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Natural Resources

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Acronyms/Abbreviations

ECL	Environmental Conservation Law
ESA	Endangered Species Act
EO	Executive Order
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NYCRR	New York Codes, Rules and Regulations
NYNHP	New York Natural Heritage Program
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
RTE	Rare, Threatened or Endangered
SGCN	Species of Greatest Conservation Need
U.S.	United States
U.S.C.	United States Code
UB	University at Buffalo
USDOT	U.S. Department of Transportation
USFWS	United States Fish and Wildlife Service

10 Natural Resources

This chapter documents the evaluation of potential effects of the Proposed Action to natural resources, which include the general ecology, flora and fauna, and rare, threatened or endangered (RTE) species. This chapter also discusses strategies undertaken by the Niagara Frontier Transportation Authority to avoid or minimize any potential effects of the Proposed Action.

10.1 REGULATORY CONTEXT

10.1.1 Federal Regulatory Context

10.1.1.1 Endangered Species Act

The Endangered Species Act of 1973 (ESA) (16 U.S.C. §1531 to 1544) recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The ESA prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the act, and interstate or foreign commercial activities. The ESA also provides for the protection of critical habitats that endangered or threatened species depend on for survival. Section 7 of the ESA requires federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.

10.1.1.2 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. §668 to 668c) prohibits anyone without a permit issued by the Secretary of the Interior from “taking” bald or golden eagles, including their parts, nests, or eggs. The act provides criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

10.1.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §703 to 712) was implemented to protect birds migrating between the United States and Canada. Subsequent amendments implemented treaties between the United States and Mexico, Japan, and the former Soviet Union. The MBTA makes it unlawful to pursue, hunt, take, capture, kill, or sell birds listed therein. The statute applies equally to both live and dead birds, and grants full protection to any bird parts, including feathers, eggs, and nests. The U.S. Fish and Wildlife Service (USFWS) implements the MBTA.

10.1.1.4 Executive Order 13112, Invasive Species

Executive Order (EO) 13112, “Invasive Species,” states that federal agencies must prevent, to the extent practicable and permitted by law, the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause.

10.1.1.5 Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species

This order amends EO 13112 and directs actions to continue coordinated federal prevention and control efforts related to invasive species.

10.1.1.6 Section 4f of the Department of Transportation Act

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Transit Administration and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use.

10.1.2 New York State Regulatory Context

10.1.2.1 Endangered Species Regulation

The Endangered and Threatened Species of Fish and Wildlife, Species of Special Concern Regulations (Environmental Conservation Law [ECL], Sections 11-0535[1]-[2], 11-0536[2], [4], Implementing Regulations 6 New York Codes, Rules and Regulations (NYCRR) Part 182) prohibit the taking, import, transport, possession, or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of these species as listed in 6 NYCRR §182.6.

10.1.2.2 Protected Native Plant Program

Section 9-1503 of 6 NYCRR Part 193.3 of the ECL states, “[n]o person shall, in any area designated by such list or lists, knowingly pick, pluck, sever, remove, damage by the application of herbicides or defoliants or carry away, without the consent of the owner thereof, any protected plant”. New York State Department of Environmental Conservation (NYSDEC), through the New York Natural Heritage Program (NYNHP), maintains a list of plant species that are endangered, threatened, rare, or exploitably vulnerable.

10.1.2.3 Invasive Species Regulations

New York State Department of Agriculture and Markets Law Section 167[3-a] and ECL, Sections 1-0101, 3-0301, 9-0105, 9-1303, 11-0507, 11-0509, 11-0511, 71-0703, and 71-0925 establish procedures to identify and classify invasive species and to establish a permit system to restrict the sale, purchase, possession, propagation, introduction, importation, and transport of invasive species in the state, as part of the statewide invasive species management program, as required by ECL Sections 9-1709 and 71-0703. Under ECL (6 NYCRR Part 575) NYSDEC has created and maintains a list of prohibited and regulated species.

10.1.2.4 Critical Environmental Areas

Critical Environmental Areas (CEAs) are areas in the state that have been designated by a local or state agency to recognize a specific geographical area. Under 6 NYCRR 617.14(g) of the State Environmental Quality Review Act regulations, CEAs have one or more of the following

characteristics: (1) is a benefit or threat to human health; (2) contains an exceptional or unique natural setting; (3) has exceptional or unique social, historic, archaeological, recreational or educational values; or (4) has an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any physical disturbance.

10.2 METHODOLOGY

The study area for natural resources consists of a 150-foot-wide area around the Proposed Action alignment. The portion of the study area south of I-290 can be characterized as urban residential and commercial land uses with closed drainage, and the portion of the study area north of I-290 can be characterized by suburban land uses with intermittent open drainage and open waterbodies. Ellicott Creek, Bizer Creek, Lake LaSalle, and several unnamed streams and open swales are within the study area.

Existing conditions for natural resources within the study area were characterized using the following governmental and non-governmental data sources:

- USFWS National Wetland Inventory wetland maps
- NYSDEC Environmental Resource Mapper for data on streams, waterbodies, and freshwater wetlands
- NYNHP Environmental Resource Mapper
- NYSDEC Nature Explorer for information on rare plants, animals, and Significant Natural Communities/Habitat occurrences and general locations
- Terrestrial ecological communities within the study area as described in the context of “Ecological Communities of New York State” (Edinger, et al. 2014)
- 2000-2005 New York State Breeding Bird Atlas
- NYSDEC Herp Atlas Project
- National Audubon Society 2012–2013 Christmas Bird Count
- Response to a request (dated March 27, 2019) from the NYNHP for information on rare, threatened, or endangered, candidate, or proposed species in the vicinity of the project corridor
- Response to requests (dated January 18 and March 6, 2019) from the NYSDEC for information on rare, threatened, or endangered, candidate, or proposed species in the vicinity of the project corridor
- Project-specific information provided through USFWS’s online platform—Information for Planning and Consultation (IPaC) System —as shown in the USFWS Species List(s) dated March 6, 2019
- Site reconnaissance of the study area on June 24, 2019, completed during the growing season for ecological communities, flora and fauna, RTE species, and wetlands

10.3 EXISTING CONDITIONS

10.3.1 Terrestrial Resources

An ecological community is an assemblage of interacting plant and animal populations that share a common environment. A review of the project study area identified six primary ecological communities using the New York Natural Heritage Program’s *Ecological Communities of New York State*, second edition as a reference. Table 10-1 lists these communities.

Table 10-1. Terrestrial Ecological Communities within the Study Area

Ecological Community	Definition Summary	Study Area	Approximate Coverage %
Terrestrial Cultural	A community created, maintained, or modified by human activity.	All	90-95%
Successional Old Field	A meadow dominated by forbs and grasses that occur on sites that have been cleared and plowed, and then abandoned	North of I-290	<5%
Successional Shrubland	A shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or that are otherwise disturbed	North of I-290	<2%
Floodplain Forest	A hardwood forest that occurs on the mineral soils of low terraces of river floodplains and of river deltas	North of I-290	<1%
Freshwater Wetland	A community that contains hydrology, hydrophytic vegetation, and hydric soils as defined by the U.S. Army Corps of Engineers	North of I-290	<2%
Surface Water (riverine cultural, lacustrine cultural)	Open water such as creeks, canals, ponds, and lakes	North of I-290	<2%
TOTAL ESTIMATED ACREAGE			250—275

Sources: Ecological community names and descriptions are derived from “Ecological Communities of New York State” (Edinger, et al. 2014).

The largest ecological community is classified as a “Terrestrial Cultural” ecological community. Terrestrial cultural ecological communities are “either created and maintained by human activities; are modified by human influence to such a degree that the physical conformation of the substrate; or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence (Edinger, et al. 2014).” Examples of terrestrial cultural ecological communities within the study area include paved roads/paths, parking lots, ditches, railroads, urban vacant lots, mowed lawns, and mowed lawns with trees, gardens, and buildings. Other communities within the study area are smaller. These communities, although characterized by moderate levels of disturbance, are generally less disturbed than terrestrial cultural ecological communities. These communities include surface water (including Riverine Cultural and Lacustrine Cultural), freshwater wetland (Open Mineral Soil Wetlands), floodplain forest (Forested Mineral Soil Wetlands), and successional shrubland and successional old field (Open Uplands). Definitions of these ecological communities and descriptions of these communities are as per [(Edinger, et al. 2014)].

10.3.2 Wildlife

In general, non-native and invasive species or native pioneer species of low ecological value dominate the ecological communities. Furthermore, a large portion of these communities are maintained (e.g., by mowing) or altered to such a degree that the physical conformation and biological composition are

of little ecological value. While floodplain forests, successional old-field and shrubland communities, freshwater wetlands, and surface waters are present, these consist primarily of edge communities bordering the study area and are characterized by moderate levels of disturbance and/or non-native invasive species. For these reasons, most ecological communities that are present are characterized by disturbance and are of low ecological value. (See Chapter 11, “Water Resources” for discussion of wetlands and aquatic communities.)

Figure 10-1 presents ecological communities within the study area. A small stretch of successional old field and shrubland exists along the north- and southbound lanes of Sweet Home Road between I-290 and 1185 Sweet Home Road. The slopes along the roadway are carpeted with both invasive and native plants along with invasive buckthorn trees (*Rhamnus sp.*) and locust trees (*Gleditsia sp.*).

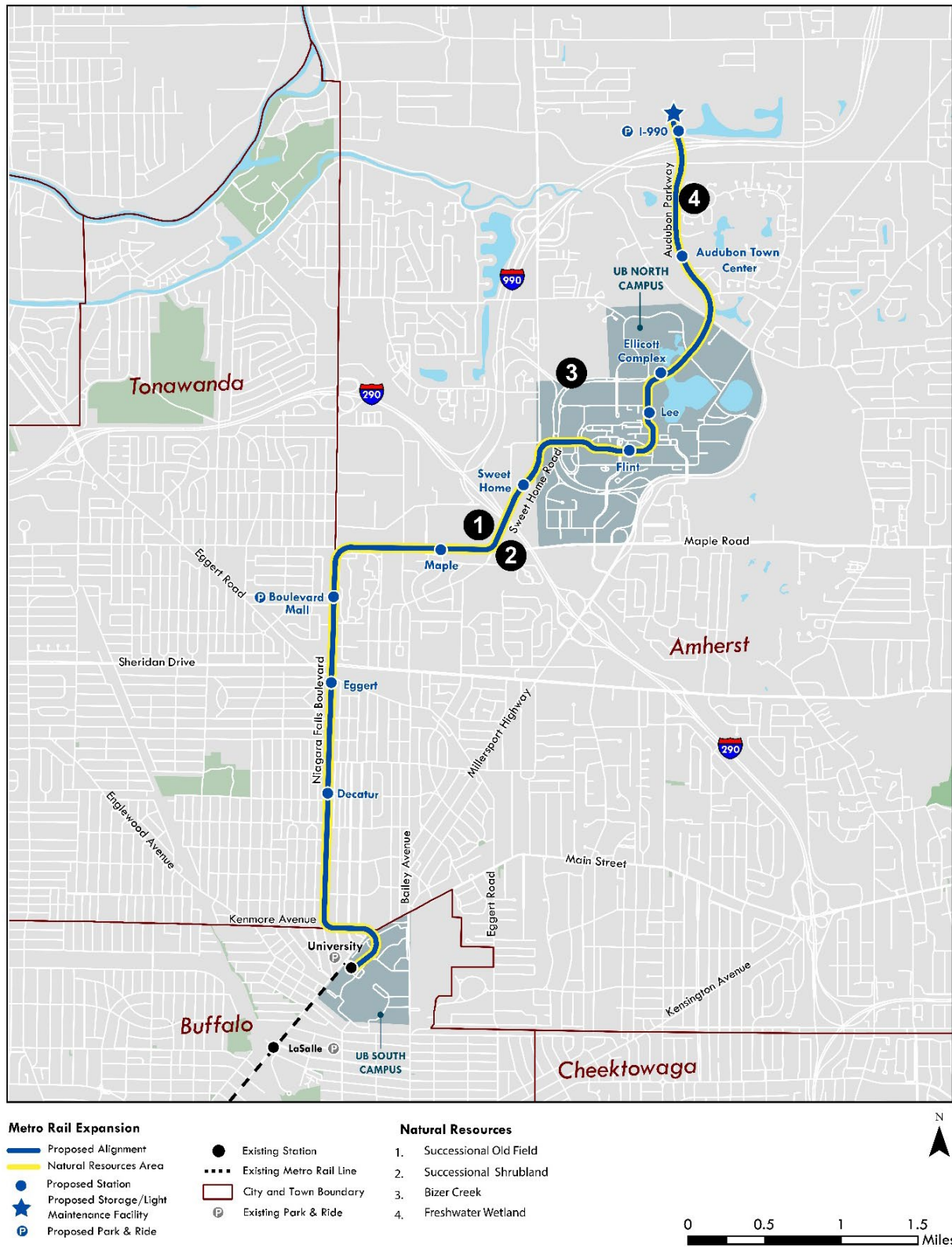
The riparian corridor along Bizer Creek is approximately 125 to 150 feet wide at the Proposed Action alignment crossing. This riparian corridor is characterized by elm, invasive buckthorn (*Rhamnus sp.*), poplar (*Populus sp.*), walnut (*Juglans sp.*), catalpa (*Catalpa sp.*), and basswood (*Tilia sp.*). The creek itself is hard walled with a concrete liner on the walls and bottom. The riparian corridor is bordered by mowed lawns planted with sycamore trees (*Platanus sp.*) and other ornamentals.

Narrow strips of secondary forests between Lake LaSalle and Ellicott Creek exist along and within the Proposed Action alignment. These forests consist of oak (*Allocauarina sp.*), maple (*Acer sp.*), cottonwood (*Populus sp.*), green ash (*Fraxinus pennsylvanica*), and walnut (*Juglans sp.*).

Freshwater forested wetlands exist in the study area between Benderson Village and Dodge Road along the southbound lanes of John James Audubon Parkway. These wetlands have been delineated and characterized as federal jurisdictional wetlands.

The Proposed Action is in a heavily urbanized setting dominated by transportation infrastructure, buildings, and other impervious surfaces. Habitat available to wildlife is primarily available in roadside margins, fragmented wooded areas, streams, and wetlands that are adjacent to portions of I-990 and north of the Proposed Action alignment’s crossing at I-290, adjacent to University at Buffalo (UB) North Campus. Traffic noise on I-990 and I-290 likely degrades habitat quality in these remnant patches and contributes to diminished wildlife communities. Most wildlife in the study area is limited to urban-adapted, disturbance-tolerant generalist species, although some areas, such as the large wetland complex (i.e., Wetland TE-22, TE-33, and TE-34 as described in Chapter 11, “Water Resources”) near the northern end of the study area, north of I-290, support a more diverse assemblage of species.

Figure 10-1. Ecological Communities within the Study Area



The New York State Breeding Bird Atlas is a periodic census of the distribution of the state's breeding birds. The last completed census was conducted from 2000 to 2005 and documented the following:

- 79 species in Atlas Block 1877D, which comprises the study area north of I-990
- 63 species in Atlas Block 1876B, which comprises the central portion of the study area north of I-290
- 57 species in Atlas Block 1876A, which comprises the western portion of the study area north of I-290 west of UB North Campus
- 56 species in Atlas Block 1876C, which comprises the study area south of I-290

The NYSDEC Herp Atlas Project conducted a survey from 1990 to 1999 that documented the geographic distribution of New York's reptile and amphibian species. The Herp Atlas documented the following within the U.S. Geological Survey 7.5' Topographic Map:

- 12 species within the Tonawanda East census block in which the portion of the Proposed Action north of I-290 is located
- 13 species within the Buffalo Northeast census block that includes all portions of the Proposed Action south of I-290

However, these census blocks span larger and less disturbed habitats, as well as different habitat types from those that are present near the study area. Therefore, many of the species documented within the census blocks are unlikely to occur within the study area because of a lack of suitable habitat. Appendix D, Agency Correspondence, provides the species found in the Breeding Bird Atlas and Herp Atlas, the subset of those expected to occur within the study area.

Most of the study area is intensively developed and covered by impervious surfaces and likely support urban-adapted generalist mammals, which include the following:

- Eastern gray squirrel (*Sciurus carolinensis*)
- Norway rat (*Rattus norvegicus*)
- Raccoon (*Procyon lotor*)
- House mouse (*Mus musculus*)
- Feral cat (*Felis domesticus*)

The UB North Campus and undeveloped area immediately north of I-990 may support some additional mammals, including the following:

- Red fox (*Vulpes vulpes*)
- Eastern coyote (*Canis latrans*)
- White-footed mouse (*Peromyscus leucopus*)
- Groundhog (*Marmota monax*)
- Striped skunk (*Mephitis*)
- Virginia opossum (*Didelphis virginiana*)
- White-tailed deer (*Odocoileus virginianus*)
- Big brown bat (*Eptesicus fuscus*)

- Eastern red bat (*Lasiurus borealis*)
- Hoary bat (*Lasiurus cinereus*)
- Silver-haired bat (*Lasionycteris noctivagans*)

Other mammals that may be supported by the adjacent waterways within Ellicott Creek and Lake LaSalle include the following:

- Muskrats (*Ondatra zibethicus*)
- Beavers (*Castor canadensis*).

Several breeding birds were seen or heard in the riparian corridor along Bizer Creek during the June 24, 2019, site visit: belted kingfisher (*Megaceryle alcyon*), yellow warbler (*Setophaga petechia*), house wren (*Troglodytes aedon*), northern cardinal (*Cardinalis cardinalis*), and American robin (*Turdus migratorius*). In addition, small fish and amphibians are within the creek and along the banks.

No NYSDEC “Critical Environmental Areas” or federal “Wildlife and Waterfowl Refuges” are present within the study area.

10.3.3 Threatened or Endangered Species and Significant Ecological Communities

The USFWS IPaC database was reviewed on March 6, 2019, and NYNHP databases for federal and New York state (NYS)-listed species for the study area most recently reviewed on March 27, 2019. Table 10-2 lists the species found near the study area. The study area was reviewed for NYS-listed and federally listed threatened or endangered species and significant ecological communities. Unless otherwise specified in the list below, the NYNHP review areas for NYS-listed and federally listed species and significant ecological communities are within a 1.5-mile radius around the study area. The NYNHP’s “Notes for Data Users” also provides species-specific screening distances for the following species/ habitats:

- Indiana bat (*Myotis sodalis*) (2.5-mile radius [hibernacula or roost tree])
- Northern long-eared bat (*Myotis septentrionalis*) (5-mile radius [hibernacula] and 1.5-mile radius [roost tree, non-winter locations])
- Bog turtle (*Glyptemys muhlenbergii*) (1-mile radius)
- Blanding’s turtle (*Emydoidea blandingii*) (0.8-mile radius)
- Timber rattlesnake (*Crotalus horridus*) (1.5-mile radius)
- Upland sandpiper (*Bartramia longicuada*) (1.5-mile radius)
- Bald eagle (*Haliaeetus leucocephalus*) (1.5-mile radius)
- Northern harrier (*Circus cyaneus*) (1.5-mile radius)
- Aquatic species (up to 2 miles downstream)

There are no documented IPaC or NYNHP records of Indiana bat, bog turtle, Blanding’s turtle, timber rattlesnake, upland sandpiper, bald eagle or northern harrier within the review area. Discussions of the species listed by IPaC and NYNHP as having the potential to occur within the study area are below.

Table 10-2. Rare, Threatened or Endangered Species within the Study Area

Common Name	Scientific Name	State Status	Federal Status	NYNHP Record Near Study Area	IPaC Potential Near Study Area
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Threatened	Threatened	N/A	No critical habitat identified
Peregrine Falcon†	<i>Falco peregrinus</i>	Endangered	—	Within 0.5 mile	Not Listed
Eastern Spiny Softshell Turtle†	<i>Apalone spinifera spinifera</i>	Special Concern	—	Within 1 mile	Not Listed
Slippershell Mussel#	<i>Alasmidonta viridis</i>	Unlisted, Critically Imperiled	—	Within 1 mile	Not Listed
Lilliput Mussel#	<i>Toxolasma parvum</i>	Unlisted, Critically Imperiled	—	Within 1 mile	Not Listed
Pink Heelsplitter Mussel#	<i>Potamilus alatus</i>	Unlisted, Imperiled	—	Within 1 mile	Not Listed
Paper Pondshell Mussel#	<i>Utterbackia imbecillis</i>	Unlisted, Critically Imperiled	—	Within 1 mile	Not Listed
Rainbow Mussel#	<i>Villosa iris</i>	Unlisted, Imperiled	—	Within 1 mile	Not Listed

Sources: New York Natural Heritage Program response letter dated March 27, 2019; U.S. Fish and Wildlife Service IPaC Official Species List dated March 6, 2019 (see Appendix D, Agency Correspondence).

Notes:

(†) Documented within 1/2 mile of the study area.

(#) Documented on 2018-08-09 where the project site coincides with Ellicott Creek per NYSDEC correspondence dated March 27, 2019.

10.3.3.1 Federal

As described shown in Table 10-2, the USFWS IPaC System lists the state and federally threatened northern long-eared bat as having the potential to occur near the study area. The bald eagle, which is federally protected under the Bald and Golden Eagle Protection Act, also has the potential to encroach into the study area. Appendix D, Agency Correspondence, provides the preliminary IPaC Official Species Lists (dated March 6, 2019) for the study area. The NYNHP correspondence response indicated no known occurrences of federally listed species near the study area. However, the IPaC System identified the northern long-eared bat as a threatened species and a number of birds of conservation concern, including bald eagle, black-billed cuckoo, bobolink, buff-breasted sandpiper, Canada warbler, cerulean warbler, dunlin, golden eagle, golden-winged warbler, lesser yellowlegs, long-eared owl, prairie warbler, red-headed woodpecker, ruddy turnstone, semipalmated sandpiper, short-billed dowitcher, snowy owl, and wood thrush. Table 10-2 lists the federally listed species.

The IPaC response letter indicates no national wildlife refuge lands and no fish hatcheries are in the study area. The study area overlaps with freshwater forested/shrub wetlands, and lake and riverine habitats.

Federally listed species are automatically NYS-listed regardless of whether the species has been identified as threatened or endangered by NYSDEC or mapped by NYNHP.

10.3.3.2 New York State

In addition to the federally listed species discussed previously, the NYNHP indicated two NYS-listed animals have been documented within 1/2 mile of the Proposed Action (peregrine falcon and spiny softshell turtle) and five freshwater mussel species of conservation concern (including slippershell mussel, lilliput, pink heelsplitter, paper pondshell, and rainbow) within Ellicott Creek. (See Table 10-2 and the response from IPaC found in Appendix D, Agency Correspondence). No

significant ecological communities were identified as occurring near the Proposed Action alignment by NYNHP in its March 27, 2019, communication.

PEREGRINE FALCON

The peregrine falcon (*Falco peregrinus*) is an NYS-listed endangered bird of prey and a Species of Greatest Conservation Need (SGCN) (New York Natural Heritage Program 2017). Populations have grown dramatically since the 1980s and have become increasingly common in urban areas, demonstrating tolerance to human disturbance and an ability to exploit resources in human-modified environments (Cade, et al. 1996), (White, et al. 2002)). It has been suggested that peregrine falcons will tolerate almost any level of human activity taking place below their nest provided that the nest is inaccessible to humans and predators (Ratcliffe 1972). Urban peregrine falcons appear to have particularly high tolerance thresholds compared with those in more remote areas (White, et al. 2002). In several cities within New York, peregrine falcons nest on bridges and high-rise buildings among high levels of noise and human activity associated with the urban environment (Frank 1994), (Cade, et al. 1996), (Loucks and Nadeski 2005)).

The NYNHP indicated that there are breeding peregrine falcons within 1/2 mile of the Proposed Action. Therefore, peregrine falcons could occur within the study area.

EASTERN SPINY SOFTSHELL TURTLE

The eastern spiny softshell turtle (*Apalone spinifera spinifera*) is listed as a species of Special Concern and an SGCN (New York Natural Heritage Program 2017). Populations of this aquatic turtle are likely in decline in portions of its range in New York, although long-term trends are unknown (New York Natural Heritage Program 2018). These turtles typically reside in slow moving waters (e.g., large rivers, lakes, protected bays, impoundments), prefer habitats with unconsolidated substrates (e.g., sandy or soft muddy bottoms), and avoid rocky bottom waters (New York Natural Heritage Program 2018). Mudflats, sandbars, and floating mats of vegetation used for basking and nesting are important components of high-quality habitat (Gibbs, et al. 2007).

The NYSDEC and NYNHP both indicated that the turtle occurs within 1/2 mile of the northern portion of the study area (north of I-290). Therefore, this species could occur within the waters crossed by, or immediately adjacent to, the Proposed Action alignment. This species was observed basking on the north shore of Ellicott Creek during the June 24, 2019, site visit approximately 0.25 mile west of the Proposed Action alignment.

SLIPPERSHELL MUSSEL

The slippershell mussel (*Alasmidonta viridis*) is designated as Critically Imperiled and an SGCN in New York (New York Natural Heritage Program 2017). Throughout its range, this species is typically found in headwater streams but could also occur downstream (NatureServe 2018). In New York, the mussel occupies a wide range of habitats, from small streams to large rivers. The largest historical collections of this species in New York have come from the Niagara River (Strayer and Jirka 1997). The mussel is found in high to moderate gradient streams, and while it may be found in riffles,¹ it is typically found living in a substrate of sand and fine gravel. In stretches where there is a continuous current, it will thrive in a mud-and-sand bottom among roots of aquatic vegetation (

¹ a shallow extending across the bed of a stream over which the water flows swiftly so that the surface of the water is broken in waves

(Cummings and Mayer 1992), (McMurray, et al. 2012), (Metcalf-Smith, et al. 2005), (NatureServe 2018)). It is a small-sized species that can burrow out of sight in sand or sandy mud and so can be easily overlooked. It is thought to be a moderate habitat specialist (NatureServe 2018) and is not found in impounded waters (G. Watters, A guide to the freshwater mussels of Ohio 1995).

The NYNHP disclosed in a March 27, 2019, letter that this mussel was confirmed on August 9, 2018, as occurring within Ellicott Creek at the intersection with the Proposed Action alignment.

LILLIPUT MUSSEL

The Lilliput mussel (*Toxolasma parvum*) is designated as Critically Imperiled, and until 2013 was known to occur only in New York from historical records (Mahar and Landry 2013). The Lilliput mussel can be found in the shallows of lakes, ponds, and reservoirs, as well as in low gradient, quiet waters of creeks, and small to large rivers, where it lives in soft substrate of mud, sand, or fine gravel (Cummings and Mayer 1992), (Parmalee and Bogan 1998), (Strayer and Jirka 1997), (Metcalf-Smith, et al. 2005), (McMurray, et al. 2012)). In large rivers and wetlands, the mussel can be found in backwater areas with little current. In New York, the mussel is most common in the muddy substrate of low gradient canals and creeks (Mahar and Landry 2013). The Lilliput mussel is considered a generalist (Pilger and Gido 2012), (NatureServe 2018), and while this mussel population trends in New York are unknown, it is assumed that they are declining from environmental stressors (NatureServe 2018). This mussel is considered an SGCN in New York (New York Natural Heritage Program 2017).

The NYNHP disclosed in a March 27, 2019, letter that this mussel was confirmed on August 9, 2018, as occurring within Ellicott Creek at the intersection with the proposed alignment.

PINK HEELSPLITTER MUSSEL

The pink heelsplitter mussel (*Potamilus alatus*) is considered Imperiled and is listed as an SGCN in New York (New York Natural Heritage Program 2017). This mussel occurs in quiet backwaters of transitional cool to warm waters and prefers silty sand and mud substrates (New York State Department of Environmental Conservation 2015). It is widespread in shallow lake habitats, impoundments, canals, and medium to large rivers (Cummings and Mayer 1992), (Strayer and Jirka 1997), (Metcalf-Smith, et al. 2005), (G. Watters, A guide to the freshwater mussels of Ohio 1995), (NatureServe 2018). Although less common, it can also be found in riffles of creeks and rivers (Strayer and Jirka 1997). Since 1970, the pink heelsplitter mussel has been found in 17 New York waterbodies in the Lower Genesee River basin, Western Lake Ontario basin, Finger Lakes basin, Lake Erie basin, Lake Champlain basin, and in the Erie Canal (New York State Department of Environmental Conservation 2015). This mussel population trends in New York are unknown, but based on historical information, it is likely they are in decline (New York State Department of Environmental Conservation 2015).

The NYNHP disclosed in a March 27, 2019, letter that this mussel was confirmed on August 9, 2018, as occurring within Ellicott Creek at the intersection with the Proposed Action alignment.

PAPER POND SHELL MUSSEL

The paper pondshell mussel (*Utterbackia imbecillis*) is considered Critically Imperiled and an SGCN in New York (New York Natural Heritage Program 2017). Based on historical records circa 1970,

until 2011 this species was known to occur only in New York (Mahar and Landry 2013), (New York State Department of Environmental Conservation 2015). Since then, this species has been found in Oswego and Mid-Ontario basins, the Lake Erie basin, and the Erie Canal (Mahar and Landry 2013). The paper pondshell mussel prefers soft substrates in quiet warm, cool, and transitional cool waters of ponds, lakes, and sluggish mud-bottomed pools and backwaters of creeks and rivers (Cummings and Mayer 1992), (Strayer and Jirka 1997), (Metcalf-Smith, et al. 2005), (G. Watters, A guide to the freshwater mussels of Ohio 1995), (McMurray, et al. 2012). It is commonly found in artificial waters (e.g., canals, impoundments, retention ponds, etc.) (G. Watters, A guide to the freshwater mussels of Ohio 1995), (NatureServe 2018). This species seems to tolerate moderately poor water and habitat quality (New York State Department of Environmental Conservation 2015).

The NYNHP disclosed in a March 27, 2019, letter that this mussel was confirmed on August 9, 2018, as occurring within Ellicott Creek at the intersection with the Proposed Action alignment.

RAINBOW MUSSEL

The rainbow mussel (*Villosa iris*) is designated Imperiled and a high-priority SGCN in New York (New York Natural Heritage Program 2017). Considered a habitat specialist, the rainbow mussel prefers sandy cobble, coarse sand, or gravel substrates in or near riffles and along the edges of emergent vegetation in moderate to strong current (Cummings and Mayer 1992) (Parmalee and Bogan 1998) (Metcalf-Smith, et al. 2005) (McMurray, et al. 2012) (NatureServe 2018). This mussel is typically thought to prefer creeks and small rivers (Cummings and Mayer 1992) (McMurray, et al. 2012), (Metcalf-Smith, et al. 2005) (Strayer and Jirka 1997). However, it may also occur in lakes and large rivers (Committee on the Status of Endangered Wildlife in Canada 2006), (NatureServe 2018) (Strayer and Jirka 1997). This mussel can become numerous in clean, well-oxygenated water in less than 3 feet of depth (Parmalee and Bogan 1998).

The NYNHP disclosed in a March 27, 2019, letter that this mussel species was confirmed on August 9, 2018, as occurring within Ellicott Creek at the intersection with the Proposed Action alignment.

10.4 FUTURE WITHOUT THE PROPOSED ACTION

The No Action condition would consist of a future scenario with no changes to the Proposed Action corridor, beyond the projects that are already committed and planned by others. See Chapter 2, “Land Use, Zoning, and Community Character” for a list of No Action conditions projects. Most wildlife in the study area is limited to urban-adapted, disturbance-tolerant generalist species. Therefore, no adverse impacts to plant communities, wildlife, forests, and protected species would occur under the No Action condition.

10.5 PROPOSED ACTION

Natural resource areas potentially affected by the Proposed Action alignment include the following:

- Approximately 0.1 acre of riparian forest along Bizer Creek
- Approximately 0.5 acre of old-field meadow and shrubland along Sweet Home Road
- An undetermined amount of habitat of the eastern spiny softshell turtle and five species of mussels along Ellicott Creek
- An undetermined amount, likely consisting of one plus acres of freshwater wetland, drainage swales, old-field meadow, and successional shrub land along and adjacent to John James Audubon Parkway
- An undetermined amount, likely consisting of several acres of freshwater wetland, surface water, floodplain forest, and successional shrubland north of the I-990 at the end of John James Audubon Parkway

In addition, other areas of federal and state jurisdictional wetlands are present within the study area. It is anticipated that some of these wetlands would be permanently incorporated into the proposed footprint of the Proposed Action. These effects would generally occur around Bizer Creek, Ellicott Creek, various roadside swales, and north of I-990. Chapter 11, “Water Resources”, provides additional detail.

10.6 MITIGATION

No mitigation is required for the plant communities within the study area. Replacement trees, shrubs, and herbs may be provided where the width of the right-of-way would accommodate the space needed for these plants to properly grow.

No mitigation is required for wildlife within the study area. The majority of the wildlife species that are common to the study area are typical of urban and/or disturbed environments and would adapt and recover quickly. As noted, the study area was not found to contain nesting sites for migratory birds. If it becomes evident that migratory birds are utilizing the study area, additional surveys will be conducted as warranted. The elimination of forest resources may be mitigated in part by implementing urban forestry practices. During the construction phase, the contractor should be strongly encouraged to send any felled trees to a chipper, so the cleared material may be reused.

10.7 REFERENCES

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