New Jersey Freshwater Wetlands Buffers and Transition Areas, version 2—DRAFT Spring 2025

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Terms of Use

The wetland and wetland buffer polygons are intended to serve as a resource for analysis or planning purposes and do not replace formal regulatory delineations of jurisdictional wetlands and buffers. These GIS layers reflect the wetland classifications and buffers, based on Landscape Version 3.4 as of the publication date, and the locations of endangered and threatened species known as of the publication date. This map is supplemental only and is not legally binding. The regulatory extent of wetlands and wetland buffers at any individual location or on any property may be established by obtaining a Letter of Interpretation as described at N.J.A.C 7:7-5.3. The NJDEP may change the presence and/or extent of wetlands based on more in-depth analysis and field inspection for regulatory purposes. In the Pineland Area, the actual limits of wetlands and required wetlands buffers require a site-specific determination by the Pinelands Commission. A definitive determination of the presence, absence or extent of wetlands or the required wetlands buffer, on or in the vicinity of a parcel, shall require submission of an application to and subsequent field verification by the Pinelands Commission. In the Highlands Region, some projects will require review by the Highlands Council.

The wetland classification and wetland buffer layers represent buffer distances as described at N.J.A.C. 7:7-3.3(d) and are approximations of the extent of these features. Site conditions on a particular property will determine the actual extent of the wetlands and associated buffers.

This data set also includes a digital representation of wetland areas valued by habitat for threatened or endangered plant and animal species based on the confidential records kept by the Natural Heritage Program and the Landscape Project Mapping. Designations are based on species considered to be "wetland dependent" by the Department of Environmental Protection and represent a subset of species identified as endangered or threatened under the Endangered and Nongame Species Conservation Act (N.J.S.A 23:2A-1 et seq.) or those that are identified as endangered pursuant to the Endangered Plant Species List Act (N.J.S.A. 7:5C-5.1). For mapping purposes, all Landscape mapped habitat for such species is assumed to feature suitable habitat. The mapped extent of wetlands and wetland buffers based on "wetland dependent" species documentation should be considered approximate and is subject to modification based on field conditions for regulatory purposes.

Maps

The data set will provide users the ability to estimate the location of buffers and transition areas for freshwater wetlands throughout New Jersey. This pair of maps shows a preliminary estimate of transition area or buffer widths and the extent of the transition areas and buffers around freshwater wetlands in New Jersey. The wetland transition area maps include a classified wetlands map and polygon buffer map (Table 1). The transition areas are drawn based on the Freshwater Wetlands Act (FWA), Highlands Water Protection and Planning Act, and the Pinelands Comprehensive Management Plan. The wetlands maps include a preliminary identification of wetland resource values and associated transition area widths as regulated under the FWA. The FWA applies to wetlands not regulated by the Wetlands Act of 1970, so for the purposes of these maps, regulated wetlands are identified as wetlands labeled *inland wetlands* in the Land Use/Land Cover data but also include freshwater tidal wetlands.

Version 2 of this map incorporates updates to the endangered and threatened species this. This includes the 2025 updated endangered and threatened species list and associated habitats

identified in the Landscape Project 3.4 as well as associated updates to wetland species protocols.

Wetland Buffer Types

Freshwater Wetlands Act Transition Areas

According to the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A), "freshwater wetlands shall be divided into three classifications based on resource value… A **transition area** is required adjacent to a freshwater wetland of exceptional resource value and of intermediate resource value. A transition area is not required adjacent to a freshwater wetland of ordinary resource value or adjacent to a State open water." This mapping assigns a resource value of "exceptional" to wetlands in trout production watersheds and wetlands that provide habitat for endangered and threatened wetland species. The full criteria to establish the classification of wetlands based on resource value are listed in Table 2 along with the operational definitions of the criteria needed to classify wetlands in GIS. Table 3 provides a list of endangered and threatened species with a protocol for the establishment of exceptional resource value as of the date of this draft. In these maps, the focus is on identifying wetlands of "exceptional" resource value, as the wetlands of "ordinary" resource value are mostly smaller than the minimum mapping unit of the available Land Use/Land Cover wetlands data source. Remaining wetlands that are neither exceptional nor ordinary are classified as "intermediate".

Regional Planning Buffers and Transition Areas

Highlands Open Water Protection Area

The Highlands Regional Master Plan includes a 300-foot protection area buffer around all Highlands Open Waters. "Highlands open waters" means all springs, streams including intermittent streams, wetlands, and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region. The current map is consistent with the general extent of buffers in the *Highlands Open Water Protection Area* map provided by the NJ Highlands Council (https://njogis-newjersey.opendata.arcgis.com/datasets/NJHighlands::open-water-protection-area/about). Differences between the current map and the Highlands map may arise due to underlying wetlands map source. The different regions of the Highlands (Planning Area and Preservation Area) and Highlands Plan Conformance Status of municipalities are included for users with specific needs.

Pinelands Transition Areas

According to the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-6.14), all regulated wetlands feature a standard 300-foot transition area. The 300-foot buffer for the wetlands and hydric soils applies throughout the Pinelands Management Areas. The current map is consistent with the general extent of buffers in the *Pinelands Wetlands 300-foot Buffer* map provided by the NJ Pinelands Commission (https://njogis-newjersey.opendata.arcgis.com/datasets/NJPines::pinelands-wetlands-300-foot-buffer/about). Differences between the current map and Pinelands map may arise due to underlying wetlands map source and mapping focus. The current map does not identify hydric soils outside of wetlands in Land Use/Land Cover of New Jersey 2020. The different jurisdictions of the

Pinelands (Protection Area, Preservation Area, National Reserve) are included for users with specific needs.

Tables

Table 1. Map layers and attribute fields.

Layer Name	**Description**	
Wetlands Classifications	Provide Freshwater Wetlands Act resource value and justification and Highlands and Pinelands Region status.	
	Field Display Name (Field Name)	***Attributes***
	Widest Applicable Buffer or Transition Area (ft) (Wetland_Buffer_Widest_ft)	50, 150, 300, Case-by-case
	Freshwater Wetlands Act Transition Area (ft) (FWA_TA_width_ft)	50, 150, Case-by-case
	Trout Production Watershed (TroutProductionWshd)	No, Yes
	E&T Habitat (EandTHabitat)	No, Yes
	Regional Planning Area Buffer (ft) (RegionalPlanning_width_ft)	0, 300, Case-by-case
	Highlands Region (HighlandsRegion)	Highlands Planning Area, Highlands Preservation Area, Not Applicable
	Pinelands Area (PinelandsArea)	National Reserve, Preservation Area, Protection Area, Not Applicable
	Highlands Conforming Municipality (HighlandsConformingMuni)	No, Yes, Not Applicable
	LandUse/LandCover 2020 OBJECTID (LULC2020_OID)	Integer
	LU20	Integer
	LABEL20	Text
	TYPE20	WETLANDS
	Wetland Type (Wetland_type)	coastal, freshwater

Wetland Buffers	Display extent of buffer as identified in the Wetland Classification layer.

Table 2. Three wetland classifications based on resource value from the Freshwater Wetlands Protection Act and GIS data definition by criterion.

Resource value classification	**Criterion**	**Transition area width (ft)**	**Data Source**	**Specific GIS criterion**
Exceptional	1) Discharge into FW-1 or FW-2 trout production waters and their tributaries.	150	Surface Water Quality Standards	Any wetland within Trout Production stream contributing watershed.
Exceptional	2) Recently or historically documented as habitat for endangered or threatened species.	150	Landscape Project 3.4; *Protocols for the Establishment of Exceptional Resource Value Wetlands Pursuant to the Freshwater Wetlands Protection Act, November 2023*	All wetland polygons for animals having a wetland protocol. See Table 3 for species list.
Exceptional	2) Recently or historically documented as habitat for endangered or threatened species.	150	Natural Heritage Program Biotics Database, 2018	Wetland polygons that intersected with known records (either a point location or sighting polygon) of plant species with a wetland protocol.
Intermediate	Not defined as exceptional or ordinary	50		
Ordinary	A drainage ditch, swale, or detention facility created in upland area	0	Land Use/Land Cover 2020	LU20 categories: 1499 Stormwater Basins

Table 3. Species included in "Protocols for the Establishment of Exceptional Resource Value Wetlands Pursuant to the Freshwater Wetlands Protection Act, November 2023". Names that differ between the Landscape Project and the Protocols document are noted.

Common Name (Landscape Project 3.4 Database)	**Scientific Name (Landscape Project 3.4 Database)**	**Scientific Name (Wetland Protocols Document)**	**Species Type**
American Bittern	*Botaurus lentiginosus*		Bird
Barred Owl	*Strix varia*		Bird
Black Rail	*Laterallus jamaicensis*		Bird
Black-crowned Night-heron	*Nycticorax nycticorax*		Bird
Bobolink	*Dolichonyx oryzivorus*		Bird
Golden-winged Warbler	*Vermivora chrysoptera*		Bird
Henslow's Sparrow	*Centronyx henslowii*	*Ammodramus henslowii*	Bird
King Rail	*Rallus elegans*		Bird
Long-eared Owl	*Asio otus*		Bird
Northern Harrier	*Circus hudsonius*	*Circus cyaneus*	Bird
Pied-billed Grebe	*Podilymbus podiceps*		Bird
Red-headed Woodpecker	*Melanerpes erythrocephalus*		Bird
Red-shouldered Hawk	*Buteo lineatus*		Bird
Saltmarsh Sparrow	*Ammospiza caudacuta*		Bird
Sedge Wren	*Cistothorus stellaris*	*Cistothorus platensis*	Bird
Short-eared Owl	*Asio flammeus*		Bird
Yellow-crowned Night-heron	*Nyctanassa violacea*		Bird
Migratory Raptor Concentration Site	*Raptor Winter Concentration Area*		Bird
Blue-spotted Salamander	*Ambystoma laterale*		Herptile
Bog Turtle	*Glyptemys muhlenbergii*		Herptile
Cope's Gray Treefrog	*Dryophytes chrysoscelis*	*Hyla chrysoscelis*	Herptile
Eastern Long-tailed Salamander	*Eurycea longicauda longicauda*		Herptile
Eastern Tiger Salamander	*Ambystoma tigrinum*	*Ambystoma tigrinum tigrinum*	Herptile
Pine Barrens Treefrog	*Dryophytes andersonii*	*Hyla andersonii*	Herptile
Timber Rattlesnake	*Crotalus horridus*		Herptile
Wood Turtle	*Glyptemys insculpta*		Herptile

Common Name (Landscape Project 3.4 Database)	Scientific Name (Landscape Project 3.4 Database)	Scientific Name (Wetland Protocols Document)	Species Type
Indiana Myotis	*Myotis sodalis*		Mammal
Northern Myotis	*Myotis septentrionalis*		Mammal
Banner Clubtail	*Hylogomphus apomyius*	*Gomphus apomyius*	Odonates
Brook Snaketail	*Ophiogomphus aspersus*		Odonates
Gray Petaltail	*Tachopteryx thoreyi*		Odonates
Harpoon Clubtail	*Phanogomphus descriptus*	*Gomphus descriptus*	Odonates
Kennedy's Emerald	*Somatochlora kennedyi*		Odonates
Robust Baskettail	*Epitheca spinosa*		Odonates
Superb Jewelwing	*Calopteryx amata*		Odonates

Procedure to Classify Wetland Resource Value and Transition Area/Buffer Width

Component datasets

Table 4. Component Datasets

Dataset	Usage
Land Use/Land Cover of New Jersey 2020, Edition 20241101, updated December 16, 2024	Wetland areas and classifications
Surface Water Quality Standards of New Jersey, Edition 20200327	Identify Trout Production streams
USGS flow direction and flow accumulation rasters (10' grid cell based on NJDEP LiDAR); Watson, K.M., 2022, New Jersey StreamStats digital elevation, flow direction, and flow accumulation GIS data 2022: U.S. Geological Survey data release, https://doi.org/10.5066/P98KJAH9.	Watershed delineation of Trout Production streams
National Hydrography Dataset (NHD) 2015 Waterbodies in New Jersey, Edition 20220401	Provide waterbody polygons for large streams/rivers to which Trout Production streams are tributary
NJDEP Landscape Project Species Based Habitat, All Regions, Version 3.4, Edition 20241202	Identify polygons for threatened and endangered species
Natural Heritage Program Rare Plants Locations, 2018	Identify FWA threatened and endangered plant species
Protocols for the Establishment of Exceptional Resource Value Wetlands Pursuant to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9b-1 Et Seq.) Based on Documentation of State or Federal Endangered or Threatened Species, November 2023	Identify FWA threatened and endangered species with wetland protocols
New Jersey's Endangered, Threatened, and Special Concern Species, NJ Fish & Wildlife	Identify threatened and endangered species
Highlands Preservation and Planning Area, 20210510	Identify wetlands within the Highlands Preservation Area
Pinelands Protection Act 1979, NJ Pinelands Commission, 20230228	Identify wetlands within the Pinelands
Highlands Conforming Towns, NJ Highlands Council, updated January 8, 2025	Identify Highlands conforming municipalities
Open Water Protection Area, NJ Highlands Council, updated February 6, 2024	Identify extent of Highlands Open Water Protection Area

Procedure Overview

1. Select wetlands from LULC (TYPE20 = 'WETLANDS')
2. Classify wetlands with exceptional resource value
   A. Wetlands that discharge into Trout Production (TP) streams and their tributaries
      i. Delineate contributing watershed of each TP segment using ESRI ArcGIS Pro Watershed Spatial Analyst tool
         a. Make set of end points from the TP stream segments to use as pour points
         b. Move pour points 100' upstream from large streams and rivers to avoid delineating too large of a watershed
         c. Snap pour points to flow accumulation raster
         d. Delineate watersheds based on flow direction raster
         e. In areas that aren't effectively select wetlands that overlap TP streams and closely adjacent wetlands
      ii. Classify all wetlands within contributing watersheds as "exceptional"
   B. Wetlands with recently or historically documented as habitat for endangered or threatened species.
      i. Select Landscape Project polygons with wetland protocols according to the Freshwater Wetlands Act
         a. Make list of species from protocols (cross check spelling and syntax in Landscape Project database)
         b. Select Landscape Project polygons linked with the species from Table 3.
      ii. Classify wetlands within Landscape Project polygons as "exceptional"
      iii. Select wetlands that overlap wetlands with E&T plants locations from Natural Heritage Program polygons and classify as "exceptional"
3. Classify wetlands with ordinary resource value
   A. LULC stormwater basins (LU20 = 1499)
4. Classify wetlands with intermediate resource value
   A. All wetlands not classified as exceptional or ordinary
5. Classify wetlands within Regional Planning Area Boundaries
   A. Highlands Region
      i. Preserve and Planning Areas
      ii. Highlands conforming municipalities
   B. Pinelands Jurisdictions
6. Classify wetlands as coastal or inland
7. Assign buffer width according to classifications
   A. 300 feet for Highlands or Pinelands
   B. 150 feet for exceptional,
   C. 50 feet for intermediate
   D. 0 feet for ordinary
   E. Case-by-case for coastal
8. Create buffer polygons
   A. Buffer wetlands within Highlands Region and Pinelands at 300'
   B. Clip buffers to Highlands Region and Pinelands boundaries

C. Buffer wetlands outside Highlands Region and Pinelands at widest applicable buffer according to FWA resource value
E. Merge B and C into single layer
F. Dissolve to create continuous layer

9. Erase wetlands footprint from buffer layer

Appendix

Definitions

“Freshwater wetland” or “wetland” means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation; provided, however, that the Department, in designating a wetland, shall use the three-parameter approach (that is, hydrology, soils and vegetation) enumerated in the 1989 Federal Manual as defined in this section. These include tidally influenced wetlands which have not been included on a promulgated map pursuant to the Wetlands Act of 1970, N.J.S.A. 13:9A-1 et seq.

WETLANDS ACT OF 1970, N.J.S.A. 13:9A-1
For the purposes of this act the term "coastal wetlands" shall mean any bank, marsh, swamp, meadow, flat or other low land subject to tidal action in the State of New Jersey along the Delaware bay and Delaware river, Raritan bay, Barnegat bay, Sandy Hook bay, Shrewsbury river including Navesink river, Shark river, and the coastal inland waterways extending southerly from Manasquan Inlet to Cape May Harbor, or at any inlet, estuary or tributary waterway or any thereof, including those areas now or formerly connected to tidal waters whose surface is at or below an elevation of 1 foot above local extreme high water, and upon which may grow or is capable of growing some, but not necessarily all, of the following: Salt meadow grass (Spartine patens), spike grass (Distichlis spicata), black grass (Juncus gerardi), saltmarsh grass (Spartina alterniflora), saltworts (Salicornia Europaea, and Salicornia bigelovii), Sea Lavendar (Limonium carolinianum), saltmarsh bulrushes (Scirpus robustus and Scirpus paludosus var. atlanticus), sand spurrey (Spergularia marina), switch grass (Panicum virgatum), tall cordgrass (Spartina pectinata), hightide bush (Iva frutescens var. oraria), cattails (Typha angustifolia, and Typha latifolia), spike rush (Eleocharis rostellata), chairmaker's rush (Scirpus americana), bent grass (Agrostis palustris), and sweet grass (Hierochloe odorata). The term "coastal wetlands" shall not include any land or real property subject to the jurisdiction of the Hackensack Meadowlands Development Commission pursuant to the provisions of P.L.1968, chapter 404, sections 1 through 84 (C. 13:17-1 through C. 13:17-86).

N.J. Admin. Code § 7:7A-3.2

(a) Freshwater wetlands shall be divided into three classifications based on resource value. The Department shall consider the resource value classification of a wetland in, among other things, evaluating alternatives to the proposed regulated activity, in determining the size of the transition area, and in determining the amount and/or type of mitigation required.**(b)** A freshwater wetland of exceptional resource value, or exceptional resource value wetland, is a freshwater wetland which: **1.** Discharges into FW-1 or FW-2 trout production waters or their tributaries;**2.** Is a present habitat for threatened or endangered species; or**3.** Is a documented habitat for threatened or endangered species, and which remains suitable for breeding, resting, or feeding by these species during the normal period these species would use the habitat.**(c)** For the purposes of (b) above, the Department identifies present and documented habitat for threatened or endangered species using the Landscape Project method, which focuses on habitat areas required to support

local populations of threatened and endangered wildlife species. The report entitled New Jersey's Landscape Project, which is updated periodically, provides additional information on mapping methodology and is available at http://www.nj.gov/dep/fgw/ensp/landscape/index.htm. Interested parties may also obtain information by writing to the Division of Fish and Wildlife, Endangered and Nongame Species Program at:
The Landscape Project
State of New Jersey Department of Environmental Protection
Division of Fish and Wildlife Endangered and Nongame Species Program
Mail Code 501-03
PO Box 420
Trenton, NJ 08625-0420.
(d) If the Department becomes aware of an occurrence of an threatened or endangered wildlife species on or proximate to a site that is not mapped as threatened or endangered wildlife species habitat by the Landscape Project, and the Department determines that the habitat may be suitable for that species, the Department shall notify the applicant of the proposed exceptional resource value classification based on new endangered or threatened species data and provide them with the opportunity to contest the classification decision prior to formally classifying the wetlands of exceptional resource value in accordance with (b) above.**(e)** An applicant may request that a documented habitat not result in the classification of a freshwater wetland as a freshwater wetland of exceptional resource value. Such a request shall include a demonstration of the long-term loss of one or more habitat requirements of the specific documented threatened or endangered species, including, but not limited to, wetlands size or overall habitat size, water quality, or vegetation density or diversity. Upon such a request, the Department shall review all available information, and shall make a final classification of the wetland.**(f)** A freshwater wetland of ordinary resource value, or an ordinary resource value wetland, is a freshwater wetland, which does not exhibit any of the characteristics in (b) above, and which is: **1.** An isolated wetland that: **i.** Is smaller than 5,000 square feet; and**ii.** Has the uses listed below covering more than 50 percent of the area within 50 feet of the wetland boundary. In calculating the area covered by a use, the Department will only consider a use that was legally existing in that location prior to July 1, 1988, or was permitted under this chapter since that date: **(1)** Lawns;**(2)** Maintained landscaping;**(3)** Impervious surfaces;**(4)** Active railroad rights-of-way; and**(5)** Gravelled or stoned parking/storage areas and roads; **2.** A drainage ditch;**3.** A swale; or**4.** A detention facility created by humans in an area that was upland at the time the facility was created regardless of the wetland resource classification of the wetland under this chapter, or the classification of the body of water, as FW-1 or FW-2 trout production, to which it discharges.**(g)** A freshwater wetland of intermediate resource value, or intermediate resource value wetland, is any freshwater wetland not defined as exceptional or ordinary.**(h)** The classification system established under this section shall not restrict the Department's authority to require the creation or restoration of freshwater wetlands under N.J.A.C. 7:7A.**(i)** To obtain a Department determination of the resource value classification for a particular wetland, an applicant may obtain a letter of interpretation from the Department under N.J.A.C. 7:7A-4.
N.J. Admin. Code § 7:7A-3.2
Amended and recodified from 7:7A-2.4 by 49 N.J.R. 3849(a), effective 12/18/2017Administrative Change, 51 N.J.R. 1193(a).

N.J. Admin. Code § 7:38-3.6

Highlands open waters (a) There shall be a 300-foot buffer adjacent to Highlands open waters in which no disturbance is permitted, except as provided in this chapter

"Highlands open waters" means all springs, streams including intermittent streams, wetlands, and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region, but shall not mean swimming pools.

N.J. Admin. Code § 7:50-6.14
No development, except for those uses which are specifically authorized in this subchapter, shall be carried out within 300 feet of any wetland, unless the applicant has demonstrated that the proposed development will not result in a significant adverse impact on the wetland, as set forth in N.J.A.C. 7:50-6.7.