

18. Endangered Species

18.1. Chapter Overview

18.1.1. Introduction

The following chapter describes the threatened and endangered species commonly found in the Northern Branch study area as well as the project's potential effect on these species. Endangered species are defined as species whose survival is in immediate danger due to a variety of factors including habitat loss, over-exploitation, competition, disease, disturbance or contamination. Threatened species are species that may become endangered due to deterioration of critical habitat. The endangered species assessment is based upon a contiguous habitat evaluation. As habitat areas cross municipal boundaries, and threatened and endangered species are mobile (either through locomotion or seed-spreading), the environmental assessment is described for the project study area as a whole and not individual municipalities.

18.1.2. Summary of Findings

Correspondence with the United States Fish and Wildlife Service (USFWS) and New Jersey Department of Environmental Protection Natural Heritage Program (NJDEP NHP) identified the potential for Indiana bat, yellow crowned night heron, wood turtle, cattle egret, glossy ibis, little blue heron, snowy egret, and eastern box turtle habitat to occur along the project corridor (refer to Section 18.3.1 and Table 18-1). In addition, an occurrence of the wood turtle was documented approximately three-quarters of a mile from the project corridor. Based on this information, a series of species habitat surveys were conducted along the existing right-of-way and at station locations to determine the presence or absence of suitable habitat for these species. The habitat surveys indicated that the existing habitat proximate to the railroad right-of-way are not suitable to support the eastern box turtle, the yellow crowned night heron, or the wood turtle. Minimal forest habitat was identified for the Indiana bat adjacent to the right-of-way due to its presence in a highly-developed urban area. As such, both the Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are not anticipated to adversely impact threatened and endangered species or habitats along the project corridor or in the vicinity of proposed station sites.

18.2. Methodology

18.2.1. Regulatory Framework

The review of threatened and endangered species was conducted pursuant to the provisions of three environmental policy documents: the Federal Endangered Species Act, the Freshwater Wetlands Protection Act, and the New Jersey Department of Environmental Protection Natural Heritage Program.

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) (16 U.S.C. 1531 et.seq.) became law in 1973 and provides for the listing, conservation and recovery of endangered and threatened species of plants and wildlife. The ESA provides for the protection of species that are at risk of extinction and for the protection of the ecosystems upon which they depend. This law includes threatened or endangered rare plant and animal species and their habitats. Endangered species are defined as species whose survival is in immediate danger due to a variety of factors including habitat loss, over-exploitation, competition, disease, disturbance or contamination. Threatened species are species that may become endangered due to deterioration of critical habitat. Under ESA, the U.S Fish and Wildlife Service (USFWS) strive to protect and monitor the numbers and populations of listed species. The State of New Jersey has incorporated similar provisions in several regulations.

Section 7(a)(2) of the ESA states that each federal agency shall ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat. Federal actions include: (1) expenditure of federal funds for roads, buildings or other construction projects, and (2) approval of a permit or license, and the activities resulting from such permit or license. This is true regardless of whether involvement is apparent, such as the issuance of a federal permit, or less direct, such as federal oversight of a state operated program

Section 9 of the ESA prohibits the taking of listed species. Taking is defined by the Act as “to harass, harm, pursue, hunt, shoot, wound, kill, trap capture or collect.” The definition of harm includes adverse habitat modification. Actions of federal agencies that do not result in the jeopardy or adverse modification, but could result in take, must be addressed under Section 7 of the ESA.

Freshwater Wetlands Protection Act

Chapter 9 of the New Jersey Statutes Annotated (N.J.S.A. 9 et. seq.) is known as the “Freshwater Wetlands Protection Act” and includes provisions for the protection of threatened and endangered species.

New Jersey Department of Environmental Protection Natural Heritage Program

The New Jersey Department of Environmental Protection Natural Heritage Program (NJDEP NHP) identifies the State’s most significant natural areas. The Natural Heritage Program database contains information collected by the Office of Natural Lands Management on rare plants, animals, and ecological communities. While there is no law associated with the database itself, the information contained in the database is important in identifying the potential for sensitive habitats and species that may be covered under the ESA or the New Jersey Freshwater Wetlands Protection Act.

18.2.2. Agency Coordination

The USFWS and the NJDEP NHP were contacted for information concerning threatened and endangered species that may be found within the Northern Branch study area. Each agency responded with lists of threatened or endangered species documented to occur on-site or within one-quarter mile of the alignments, and the USFWS also supplied maps showing the approximate area of the species. The NJDEP NHP also supplied information on species of special concern, which are rare species within the state that are at risk of becoming threatened. The species of special concern are often referred to as avian or herptile species. Avian species include all bird species; herptiles are species that are either reptiles or amphibians. Additionally, the Landscape Project GIS data set, produced by the New Jersey Division of Fish and Wildlife (DFW), was reviewed to identify potential habitat areas. This data set provides the geographic assessment of habitat that may contain threatened or endangered species.

Information regarding specific species along the alignment will be discussed; however, as requested by the NJDEP NHP, their specific locations cannot be shared with the public due to their sensitive nature and the threat of potential disturbance and/or illegal collection. As requested by the USFWS, their website was periodically reviewed (last performed in April 2011) to determine if there has been any change in status of the listing of threatened and endangered species in the vicinity of the municipalities along the alignment.

18.3. Environmental Review

The following section describes the environmental review as it pertains to endangered species and/or significant habitats. For the purposes of this analysis, the endangered species analysis area was assessed at the project corridor level as the potential impacts to significant species and habitats were uniform across municipalities. The narrative below describes the threatened and endangered species record review

and subsequent habitat survey that was performed for the project, potential impacts and mitigation methods if required.

18.3.1. Existing Conditions

18.3.1.1. Agency Record Review

Correspondence with the USFWS and NJDEP NHP identified four species or habitat as having the potential to occur along the project corridor and within one-quarter mile of the project corridor (Refer to Table 18-1).

Table 18-1: Threatened and Endangered Species Potentially Located within the Study Area

Common Name	Scientific Name	Federal Status	State Status	Agency Record Review	Habitat Survey
US FWS List					
Indiana bat	<i>Myotis sodalis</i>	E	E	Potentially within corridor	No favorable habitat was observed in project corridor
NJDEP NHP List					
eastern box turtle	<i>Terrapane carolina-carolina</i>	-	SC	Potentially within project corridor	No favorable habitat was observed in project corridor
cattle egret	<i>Bubulcus ibis</i>	-	SC	Potentially within ¼ mile of project corridor	No favorable habitat was observed in project corridor
glossy ibis	<i>Plegadis falcinellus</i>	-	SC	Potentially within ¼ mile of project corridor	No favorable habitat was observed in project corridor
little blue heron	<i>Egretta caerulea</i>	-	SC	Potentially within ¼ mile of project corridor	No favorable habitat was observed in project corridor
snowy egret	<i>Egretta thula</i>	-	SC	Potentially within ¼ mile of project corridor	No favorable habitat was observed in project corridor
yellow crowned night heron	<i>Nyctanassa violacea</i>	-	T	Potentially within project corridor	No favorable habitat was observed in project corridor
wood turtle	<i>Glyptemys insculpta</i>	-	T	Potentially within ¼ mile, documented occurrence ¾ mile away	No favorable habitat was observed in project corridor

T=Threatened; E=Endangered; SC=Species of Concern

Source: New Jersey Department of Environmental Protection, 2007 and US Fish and Wildlife Service, 2009.

A review of the NJDEP DFW Landscape Project GIS data set on February 2, 2010 concludes that there are no identified threatened or endangered species on the project site however the database identifies occurrences of the threatened species wood turtle and yellow-crowned night-heron within ¼ mile of the site.

Specific species location information is not disclosed in this document at the request of NJDEP NHP due to its sensitive nature and the potential disturbance and/or illegal collection of endangered species.

18.3.1.2. Habitat Survey

In November 2008, a species habitat survey was performed along the existing right-of-way and at station locations to identify the presence of suitable habitat for the eastern box turtle, the yellow crowned night heron, the wood turtle and the Indiana bat. The habitat assessment followed the regulatory guidelines as

set forth in the *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* (2002). Following is a summary of the habitat survey.

Indiana Bat

According to the USFWS the project corridor is located within the geographic vicinity of the endangered Indiana bat. From April through October, the Indiana bat is known to inhabit floodplain, riparian and upland forested areas roosting under loose bark during the day and foraging for insects at night. October through April is the hibernation period for the Indiana bat. The species is known to hibernate in caves and abandoned mine shafts. The November 2008 survey of the study area identified limited suitable habitat for the Indiana bat. Additionally, no caves or mines were identified in the project corridor.

The USFWS confirmed in correspondence dated December 17, 2009, that the project is not likely to adversely affect the Indiana bat due to the urbanized nature of the study area and the minimal proposed tree clearing. Field visits to the study area in 2010 indicated that the conditions addressed in the 2009 letter, specifically the lack of habitat for Indiana bats, remains unchanged.

Eastern Box Turtle (Terrapene Carolina)

The eastern box turtle is classified by the NJDEP NHP as a “species of special concern.” As a species of special concern the box turtle has no regulatory protections and is not a consideration in the permitting process. The eastern box turtle is found primarily in woodland settings, but can be found in pastures and marshy meadows (usually during cooler temperatures). Early in the day they can be found foraging at the edge of the forest. Their shell pattern is perfect camouflage for the forest floor. They tend to avoid open areas and bright sunlight. They have been found in muddy or shallow pools, or under decaying logs or vegetation during hot, dry weather.

The habitat assessment included both upland areas within the project corridor and surrounding water bodies. While it can be assumed that some of the surrounding suburban areas may support a population of turtles, the project corridor did not provide the required habitat and no specimens were observed.

Yellow Crowned Night Heron (Nyctanassa violacea)

The yellow crowned night heron is a medium sized short-legged wading bird having a grayish body with a white and black head and yellow/white crown. Yellow crowned night herons nest on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory or suburban parks and yards that offer suitable habitat. Yellow crowned night herons hunt along the shores of tidal creeks and tide pools within salt and brackish marshes dominated by salt marsh cordgrass (*Spartina alterniflora*). They also wade in shallow water and mudflats in search of prey and seek food along the wrack line during low tides.

The habitat assessment included both upland areas within the project corridor and surrounding water bodies. Foraging habitat was observed; however, there was an absence of the required nesting and roosting habitat.

Wood Turtle (Clemmys insculpta)

Wood turtles use aquatic habitats for mating, feeding and hibernation. Preferential aquatic habitat includes relatively remote freshwater streams, creeks and rivers with good water quality. Due to the requirement of good water quality, wood turtles are often found in streams containing native brook trout (*Salvelinus fontinalis*). These streams are typically located in undisturbed uplands such as fields and forests. Wood turtles breed underwater, typically in slow meandering streams with sandy bottoms and shoals. During hibernation, they are typically found on the bottom or in the banks of the waterway (NJDEP 2002).

The habitat assessment included both upland areas within the project corridor and surrounding water bodies. No favorable habitat was observed within the project corridor. Land uses adjacent to the rail corridor range from suburban residential to degraded industrial and do not provide the necessary remote habitat for the wood turtle. The project corridor provides limited wooded areas and therefore understory that is necessary for both potential protection and basking areas for the wood turtle. Most important is the fact that wood turtles are generally associated with the highest quality water bodies (trout streams). Only one tributary within the study area is classified as a C1 water. However this tributary to Tenakill Brook is not trout producing and therefore does not represent habitat for the wood turtle.

Cattle Egret (Bubulcus ibis)

The cattle egret is classified by the NJDEP as a “species of special concern”. As a species of special concern the egret has no regulatory protections and is not a consideration in the permitting process. The cattle egret’s habitat consists of fields, marshes, freshwater wetlands, pastures, livestock pens, swamps, and air strips. The cattle egret is less dependent on aquatic habitats than other egrets, preferring grassy fields. New Jersey is at the northern fringe of the egret’s range. The habitat assessment included both upland areas within the project corridor and surrounding water bodies. No favorable habitat was observed within the project corridor.

Glossy Ibis (Plegadis falcinellus)

The glossy ibis is classified by the NJDEP as a “species of special concern”. As a species of special concern the ibis has no regulatory protections and is not a consideration in the permitting process. Most common in wetlands, floodplains, mangroves, mudflats along the Atlantic and Gulf coasts; occasionally wanders inland. Their diet consists of crayfish and other invertebrates, as well as frogs, fish, and plants; eats crabs on the coast. New Jersey is at the fringe of the glossy ibis’ range. The habitat assessment included both upland areas within the project corridor and surrounding water bodies. No favorable habitat was observed within the project corridor.

Little Blue Heron (Egretta caerulea)

The little blue heron is classified by the NJDEP as a “species of special concern”. As a species of special concern the little blue heron has no regulatory protections and is not a consideration in the permitting process. The little blue heron is common in wetlands, floodplains, mangroves, mudflats along the Atlantic and Gulf coasts; occasionally wanders inland. Diet consists of crayfish and other invertebrates, as well as frogs, fish, and plants. The habitat assessment included both upland areas within the project corridor and surrounding water bodies. The little blue heron requires stands of trees for colonized roosting. No favorable habitat was observed within the project corridor.

Snowy Egret (Egretta thula)

The snowy egret is classified by the NJDEP as a “species of special concern”. As a species of special concern the snowy egret has no regulatory protections and is not a consideration in the permitting process. Snowy egrets prefer shallow estuaries and coastal wetlands throughout their range. In the interior west, their preferred habitats include emergent wetlands and marshes, shorelines, and riparian areas along large rivers. Snowy egrets require shallow water for foraging, and they nest colonially in low shrubs or trees in marsh or riparian areas. New Jersey is at the fringe of the egret’s range. The habitat assessment included both upland areas within the project corridor and surrounding water bodies. No favorable habitat was observed within the project corridor.

18.3.2. Potential Impacts and Mitigation

18.3.2.1. No Build Alternative

It is anticipated that the continuation of existing rail operations within the right-of-way will not impact threatened or endangered species habitats. Under the No Build Alternative, any proposed developments that could potentially impact threatened or endangered species would be required to adopt mitigation measures to eliminate any adverse impacts.

It is possible that, over time, other rare or protected species could establish populations in the study area. Such establishment would be the result of continuing conservation efforts and environmental remediation activities that have as a goal the ongoing restoration of degraded habitat areas. As a result, all future proposed developments should be reviewed on a case-by-case basis.

18.3.2.2. Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4

Both Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation. Consequently, the discussion below applies to both alternatives.

Impacts – The habitat surveys described above assessed the entire study area and determined that there is insufficient habitat to support the eastern box turtle, the yellow crowned night heron, or the wood turtle. As such, neither of the Build Alternatives, regardless of linear distance, has the potential to affect threatened or endangered species through the compromise or taking of habitat.

In addition, minimal forest habitat was identified for the Indiana bat adjacent to the right-of-way due to the densely developed urban corridor. All station sites would be confined to already developed urban land and would not require any tree clearing. Correspondence with the USFWS in 2008 and 2009 concurred that the proposed project is unlikely to adversely affect the Indiana bat due to the urbanized condition of the project corridor and minimal proposed tree clearing. Therefore, no further consultation is required with the USFWS, unless it is determined in the future that tree clearing will be required.

Mitigation – The implementation of either the Light Rail to Tenafly (Preferred Alternative) or Light Rail to Englewood Route 4 is not expected to adversely impact threatened and endangered species habitat along the project corridor or at station sites; therefore, mitigation for operational impacts is not required. Should tree clearing during construction activities be required, NJ TRANSIT would consult with the USFWS, and seasonal restrictions would likely be implemented (prohibiting tree clearing between April 1 and September 30).

18.4. Summary of Potential Environmental Effects

Correspondence with the respective wildlife agencies indicated the potential for threatened or endangered species to occur within the Northern Branch study area. A field survey and subsequent correspondence with the USFWS and NJDEP confirmed that the study area corridor is unlikely to support communities of the identified species.

This finding is true for the entirety of the Northern Branch study area, from Tenafly to North Bergen. As a result, there are no findings differentiating the two Build Alternatives in terms of their potential for impact to threatened and endangered species. No impact is therefore anticipated under either Build Alternative.