued upon intersection with a SOA. Cardinal-Proximate polygons from an initial, or cardinal, set of LULC classes are valued upon intersection with a SOA and then polygons from a second, proximate set of LULC classes are valued based on a spatial relationship (e.g., adjacency) with polygons from the cardinal set of LULC classes and/or a SOA. Once the valued habitat area is identified, any internal holes or gaps containing polygons of selected LULC classes are also valued if they are completely enclosed by, and contiguous with, the valued area. Stream Centerline stream centerlines are valued upon intersection with a SOA. In Version 3.1 of the Landscape Project, only freshwater mussel species utilize the Stream Centerline patch type, described more thoroughly in the next section.

ENTITY AND ATTRIBUTE DETAIL CITATION <http://www.state.nj.us/dep/fgw/ensp/landscape/index.htm>

Metadata Details

ARCGIS METADATA PROPERTIES METADATA FORMAT ESRI-ISO

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