

## 2.6 Biological Resources

The biological resources within the study area are varied in extent and quality, but generally consist of common/adaptable species. This section addresses vegetation, wildlife, and threatened and endangered species.

### 2.6.1 Vegetation and Cover Types

There are 1,803 species of plants recorded for Cook County and 1,311 for DuPage County (Iverson, 1999). Table 2-19 summarizes the land cover within the study area based on information from the *Land Cover of Illinois 1999–2000* inventory and associated database, which is the result of the Illinois Interagency Landscape Classification Project (IILCP).<sup>17</sup>

TABLE 2-19  
Land Cover within the Study Area

Cover Type <sup>a</sup>	Area (mi <sup>2</sup> )	Acres <sup>b</sup>	Percent of Total Land Cover within Study Area
<b>Forested Land</b>			
Upland	8.6	5,530.9	6.8
Partial canopy/savannah upland	3.6	2,305.2	2.8
Floodplain forest	0.2	105.3	0.1
Total	12.4	7,941.4	9.7
<b>Urban and Built-up Land</b>			
High density	32.4	20,753.8	25.4
Low/medium density	54.2	34,704.0	42.5
Urban open space	24.3	15,558.8	19.1
Total	110.9	71,016.6	87.0
<b>Other</b>			
Barren and exposed land	0.0	25.2	0.0
Total	0.0	25.2	0.0

Source: USDA National Agriculture Statistics Service, IDOA and IDNR, 2002.

<sup>a</sup> See subsections 2.2 for agriculture, 2.3 for surface waters, and 2.4 for wetlands. Subcategories included in the IILCP data that were not mapped in the study area are not listed in the table. These subcategories include coniferous (forested land); clouds and cloud shadows (other).

<sup>b</sup> Land cover acreages for this table were calculated for the study area based on data from the *Land Cover of Illinois 1999–2000*; the data may vary from data provided by other sources found in other tables within this document.

The study area is 81,603 acres (127.5 square miles) in size. Roughly 87 percent of the total cover is urban and built-up land, including low-, medium-, and high-density development, and also urban open space (see Table 2-19). In high density areas, nearly all the land surface is covered with built structures and facilities, such as buildings, roads, parking lots, and driveways. The high percentage of impervious surface provides limited cover, foraging, and

<sup>17</sup> IILCP includes the following agencies: USDA National Agricultural Statistics Service, Illinois Department of Agriculture (IDOA), and IDNR.

resting areas for wildlife. In areas of low/medium density, up to half of the land surface is covered with manmade structures. The remaining surface area is intermixed with urban landscaping, open space, or forested cover. Such areas can have more area for foraging and cover habitat. Urban open space includes parks, golf courses, cemeteries, and other grass-covered surfaces within developed areas.

Of the land cover types listed in Table 2-19, the most important for wildlife are forested lands and urban open space. Within the study area, large contiguous wooded areas generally are within special lands or adjacent to waterways. Roughly 10 percent of the study area comprises forested land and approximately five percent of the study area comprises wetlands or surface waters (see Table 2-19). Surface waters and wetlands are also important to wildlife. This combination of cover types provides important habitat for many species of plants and wildlife, including threatened or endangered species. Subsection 2.3, Water Resources and Quality, and subsection 2.4, Wetlands, discuss the general distribution of aquatic/wetland habitats.

Field reconnaissance near the proposed transportation improvements found that most of the open space habitat consists of old field successional areas and degraded woodlands, which are low to moderate quality. The old field successional areas are entirely herbaceous or have scattered trees. Nonnative or quickly colonizing plant species dominate these areas. Trees are beginning to colonize the old successional fields that have been abandoned or undisturbed for a long time. A moderate quality successional prairie dominated by native vegetation is located at the south end of the Ned Brown Preserve near the proposed transportation improvements. Three higher quality woodlands near the proposed project improvements are also associated with forest preserve property, including Fischer Woods,<sup>18</sup> Cricket Creek, and Salt Creek Marsh.

The least productive cover types for providing wildlife habitat in the study area are high- and medium-density developments. Wildlife may use such areas for foraging, but there is little opportunity for nesting or cover for most species. Plants and wildlife in these areas are limited primarily to species tolerant of disturbance or that have adapted to urban environments.

## 2.6.2 Wildlife

The study area contains limited areas of prime wildlife habitat. Roughly 87 percent of the study area is urban and built-up land (see Table 2-19). Development in the study area has limited the distribution of sensitive wildlife species to protected lands, such as forest preserves. The largest forest preserves in the study area are the Ned Brown Preserve and several properties located along the Des Plaines River, both in Cook County. There is also a cluster of forest preserves in DuPage County along Salt Creek and adjacent to I-290. The preserved open space and Salt Creek provide connectivity between the DuPage County preserves and may allow for animal movement between these areas. Overall, urban development and habitat fragmentation limits wildlife movement throughout much of the study area.

The developed parts of the study area provide minimal wildlife habitat. Wildlife species in urban/suburban areas tend to be tolerant of disturbance and human activities. Some will

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<sup>18</sup> Fischer Woods Forest Preserve includes one of the few wet forests in DuPage County (FPDDC, 2008b). A state threatened plant species has been recorded in the seasonally wet, unique wet forests at Fischer Woods (Swink and Wilhelm, 1994).

use urban and suburban habitats, but species diversity generally is lower than in forest preserves and rural habitats. Urban tolerant wildlife species are generally common, adaptable species and include limited numbers of mammals, birds, reptiles, and amphibians. Aquatic species, such as fish, mussels, and crustaceans are discussed in subsection 2.3.5, Aquatic Species. A wildlife survey was not conducted as part of the study; instead, national, state, and county databases were searched for wildlife information.<sup>19</sup>

**Birds.** Based on information from a national public bird database and the Forest Preserve District of Cook County (FPDCC) and FPDDC, 226 bird species have been documented within the study area including seasonal spring-fall migrants, breeding residents, and overwintering species. Of those, 128 species have been recorded as nesting within the study area. In general, most of the birds are passerine species (or perching birds), with a complement of birds of prey, waterfowl, woodpeckers, and shorebirds. (Per USFWS's comments on the Draft EIS, the list of bird species within the study area has been included in Appendix C of this Final EIS. See Page 5-25 for a description of the agency's entire comment and IDOT's response. USFWS's comment letter can be found in Appendix D beginning on Page D\_5-6).

The study area is within the eastern half of the Mississippi flyway, which is used by migratory birds in the United States and Canada. Many bird species that migrate through the corridor also nest in the study area, including neotropical migrants. Neotropical migrants, including all or part of their population, fly through or breed in the United States and Canada but winter in the tropical habitats of Latin America and/or the Caribbean. Ninety-four neotropical migrants<sup>20</sup> are known to breed in the study area based on county forest preserve district data. Neotropical migrants may use the habitats found in the study area, such as wetlands, prairies, woodlands, and shrub-lands, for breeding. In general, based on habitat types, neotropical migrants that may be found in the study area include the house wren (*Troglodytes aedon*) in urban areas, eastern kingbird (*Tyrannus tyrannus*) in undeveloped areas, common yellowthroat (*Geothlypis trichas*) in wetlands/shrub-lands, and red-eyed vireo (*Vireo olivaceus*) in woodlands. Additional neotropical migrants that may commonly be observed in the study area include the barn swallow (*Hirundo rustica*), chimney swift (*Chaetura pelagica*), and gray catbird (*Dumetella carolinensis*).

**Mammals.** Based on data compiled from the INHS, the University of Illinois Museum of Natural History, the FPDCC, and the FPDDC, 43 mammal species have been recorded in the study area. Several mammal species listed for the study area are tolerant of development but require greenways or nearby natural areas for habitat. Common species relatively tolerant of urban areas include the eastern cottontail (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), and to some extent white-tailed deer (*Odocoileus virginianus*).

**Reptiles and Amphibians.** Based on data compiled by the INHS, FPDCC, and FPDDC, 17 reptile species and 13 species of amphibians have been recorded in the study area. Three state-listed reptile species – eastern massasauga (*Sistrurus catenatus*), Kirtland's snake

<sup>19</sup> FPDDC provided a wildlife species list for all preserves in the study area, except Salt Creek Greenway (list not available). The wildlife lists included birds, mammals, reptiles, amphibians, fish, and mussels.

<sup>20</sup> Based on a list of neotropical migrants provided by Cotton et al, 2008, and USFWS – Division of Bird Habitat Conservation, last updated February 2008. The migratory bird lists include both nearctic and neotropical migrants – no distinction between the two types is made.

(*Clonophis kirtlandii*), and Blanding's turtle (*Emydoidea blandingii*) – are on the INHS lists and in the wildlife lists provided by the county forest preserves. However, the eastern massasauga was not included in the threatened and endangered species list for the study area provided by IDNR, while the other two species were on that list. FPDDC considers the massasauga a “historical record.”<sup>21</sup> The snake may no longer exist within the study area, and it was not included in the FPDDC wildlife list. Additional information from INHS states that there are no historical records that definitively place the eastern massasauga in or near the proposed improvements; there are no habitat corridors that would allow travel between the only known massasauga population in the region and the location of the proposed improvements; and suitable habitat is lacking near or within the proposed improvements near historical localities (Kuhns, 2009). INHS concluded that impacts to the eastern massasauga by work within the boundaries of the proposed improvements are unlikely. Other than the state-listed species mentioned above, most of the reptiles and amphibians in the study area are considered locally common.

**Invasive Species.** Invasive species are those not native to a particular ecosystem, whose introduction does or is likely to cause harm to the associated habitat, environment, economy, or human health. Under EO 13112 (*Invasive Species*), federal agencies are required to identify, control, and minimize/prevent actions that may cause or promote the introduction or spread of invasive species. Invasive species should be considered during all phases of the environmental process to meet NEPA requirements.

Based on available data, the U.S. Department of Agriculture (USDA)–Natural Resources Conservation Service (NRCS) *Noxious Weeds List for Illinois* includes invasive plant species that have been recorded within Cook and DuPage counties, such as Canada thistle (*Cirsium arvense*), Johnson grass (*Sorghum halepense*), marijuana (*Cannabis sativa*), musk thistle (*Carduus nutans*), and perennial sow thistle (*Sonchus arvensis*). Additional invasive plant species dominate many of the upland and wetland habitats in the study area, such as common buckthorn (*Rhamnus cathartica*), garlic mustard (*Alliaria petiolata*), purple loosetrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), Tartarian honeysuckle (*Lonicera tatarica*), and teasel (*Dipsacus* spp.).

Invasive species also include several aquatic nuisance species<sup>22</sup> and injurious wildlife species<sup>23</sup> that can potentially harm an ecosystem. Examples of aquatic nuisance species and injurious wildlife that have been recorded from the study area include the Asian clam (*Corbicula fluminea*), common carp (*Cyprinus carpio*), grass carp (*Ctenopharyngodon idella*), rusty crayfish (*Orconectes rusticus*), and zebra mussel (*Dreissena polymorpha*).

<sup>21</sup> Historical records include wildlife species data for which a year of observation is not provided or collection dates predate 1980. Some of the historical wildlife observation/collection records were made as early as the 1850s and it is possible that these species no longer inhabit the locale where they were identified.

<sup>22</sup> An aquatic nuisance species as defined in the *Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990* (16 USC 4701 *et seq.*) is a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on such waters.

<sup>23</sup> Injurious wildlife are mammals, birds, amphibians, reptiles, fish, crustaceans, mollusks and their offspring or gametes that are injurious to the interests of human beings, agriculture, horticulture, forestry, wildlife or wildlife resources of the United States. Refer to 18 USC 42 and 50 CFR Part 16. The list of Illinois “injurious species” can be found at 17 IAC §805.20.

### 2.6.3 Threatened and Endangered Species

**Federal-Listed Species.** Based on a letter from the USFWS (January 29, 2009), the study area includes two known locations of the federal-threatened eastern prairie fringed orchid (*Platanthera leucophaea*) (Rogner, 2009). Possible habitat for the eastern prairie fringed orchid includes mesic prairie, sedge meadows, marsh edges, and bogs. Any moderate to high quality wetland habitat within the study area could support the species. There is no known federally designated critical habitat for this protected species within the study area. A letter from the USFWS (April 10, 2008) states that the Indiana bat (*Myotis sodalis*) is not likely present in northeastern Illinois and that transportation projects are not likely to affect the species adversely (Rogner, 2008). The Indiana bat was not listed in USFWS's letter of January 29, 2009, regarding the study area. Appendix D contains copies of both letters.

**State-Listed Species.** Based on information provided by the IDNR and Illinois Natural Heritage Database, 23 state-listed threatened or endangered species<sup>24</sup> are potentially within the study area: 17 plants,<sup>25</sup> four birds, and two reptiles (see Table 2-20). No state-listed mammals, amphibians, fish, insects, mussels, snails, or crustaceans were mentioned in the information provided by IDNR for the study area. However, INHS identifies two state-listed threatened or endangered mussel species – slippershell mussel (*Alasmidonta viridis*) and rainbow mussel (*Villosa iris*) – as having been collected from Salt Creek in recent years (1997, 2006) in Cook County. Based on additional information provided by INHS, both mussels were found downstream of the study area as represented by relict or weathered dead shells.

In the study area, the presence of threatened and endangered species generally coincides with special lands, such as forest preserves or natural areas. Fischer Woods Forest Preserve, a protected resource located near the proposed transportation improvements, has six state-listed plant species within its boundaries. Wildlife lists from FPDDC include three more state-listed birds for Fischer Woods. Other special lands near the proposed transportation improvements with state-listed species recorded within their boundaries include the Ned Brown Preserve (with nine species) and a natural area near the southwest corner of the Ned Brown Preserve (with one species).

TABLE 2-20  
State-Listed Species Potentially within the Study Area as Identified by IDNR

Common Name	Scientific Name	State Status <sup>a</sup>
<b>Plants</b>		
Alkali bulrush	<i>Bolboschoenus maritimus</i>	delisted <sup>b</sup>
Buffalo clover	<i>Trifolium reflexum</i>	LT
Dog violet	<i>Viola conspersa</i>	LT
Downy Solomon's seal	<i>Polygonatum pubescens</i>	LE
Dwarf raspberry	<i>Rubus pubescens</i>	LT
Ear-leafed foxglove	<i>Tomanthera auriculata</i>	LT
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	LE
Marsh speedwell	<i>Veronica scutellata</i>	LT

<sup>24</sup> The alkali bulrush (*Bolboschoenus maritimus*) was delisted in 2009 by the Illinois Endangered Species Protection Board.

<sup>25</sup> Ibid.

TABLE 2-20  
State-Listed Species Potentially within the Study Area as Identified by IDNR

Common Name	Scientific Name	State Status <sup>a</sup>
Northern grape fern	<i>Botrychium multifidum</i>	LE
Pretty sedge	<i>Carex woodii</i>	LT
Purple fringed orchid	<i>Platanthera psycodes</i>	LE
(Brome hummock) sedge	<i>Carex bromoides</i>	LT
Small sundrops	<i>Oenothera perennis</i>	LT
Spotted coral-root orchid	<i>Corallorhiza maculata</i>	LT
Star-flower	<i>Trientalis borealis</i>	LE
Tuckerman's sedge	<i>Carex tuckermanii</i>	LE
White lady's slipper	<i>Cypripedium candidum</i>	LT
<b>Birds</b>		
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	LE
Common moorhen	<i>Gallinula chloropus</i>	LE <sup>c</sup>
Least bittern	<i>Ixobrychus exilis</i>	LT
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	LE
<b>Reptiles</b>		
Blanding's turtle	<i>Emydoidea blandingii</i>	LE <sup>c</sup>
Kirtland's snake	<i>Clonophis kirtlandii</i>	LT

Sources: IDNR and Illinois Natural Heritage Database, 2008a; IDNR and Illinois Natural Heritage Database, 2008b).

<sup>a</sup> LE = state-listed as endangered; LT = state-listed as threatened.

<sup>b</sup> The Illinois Endangered Species Protection Board delisted the alkali bulrush (*Bolboschoenus maritimus*) in 2009.

<sup>c</sup> The Illinois Endangered Species Protection Board changed the status of the common moorhen (*Gallinula chloropus*) and Blanding's turtle (*Emydoidea blandingii*) from state-threatened to state-endangered.

## 2.7 Special Lands

Special lands include publicly owned parks, recreational areas, wildlife and waterfowl refuges, and historic sites.<sup>26</sup> Within the study area, numerous properties in the public domain are managed and protected for their special resources, including 18 forest preserve areas, one nature preserve, eight Illinois Natural Areas Inventory (INAI) sites,<sup>27</sup> and several local parks (see Exhibit 2-10). These areas provide open space and habitat for different types of plants and wildlife, including common species and threatened and endangered species that rely on this habitat for survival. Forest preserves and parks also provide recreational

<sup>26</sup> Properties with these qualities are protected under Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303). Special lands potentially affected by the proposed improvements that qualify as Section 4(f) properties are described in Section 4.6. Lands purchased or developed using Land and Water Conservation funds (Section 6(f) lands) or Open Space Land Acquisition and Development (OSLAD) grant program funds are also protected. Potential impacts to Section 6(f) lands are discussed in Section 4.7.

<sup>27</sup> One INAI site, WGN Marsh, is privately owned. It is located within the study area near the southwest corner of the Ned Brown Preserve – outside of forest preserve limits.