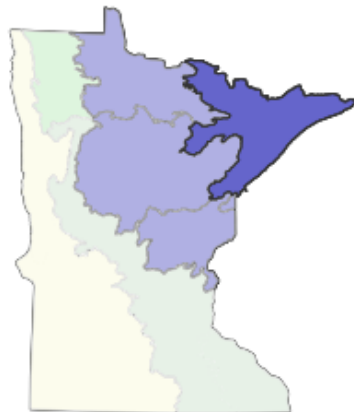


Northern Superior Uplands

Section Forest Resources Management Plan



Preliminary Issues and Assessment Chapter 8: Wildlife Species and Trends



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Prepared February 2015

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Minnesota Forest Resource Council. 2014. Northeast Landscape Conditions & Trends Report. Landscape Program Document #LT0114. Minnesota Forest Resource Council, St. Paul, Minnesota. Available online at the [Minnesota Forest Resource Council](http://www.frc.state.mn.us) web site www.frc.state.mn.us

Notes relating to this document:

This *Preliminary Issues and Assessment* document and color maps may be viewed as PDF files on the *Northern Northern Superior Uplands Section Forest Resources Management Plan* website at:

[Northern Superior Uplands SFRMP](#)

Information about the Section Resource Management Plan (SFRMP) process can be found at:

[Information about SFRMP](#)

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Wildlife Species and Trends For the Northern Superior Uplands Section

Border Lakes, Laurentian Uplands, Nashwauk Uplands, North Shore Highlands, and Toimi Uplands subsections

Introduction

This chapter provides information on the occurrence, legal status, habitat associations, and population trends of wildlife species in these five subsections in the Northern Superior Uplands (NSU). Species presence information is summarized from data collected by the Minnesota Gap Analysis Project (MN-GAP), a project organized to provide a state assessment of the conservation status of native vertebrate species and natural land cover-types.

Minnesota completed its first [State Wildlife Action Plan](http://www.dnr.state.mn.us/cwcs/index.html) in 2006 (known as *Tomorrow's Habitat for the Wild and Rare*; <http://www.dnr.state.mn.us/cwcs/index.html>). It is a strategic plan that sets objectives and conservation actions for species in greatest conservation need (SGCN). SGCN include all wildlife species listed as endangered, threatened, or special concern as well as species that are rare, declining, or vulnerable to decline. The State Wildlife Action Plan includes goals for stabilizing and increasing populations of SGCNs, improving knowledge about these species, and enhancing people's appreciation and enjoyment of them. The plan also identifies habitats that are most important to the greatest number of SGCN in a subsection, known as a Key Habitats.

Within the five subsections in the NSU, Border Lakes has 69 SGCN, Laurentian Uplands has 58 SGCNs, Nashwauk Uplands has 60 SGCN, North Shore Highlands has 84 SGCN, and Toimi Uplands has 52 SGCN (see Appendix G in the *State Wildlife Action Plan* for the list of SGCN in each subsection). The Key Habitats of Forest-Upland Coniferous, Forest-Lowland Coniferous, and River-Headwater to Large were identified for all five of the subsections in the NSU. The Key Habitat of Shrub/Woodland-Upland (jack pine woodland) was identified for all the subsections except the North Shore Highlands. The Key Habitat of Forest-Upland Deciduous (mixed hardwood-pine) was identified for the Nashwauk Uplands, Shoreline-dunes-cliffs/talus was identified for the North Shore Highlands, and Lake-Deep was identified for the Border Lakes and North Shore Highlands. See the subsection profiles in Chapter 5 and the habitat descriptions in Chapter 6 of the *State Wildlife Action Plan* for more information on SGCN and Key Habitats in each subsection.

The *State Wildlife Action Plan* identified habitat loss and habitat degradation as the most significant challenges facing SGCN in the five subsections in the NSU. Priority conservation actions identified in the plan for these subsections include maintaining, enhancing, and protecting key habitats, conducting surveys and research on SGCN populations and habitat, and monitoring long-term trends in SGCN populations and habitat. Minnesota is currently revising the *State Wildlife Action Plan*, which will be available in October 2015. The revised plan will include an updated list of SGCN and will delineate priority conservation areas for SGCN.

Long-term monitoring of wildlife populations is necessary for assessing population trends and the response of species to land management activities. Information used to assess population status and health comes from a variety of sources, including direct and indirect surveys, habitat quality surveys, and

harvest surveys (see table below for most recent data sources). DNR’s Division of Fish and Wildlife conducts annual population and harvest assessments and research, and publishes [annual population status, harvest, and research reports online](#) at <http://www.dnr.state.mn.us/publications/wildlife/index.html> . The DNR Department of Ecological and Water Resources conducts annual surveys for a variety of species including northern goshawks, common loons, colonial waterbirds, and frogs and toads. In addition, the [DNR’s Minnesota Biological Survey](#) (<http://www.dnr.state.mn.us/mbs/index.html>) and the [Minnesota Breeding Bird Atlas](#) (<http://www.mnbba.org/>) collect baseline data on wildlife that can be used to assess trends over time, while the US Fish and Wildlife Service conducts ongoing [waterfowl, dove, sandhill crane, and woodcock surveys](#) (<http://www.fws.gov/migratorybirds/NewReportsPublications/>).

Table 8.1. Wildlife survey data locations and availability

Survey	Data Availability
Breeding Bird Survey	https://www.pwrc.usgs.gov/BBS
Forest Bird Monitoring Program	http://www.nrri.umn.edu/mnbirds/default.htm
Western Great Lakes Owl Monitoring	http://www.hawkridge.org/research/springowl.html
Northern Goshawk Monitoring	MN DNR – Nongame Wildlife Program
Minnesota Loon Monitoring Program	http://www.dnr.state.mn.us/eco/nongame/projects/mlmp_state.html
Colonial Waterbird Survey	MN DNR – Nongame Wildlife Program
Minnesota Frog and Toad Survey	http://www.dnr.state.mn.us/volunteering/frogtoad_survey/index.html

Survey	Data Availability
Minnesota Dragonfly Survey	http://www.mndragonfly.org/
Grouse Surveys Grouse surveys PDF	http://www.dnr.state.mn.us/hunting/grouse/reports.html http://files.dnr.state.mn.us/recreation/hunting/grouse/grouse_survey_report14.pdf
Sandhill Crane Survey	http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus/SandhillCrane/2014%20Status%20and%20Harvest%20Sandhill%20Cranes.pdf
Mourning Dove Survey	http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus/MourningDove/Mourning%20Dove%20Population%20Status%202014.pdf
Wetland Wildlife Population Survey	http://files.dnr.state.mn.us/publications/wildlife/population2013/4-wetland-wildlife.pdf
Woodcock Survey	http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus/Woodcock/American%20Woodcock%20Population%20Status2014.pdf
Small Game, Goose, Turkey, Moose Harvest Report	http://files.dnr.state.mn.us/publications/wildlife/population2013/5-hunting-harvest.pdf
Furbearer Scent Station	http://files.dnr.state.mn.us/recreation/hunting/trapping/scent_station

Survey	Data Availability
Surveys	.pdf
Furbearer Track Surveys	http://files.dnr.state.mn.us/recreation/hunting/trapping/wintertrack.pdf
Furbearer Harvest Report	http://files.dnr.state.mn.us/recreation/hunting/trapping/harvest_13-14.pdf
Bear Survey	http://files.dnr.state.mn.us/publications/wildlife/population2013/5-hunting-harvest.pdf
Bear Harvest Report	http://files.dnr.state.mn.us/recreation/hunting/bear/2013_bearharvest.pdf
Deer Survey	http://files.dnr.state.mn.us/publications/wildlife/population2013/1-farmland-wildlife.pdf
Deer Harvest Report	http://files.dnr.state.mn.us/wildlife/deer/reports/harvest/deerharvest_2013.pdf
Grouse/Moose Survey	http://files.dnr.state.mn.us/publications/wildlife/population2013/3-forest-wildlife.pdf
Wolf Survey	http://files.dnr.state.mn.us/fish_wildlife/wildlife/wolves/2013/wolfsurvey_2013.pdf

Wildlife species within the planning area face many threats including forest loss, forest fragmentation, changes in forest ages, forest types, and forest patch sizes, invasive species, and climate change (MFRC 2014). Forest management activities can have a positive or negative influence on these threats.

Over the past 150 years as timber harvest replaced fire as the dominant disturbance factor on the landscape, the forests of the NSU have become simplified in terms of composition and structure. There has been a loss of species diversity and structural complexity at the stand-level (Franklin et al. 2007), as well as significant changes in forest composition, forest ages, and patch sizes on a landscape scale (Host and White 2003, MFRC 2014, White and Host 2003). Within-stand species diversity has been altered, most notably a reduced abundance of long-lived conifers due to lack of seed trees (MFRC 2014). Within-stand horizontal and vertical structure has been reduced so that stands tend to have fewer snags, fewer large live trees, less diversity in tree sizes, fewer large downed trees, and more uniform tree distribution (Franklin et al. 2007). On a landscape scale, forest composition and age have been altered so that today's forests are dominated by younger-aged stands of early successional species (MFRC 2014, White and Host 2003). Forest patches are smaller and have become more uniform in shape, there has been an increase in the amount of edge and a decrease in the amount of interior forest area, and large patches tend to be underrepresented on the landscape (Host and White 2003, MFRC 2014, White and Host 2003).

These changes have decreased habitat quality for many wildlife species, particularly species that require older forest and larger patches of forest. However, these changes have led to increased habitat quality for some wildlife species, particularly species that prefer edge and early successional habitats. Forest management can be an important tool for increasing habitat quality for wildlife and maintaining and enhancing components of the forest that have been compromised over the past 150 years.

Literature Cited

Franklin, J. F., R. J. Mitchell, and B. J. Palik. 2007. Natural disturbance and stand development principles for ecological forestry. USDA, Northern Research Station. General Technical Report NRS-19.

Host, G. E., and M. A. White. 2003. Changes in forest spatial patterns from the 1930s to the present in north central and northeastern Minnesota: an analysis of historic and recent air photos. Minnesota Forest Resources Council Report LT-1203c.

MFRC. 2014. Northeast landscape forest resources plan. Prepared by the Minnesota Forest Resources Council Northeast Landscape Planning Committee. Document in draft pending Council approval of the Plan.

White, M. A., and G. E. Host. 2003. Changes in disturbance frequency, age and patch structure from pre-Euro-American to settlement to present in north-central and northeastern Minnesota. Minnesota Forest Resources Council Report LT-1203a.

Terrestrial Vertebrate Species List, Status and Trends

Notes regarding the following six tables:

<p>Species Criteria: Species criteria for MN-GAP includes the following: 1) Be known to breed in Minnesota (evidence of breeding 5 of the past 10 years) and be a regularly occurring non-accidental, 2) Be listed as state endangered, threatened, or special concern or as federally endangered or threatened, 3) Be listed as a furbearer, big game, small game, or migratory bird in Minnesota, and, 4) Be an exotic species in Minnesota that impacts native species or is of management interest.</p>
<p>Species Group: Animals are assigned to one of four major species groups - Amphibians, Birds, Mammals, and, Reptiles.</p>
<p>^a Species Common and Scientific Names: Notes standard MN-GAP protocol based on NatureServe and it's related searchable plant, animal and ecological database called NatureServe Explorer located at www.natureserveexplorer.org</p>
<p>^bMinnesota Legal Status: E = State Endangered; T = State Threatened; SC = State Species of Special Concern; BG = Big Game; SG = Small Game; F = Furbearer; MW = Migratory Waterfowl; UB = Unprotected Bird; PB = Protected Bird; PWA = Protected Wild Animal; UWA = Unprotected Wild Animal. Note: A species may have more than one Minnesota Legal Status notation.</p>
<p>^cFederal Legal Status: T = Federal Threatened; E = Federal Endangered; P = Federal Protection by the Migratory Bird Treaty Act or Bald Eagle Protection Act or CITES.</p>
<p>^dSpecies Occurrence: For all ECS Subsections, the following codes note a species specific range modifier: B = Breeding; PR = Permanent Resident; a = absent; m = migrant; m/sv = migrant/summer visitor; wv = winter visitor. Also, an (L) may be listed with these range codes if the species has a limited distribution in the Subsection due to specific habitat needs. Note: These range notations by ECS subsections represent the current occurrence of these wildlife species based on ECS subsections. Animal distributions are dynamic and revisions may be made as new information becomes available.</p>
<p>DISCLAIMER: Information and data listed in these tables has been produced by ongoing wildlife species assessment efforts conducted under the MNDNR Division of Wildlife's Minnesota Wildlife Resource Assessment Project (MN-WRAP) and Minnesota Gap Analysis Project (MN-GAP). These efforts and related tables noted here are initial products that are currently in various stages of literature and expert review. Review and comments on these tables and contents is encouraged. Please contact the MNDNR Division of Wildlife at 218-833-8620 for comments or suggestions</p>

Table 8.2.a. Bird species list

Northern Superior Uplands (NSU) Subsections

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABNBA01030	Common Loon	<i>Gavia immer</i>	R	PB	P	B	B	B	B	B
ABNCA02010	Pied-billed Grebe	<i>Podilymbus podiceps</i>	R	PB	P	B	B	B	B	B
ABNCA03020	Red-necked Grebe	<i>Podiceps grisegena</i>	R	PB	P	B	B	B	B	B
ABNFD01020	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	R	UB	P	B	B	B	B	B
ABNGA01020	American Bittern	<i>Botaurus lentiginosus</i>	R	PB	P	B	B	B	B	B
ABNGA04010	Great Blue Heron	<i>Ardea herodias</i>	R	PB	P	B	B	B	B	B
ABNGA08010	Green Heron	<i>Butorides virescens</i>	R	PB	P	B	A	A	A	A
ABNJB0230	Trumpeter Swan	<i>Cygnus buccinator</i>	R	SC	P	M	M	M	B	B
ABNJB05030	Canada Goose	<i>Branta canadensis</i>	R	PB, MW	P	B	B	B	B	B
ABNJB09010	Wood Duck	<i>Aix sponsa</i>	R	PB, MW	P	B	B	B	B	B
ABNJB10040	American Black Duck	<i>Anas rubripes</i>	R	PB, MW	P	B	B	B	B	B
ABNJB10060	Mallard	<i>Anas platyrhynchos</i>	R	PB, MW	P	B	B	B	B	B
ABNJB10130	Blue-winged Teal	<i>Anas discors</i>	R	PB, MW	P	B	B	B	B	B
ABNJB10010	Green-winged Teal	<i>Anas crecca</i>	R	PB, MW	P	M	M	M	B	M
ABNJB10180	American Wigeon	<i>Anas americana</i>	R	PB, MW	P	M	B	M	M	B
ABNJB11040	Ring-necked Duck	<i>Aythya collaris</i>	R	PB, MW	P	B	B	B	B	B
ABNJB18010	Common Goldeneye	<i>Bucephala clangula</i>	R	PB, MW	P	WV	B	B	B	B
ABNJB20010	Hooded Merganser	<i>Lophodytes cucullatus</i>	R	PB, MW	P	B	B	B	B	B
ABNJB21010	Common Merganser	<i>Mergus merganser</i>	R	PB, MW	P	B	B	B	B	B
ABNJB21020	Red-breasted Merganser	<i>Mergus serrator</i>	R	PB, MW	P	B	M	M	M	M
ABNKA02010	Turkey Vulture	<i>Cathartes aura</i>	R	PB	P	B	B	B	B	B

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABNKC01010	Osprey	<i>Pandion haliaetus</i>	R	PB	P	B	B	B	B	B
ABNKC10010	Bald Eagle	<i>Haliaeetus leucocephalus</i>	R	PB	P	B	B	B	B	B
ABNKC11010	Northern Harrier	<i>Circus cyaneus</i>	R	PB	P	B	B	B	B	B
ABNKC12020	Sharp-shinned Hawk	<i>Accipiter striatus</i>	R	PB	P	B	B	B	B	B
ABNKC12040	Cooper's Hawk	<i>Accipiter cooperii</i>	R	PB	P	B	M	B	M	M
ABNKC12060	Northern Goshawk	<i>Accipiter gentilis</i>	PR	SC	P	B	B	B	B	B
ABNKC19050	Broad-winged Hawk	<i>Buteo platypterus</i>	R	PB	P	B	B	B	B	B
ABNKC19110	Red-tailed Hawk	<i>Buteo jamaicensis</i>	R	PB	P	B	B	B	B	B
ABNKD06020	American Kestrel	<i>Falco sparverius</i>	R	PB	P	B	B	B	B	B
ABNKD06030	Merlin	<i>Falco columbarius</i>	R	PB	P	B	B	B	B	B
ABNKD06070	Peregrine Falcon	<i>Falco peregrinus</i>	R	PB, SC	P	B	M	M	M	B
ABNLC09010	Spruce Grouse	<i>Falcipennis canadensis</i>	PR	PB, SG		A	A	P	P	A
ABNLC11010	Ruffed Grouse	<i>Bonasa umbellus</i>	PR	PB, SG		P	P	P	B	B
ABNME05030	Virginia Rail	<i>Rallus limicola</i>	R	PB, SG	P	B	B	B	A	B
ABNME08020	Sora	<i>Porzana carolina</i>	R	PB, SG	P	B	B	B	B	B
ABNMK01010	Sandhill Crane	<i>Grus canadensis</i>	R	PB	P	M / B (L)	B	B	M	M
ABNNB03070	Piping Plover	<i>Charadrius melodus</i>	R	PB, E	P, E&T	M / B (L)	M	M	A	M
ABNNB03090	Killdeer	<i>Charadrius vociferus</i>	R	PB	P	B	B	B	B	B
ABNNF04020	Spotted Sandpiper	<i>Actitis macularia</i>	R	PB	P	B	B	B	B	B
ABNNF18030	Wilson's Snipe	<i>Gallinago delicata</i>	R	PB, SG	P	B	B	B	B	B
ABNNF19020	American Woodcock	<i>Scolopax minor</i>	R	PB, SG	P	B	B	B	B	B
ABNNM03100	Ring-billed Gull	<i>Larus delawarensis</i>	R	PB	P	B	M	M	M	M
ABNNM03120	Herring Gull	<i>Larus argentatus</i>	R	PB	P	B	B	B	B	B
ABNNM08070	Common Tern	<i>Sterna hirundo</i>	R	PB, T	P	B	M	M	M	M
ABNPB0401a	Rock Dove	<i>Columba livia</i>	PR	PB		P	P	P	P	P
ABNPB04040	Mourning Dove	<i>Zenaidura macroura</i>	R	PB	P	B	M	M	M	B
ABNRB02010	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	R	PB	P	B	B	B	B	B
ABNSB05010	Great Horned Owl	<i>Bubo virginianus</i>	PR	UB	P	P	P	P	P	P
ABNSB07010	Northern Hawk Owl	<i>Surnia ulula</i>	PR	PB	P	WV	WV	P	P	P
ABNSB12020	Barred Owl	<i>Strix varia</i>	PR	PB	P	P	P	P	P	P
ABNSB12040	Great Gray Owl	<i>Strix nebulosa</i>	PR	PB	P	WV	P	P	P	P
ABNSB13010	Long-eared Owl	<i>Asio otus</i>	R	PB	P	B	B	B	B	B
ABNSB15010	Boreal Owl	<i>Aegolius funereus</i>	PR	SC	P	WV / P (L)	WV	P	P	WV

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABNSB15020	Northern Saw-whet Owl	<i>Aegolius acadicus</i>	R	PB	P	B	B	B	B	B
ABNTA02020	Common Nighthawk	<i>Chordeiles minor</i>	R	PB	P	B	B	B	B	B
ABNTA07070	Whip-poor-will	<i>Caprimulgus vociferus</i>	R	PB	P	B	B	B	B	B
ABNUA03010	Chimney Swift	<i>Chaetura pelagica</i>	R	PB	P	B	B	B	B	B
ABNUC45010	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	R	PB	P	B	B	B	B	B
ABNXD01020	Belted Kingfisher	<i>Ceryle alcyon</i>	R	PB	P	B	B	B	B	B
ABNYF04040	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	R	PB	P	B	B	A	A	B
ABNYF05010	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	R	PB	P	B	B	B	B	B
ABNYF07030	Downy Woodpecker	<i>Picoides pubescens</i>	PR	PB	P	P	P	P	B	B
ABNYF07040	Hairy Woodpecker	<i>Picoides villosus</i>	PR	PB	P	P	P	P	P	P
ABNYF07080	Three-toed Woodpecker	<i>Picoides tridactylus</i>	PR	PB	P	WV	WV	P	P	WV
ABNYF07090	Black-backed Woodpecker	<i>Picoides arcticus</i>	PR	PB	P	P	P	P	P	P
ABNYF10020	Northern Flicker	<i>Colaptes auratus</i>	R	PB	P	B	B	B	B	B
ABNYF12020	Pileated Woodpecker	<i>Dryocopus pileatus</i>	PR	PB	P	P	P	P	P	P
ABPAE32010	Olive-sided Flycatcher	<i>Contopus cooperi</i>	R	PB	P	B	B	B	B	B
ABPAE32060	Eastern Wood-Pewee	<i>Contopus virens</i>	R	PB	P	B	B	B	B	B
ABPAE33010	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	R	PB	P	B	B	B	B	B
ABPAE33030	Alder Flycatcher	<i>Empidonax alnorum</i>	R	PB	P	B	B	B	B	B
ABPAE33070	Least Flycatcher	<i>Empidonax minimus</i>	R	PB	P	B	B	B	B	B
ABPAE35020	Eastern Phoebe	<i>Sayornis phoebe</i>	R	PB	P	B	B	B	B	B
ABPAE43070	Great Crested Flycatcher	<i>Myiarchus crinitus</i>	R	PB	P	B	B	B	B	B
ABPAE52060	Eastern Kingbird	<i>Tyrannus tyrannus</i>	R	PB	P	B	B	B	B	B
ABPAU01010	Purple Martin	<i>Progne subis</i>	R	PB,SC	P	B	B	B	B	B
ABPAU03010	Tree Swallow	<i>Tachycineta bicolor</i>	R	PB	P	B	B	B	B	B
ABPAU07010	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	R	PB	P	B	B	B	B	B
ABPAU08010	Bank Swallow	<i>Riparia riparia</i>	R	PB	P	B	B	B	B	B
ABPAU09010	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	R	PB	P	B	B	B	B	B

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABPAU09030	Barn Swallow	<i>Hirundo rustica</i>	R	PB	P	B	B	B	B	B
ABPAV01010	Gray Jay	<i>Perisoreus canadensis</i>	PR	PB	P	P	P	P	P	P
ABPAV02020	Blue Jay	<i>Cyanocitta cristata</i>	PR	PB	P	P	P	P	P	P
ABPAV10010	American Crow	<i>Corvus brachyrhynchos</i>	PR	PB	P	P	P	P	B	P
ABPAV10110	Common Raven	<i>Corvus corax</i>	PR	PB	P	P	P	P	P	P
ABPAW01010	Black-capped Chickadee	<i>Poecile atricapillus</i>	PR	PB	P	P	P	P	P	P
ABPAW01060	Boreal Chickadee	<i>Poecile hudsonicus</i>	PR	PB	P	P	P	P	P	P
ABPAZ01010	Red-breasted Nuthatch	<i>Sitta canadensis</i>	PR	PB	P	P	P	P	P	P
ABPAZ01020	White-breasted Nuthatch	<i>Sitta carolinensis</i>	PR	PB	P	P	P	P	P	P
ABPBA01010	Brown Creeper	<i>Certhia americana</i>	R	PB	P	B	B	B	B	B
ABPBG09010	House Wren	<i>Troglodytes aedon</i>	R	PB	P	B	B	B	B	B
ABPBG09050	Winter Wren	<i>Troglodytes troglodytes</i>	R	PB	P	B	B	B	B	B
ABPBG10010	Sedge Wren	<i>Cistothorus platensis</i>	R	PB	P	B	B	B	B	B
ABPBJ05010	Golden-crowned Kinglet	<i>Regulus satrapa</i>	R	PB	P	B	B	B	B	B
ABPBJ05020	Ruby-crowned Kinglet	<i>Regulus calendula</i>	R	PB	P	B	B	B	B	B
ABPBJ15010	Eastern Bluebird	<i>Sialia sialis</i>	R	PB	P	B	B	B	B	B
ABPBJ18080	Veery	<i>Catharus fuscescens</i>	R	PB	P	B	B	B	B	B
ABPBJ18100	Swainson's Thrush	<i>Catharus ustulatus</i>	R	PB	P	B	B	B	B	B
ABPBJ18110	Hermit Thrush	<i>Catharus guttatus</i>	R	PB	P	B	B	B	B	B
ABPBJ19010	Wood Thrush	<i>Hylocichla mustelina</i>	R	PB	P	B	B	B	B	B
ABPBJ20170	American Robin	<i>Turdus migratorius</i>	R	PB	P	B	B	B	B	B
ABPBK01010	Gray Catbird	<i>Dumetella carolinensis</i>	R	PB	P	B	B	B	B	B
ABPBK06010	Brown Thrasher	<i>Toxostoma rufum</i>	R	PB	P	B	B	B	B	B
ABPBK0607a	European Starling	<i>Sturnus vulgaris</i>	PR	UB		P	P	P	P	P
ABPBN01020	Cedar Waxwing	<i>Bombycilla cedrorum</i>	R	PB	P	B	B	B	B	B
ABPBW01160	Blue-headed Vireo	<i>Vireo solitarius</i>	R	PB	P	B	B	B	B	B
ABPBW01170	Yellow-throated Vireo	<i>Vireo flavifrons</i>	R	PB	P	A	A	A	A	A

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABPBW01210	Warbling Vireo	<i>Vireo gilvus</i>	R	PB	P	B (L)	A	A	A	A
ABPBW01230	Philadelphia Vireo	<i>Vireo philadelphicus</i>	R	PB	P	B	B	B	B	B
ABPBW01240	Red-eyed Vireo	<i>Vireo olivaceus</i>	R	PB	P	B	B	B	B	B
ABPBX01030	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	R	PB	P	B	B	B	B	B
ABPBX01040	Tennessee Warbler	<i>Vermivora peregrina</i>	R	PB	P	B	B	B	B	B
ABPBX01060	Nashville Warbler	<i>Vermivora ruficapilla</i>	R	PB	P	B	B	B	B	B
ABPBX02010	Northern Parula	<i>Parula americana</i>	R	PB	P	B	B	B	B	B
ABPBX03010	Yellow Warbler	<i>Dendroica petechia</i>	R	PB	P	B	B	B	B	B
ABPBX03020	Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	R	PB	P	B	B	B	B	B
ABPBX03030	Magnolia Warbler	<i>Dendroica magnolia</i>	R	PB	P	B	B	B	B	B
ABPBX03040	Cape May Warbler	<i>Dendroica tigrina</i>	R	PB	P	B	B	B	B	B
ABPBX03050	Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	R	PB	P	B	M	B	B	M
ABPBX03060	Yellow-rumped Warbler	<i>Dendroica coronata</i>	R	PB	P	B	B	B	B	B
ABPBX03100	Black-throated Green Warbler	<i>Dendroica virens</i>	R	PB	P	B	B	B	B	B
ABPBX03120	Blackburnian Warbler	<i>Dendroica fusca</i>	R	PB	P	B	B	B	B	B
ABPBX03170	Pine Warbler	<i>Dendroica pinus</i>	R	PB	P	B	B	B	M	B
ABPBX03210	Palm Warbler	<i>Dendroica palmarum</i>	R	PB	P	M	B	B	M	B
ABPBX03220	Bay-breasted Warbler	<i>Dendroica castanea</i>	R	PB	P	M	M	B	M	B
ABPBX05010	Black-and-white Warbler	<i>Mniotilta varia</i>	R	PB	P	B	B	B	B	B
ABPBX06010	American Redstart	<i>Setophaga ruticilla</i>	R	PB	P	B	B	B	B	B
ABPBX10010	Ovenbird	<i>Seiurus aurocapillus</i>	R	PB	P	B	B	B	B	B
ABPBX10020	Northern Waterthrush	<i>Seiurus noveboracensis</i>	R	PB	P	B	B	B	B	B
ABPBX11020	Connecticut Warbler	<i>Oporornis agilis</i>	R	PB	P	B	B	B	B	B
ABPBX11030	Mourning Warbler	<i>Oporornis philadelphia</i>	R	PB	P	B	B	B	B	B
ABPBX12010	Common Yellowthroat	<i>Geothlypis trichas</i>	R	PB	P	B	B	B	B	B
ABPBX16020	Wilson's Warbler	<i>Wilsonia pusilla</i>	R	PB	P	M	B	B	B	M
ABPBX16030	Canada Warbler	<i>Wilsonia canadensis</i>	R	PB	P	B	B	B	B	B
ABPBX45040	Scarlet Tanager	<i>Piranga olivacea</i>	R	PB	P	B	B	B	B	B
ABPBX60010	Northern Cardinal	<i>Cardinalis cardinalis</i>	PR	PB	P	P	WV	WV	A	WV

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABPBX61030	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	R	PB	P	B	B	B	B	B
ABPBX64030	Indigo Bunting	<i>Passerina cyanea</i>	R	PB	P	B	B	B	B	B
ABPBX94020	Chipping Sparrow	<i>Spizella passerina</i>	R	PB	P	B	B	B	B	B
ABPBX94030	Clay-colored Sparrow	<i>Spizella pallida</i>	R	PB	P	B	B	B	B	B
ABPBX99010	Savannah Sparrow	<i>Passerculus sandwichensis</i>	R	PB	P	B	B	B	B	B
ABPBXA0040	Le Conte's Sparrow	<i>Ammodramus leconteii</i>	R	PB	P	B	B	B	B	B
ABPBXA3010	Song Sparrow	<i>Melospiza melodia</i>	R	PB	P	B	B	B	B	B
ABPBXA3020	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	R	PB	P	B	B	B	B	B
ABPBXA3030	Swamp Sparrow	<i>Melospiza georgiana</i>	R	PB	P	B	B	B	B	B
ABPBXA4020	White-throated Sparrow	<i>Zonotrichia albicollis</i>	R	PB	P	B	B	B	B	B
ABPBXA5020	Dark-eyed Junco	<i>Junco hyemalis</i>	R	PB	P	B	B	B	B	B
ABPBXA9010	Bobolink	<i>Dolichonyx oryzivorus</i>	R	PB	P	B	B	B	B	B
ABPBXB0010	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	R	UB	P	B	B	B	B	B
ABPBXB2020	Eastern Meadowlark	<i>Sturnella magna</i>	R	PB	P	B	B	B	B	B
ABPBXB5010	Rusty Blackbird	<i>Euphagus carolinus</i>	R	PB	P	M	M	M	B	M
ABPBXB5020	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	R	UB	P	B	A	A	A	B
ABPBXB6070	Common Grackle	<i>Quiscalus quiscula</i>	R	UB	P	B	B	B	B	B
ABPBXB7030	Brown-headed Cowbird	<i>Molothrus ater</i>	R	PB	P	B	B	B	B	B
ABPBXB9190	Baltimore Oriole	<i>Icterus galbula</i>	R	PB	P	B	B	B	B	B
ABPBY04020	Purple Finch	<i>Carpodacus purpureus</i>	R	PB	P	B	B	B	B	B
ABPBY04040	House Finch	<i>Carpodacus mexicanus</i>	PR	PB	P	P	A	A	A	B
ABPBY05020	White-winged Crossbill	<i>Loxia leucoptera</i>	R	PB	P	B	B	B	B	WV
ABPBY06030	Pine Siskin	<i>Carduelis pinus</i>	PR	PB	P	P	P	P	P	P
ABPBY06110	American Goldfinch	<i>Carduelis tristis</i>	R	PB	P	B	B	B	B	B
ABPBY09020	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	PR	PB	P	P	P	P	P	P

Birds										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
ABPBY0902a	House Sparrow	<i>Passer domesticus</i>	PR	UB		P	P	P	P	P

Table 8.2.b. Mammal species list

For the Northern Superior Uplands subsections

Mammals										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
AMABA01010	Cinereus Shrew	<i>Sorex cinereus</i>	PR			P	P	P	P	P
AMABA01150	Water Shrew	<i>Sorex palustris</i>	PR			P	P	P	P	P
AMABA01180	Smoky Shrew	<i>Sorex fumeus</i>	PR	SC		P	A	P	P	P
AMABA01190	Arctic Shrew	<i>Sorex arcticus</i>	PR			P	P	P	P	P
AMABA01250	Pygmy Shrew	<i>Sorex hoyi</i>	PR			P	P	P	P	P
AMABA03010	Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	PR			P	P	P	P	P
AMABB05010	Star-nosed Mole	<i>Condylura cristata</i>	PR			P	P	P	P	P
AMACC01010	Little Brown Myotis	<i>Myotis lucifugus</i>	PR	SC		B	B	B	B	P
AMACC01150	Northern Myotis	<i>Myotis septentrionalis</i>	PR	SC		P	B	B	P	B
AMACC02010	Silver-haired Bat	<i>Lasionycteris noctivagans</i>	R			B	B	B	B	B
AMACC03020	Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	PR	SC		P	A	A	P	B
AMACC04010	Big Brown Bat	<i>Eptesicus fuscus</i>	PR	SC		B	B	B	B	P
AMACC05010	Eastern Red Bat	<i>Lasiurus borealis</i>	R			B	B	B	B	B
AMACC05030	Hoary Bat	<i>Lasiurus cinereus</i>	R			B	B	B	B	B
AMAEB01040	Eastern Cottontail	<i>Sylvilagus floridanus</i>	PR	PWA, SG		P	P	P	A	B
AMAEB03010	Snowshoe Hare	<i>Lepus americanus</i>	PR	PWA, SG		P	P	P	P	P
AMAFB02020	Least Chipmunk	<i>Tamias minimus</i>	PR			P	P	P	P	P
AMAFB02230	Eastern Chipmunk	<i>Tamias striatus</i>	PR			P	P	P	P	P

Mammals										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
AMAFB03010	Woodchuck	<i>Marmota monax</i>	PR			P	P	P	P	P
AMAFB05090	Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>	PR			P	P	P	A	P
AMAFB05120	Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	PR			P	P	P	A	P
AMAFB07010	Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	PR	PWA, SG		P	A	A	A	P
AMAFB08010	Red Squirrel	<i>Tamiasciurus hudsonicus</i>	PR			P	P	P	P	P
AMAFB09020	Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	PR			P	P	P	P	P
AMAFE01010	American Beaver	<i>Castor canadensis</i>	PR	PWA, SG, F		P	P	P	P	P
AMAFF0304a	Woodland Deer Mouse	<i>Peromyscus maniculatus gracilis</i>	PR			P	P	P	P	P
AMAFF03070	White-footed Mouse	<i>Peromyscus leucopus</i>	PR			P	A	A	A	A
AMAFF09020	Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	PR			P	P	P	P	P
AMAFF10050	Eastern Heather Vole	<i>Phenacomys ungava</i>	PR	SC		A	A	P	P	A
AMAFF11010	Meadow Vole	<i>Microtus pennsylvanicus</i>	PR			P	P	P	P	P
AMAFF11090	Rock Vole	<i>Microtus chrotorrhinus</i>	PR			P	A	P	P	A
AMAFF15010	Muskrat	<i>Ondatra zibethicus</i>	PR	PWA, SG, F		P	P	P	P	P
AMAFF17010	Southern Bog Lemming	<i>Synaptomys cooperi</i>	PR			P	P	P	P	P
AMAFH01010	Meadow Jumping Mouse	<i>Zapus hudsonius</i>	PR			P	P	P	P	P
AMAFH02010	Woodland Jumping Mouse	<i>Napaeozapus insignis</i>	PR			P	P	P	P	P
AMAFJ01010	North American Porcupine	<i>Erethizon dorsatum</i>	PR	UWA		P	P	P	P	P
AMAJA01010	Coyote	<i>Canis latrans</i>	PR	UWA		P	P	P	P	P
AMAJA01030	Gray Wolf	<i>Canis lupus</i>	PR	PWA, F	P	P	P	P	P	P
AMAJA03010	Red Fox	<i>Vulpes vulpes</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJA04010	Gray Fox	<i>Urocyon</i>	PR	PWA,		P	A	A	A	A

Mammals										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
		<i>cinereoargenteus</i>		SG, F						
AMAJB01010	American Black Bear	<i>Ursus americanus</i>	PR	PWA, BG	P,	P	P	P	P	P
AMAJE02010	Northern Raccoon	<i>Procyon lotor</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJF01010	American Marten	<i>Martes americana</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJF01020	Fisher	<i>Martes pennanti</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJF02010	Ermine	<i>Mustela erminea</i>	PR	UWA		P	P	P	P	P
AMAJF02050	American Mink	<i>Mustela vison</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJF04010	American Badger	<i>Taxidea taxus</i>	PR	PWA, SG, F		P	P	P	A	P
AMAJF06010	Striped Skunk	<i>Mephitis mephitis</i>	PR	UWA		P	P	P	P	P
AMAJF10010	Northern River Otter	<i>Lontra canadensis</i>	PR	PWA, SG, F		P	P	P	P	P
AMAJH01020	Puma	<i>Puma concolor</i>	PR	PWA, SG, SC	P,	P	P	P	P	P
AMAJH03010	Canada Lynx	<i>Lynx canadensis</i>	PR	PWA, SG, SC	T, P	P	P	P	P	P
AMAJH03020	Bobcat	<i>Felis rufus</i>	PR	PWA, SG, F	P,	P	P	P	A	P
AMALC02020	White-tailed Deer	<i>Odocoileus virginianus</i>	PR	PWA, BG		P	P	P	P	P
AMALC03010	Moose	<i>Alces alces</i>	PR	PWA, SC		P	P	P	P	P

Table 8.2.c. Amphibian and reptile species list

For the Northern Superior Uplands subsections

Amphibians and Reptiles										
Element Code ^a	Common Name ^a	Scientific Name	Resident Status ^b	State Legal Status ^c	Federal Legal Status ^d	North Shore Highlands ECS Subsection ^e	Toimi Uplands ECS Subsection ^e	Laurentian Uplands ECS Subsection ^e	Border Lakes ECS Subsection ^e	Nashwauk Uplands ECS Subsection ^e
AAAAA01060	Blue-spotted Salamander	<i>Ambystoma laterale</i>	PR			P	P	P	P	P
AAAAA01140	Tiger Salamander	<i>Ambystoma tigrinum</i>	PR			P	P	P	A	P
AAAAD08010	Four-toed Salamander	<i>Hemidactylium scutatum</i>	PR	SC		P (L)	A	A	A	A
AAAAD12020	Redback Salamander	<i>Plethodon cinereus</i>	PR			P	P	P	P	P
AAAAF01030	Eastern Newt	<i>Notophthalmus viridescens</i>	PR			P	P	P	P	P
AAABB01020	American Toad	<i>Bufo americanus</i>	PR	PWA		P	P	P	P	P
AAABC02130	Gray Treefrog	<i>Hyla versicolor</i>	PR	PWA		P	P	P	P	P
AAABC05070	Western Chorus Frog	<i>Pseudacris triseriata</i>	PR	PWA		P	P	P	P	P
AAABC05090	Spring Peeper	<i>Pseudacris crucifer</i>	PR	PWA		P	P	P	P	P
AAABH01090	Green Frog	<i>Rana clamitans</i>	PR	PWA		P	P	P	P	P
AAABH01170	Northern Leopard Frog	<i>Rana pipiens</i>	PR	PWA		P	P	P	P	P
AAABH01190	Mink Frog	<i>Rana septentrionalis</i>	PR	PWA		P	P	P	P	P
AAABH01200	Wood Frog	<i>Rana sylvatica</i>	PR	PWA		P	P	P	P	P
ARAAB01010	Snapping Turtle	<i>Chelydra serpentina</i>	PR	PWA		P	P	P	P	P
ARAAD01010	Painted Turtle	<i>Chrysemys picta</i>	PR	PWA		P	P	P	P	P
ARAAD02020	Wood Turtle	<i>Clemmys insculpta</i>	PR	PWA, T		P (L)	P	A	A	A
ARAAD04010	Blanding's Turtle	<i>Emydoidea blandingii</i>	PR	PWA, T		P (L)	A	A	A	A
ARADB10010	Ringneck Snake	<i>Diadophis punctatus</i>	PR			P	A	A	A	A
ARADB34030	Redbelly Snake	<i>Storeria occipitomaculata</i>	PR			P	P	P	P	P
ARADB36130	Common Garter Snake	<i>Thamnophis sirtalis</i>	PR			P	P	P	P	P

^a **Element Code and Species Common Name:** Are standardized nomenclature for GAP protocol uses through NatureServe and it's related searchable plant, animal and ecological communities database called NatureServe Explorer (2002) located at <www.natureserveexplorer.org>.

^b **Resident Status (2006):** R=Regular resident as Breeding, Nesting, or Migratory (acceptable record exists in at least eight of the past ten years); PR=Permanent Resident (exists year-round).

^c **State Legal Status (2014):** E=State Endangered; T=State Threatened; SC=State Species of Special Concern; BG=Big Game; SG=Small Game; F=Furbearer; MW=Migratory Waterfowl; UB=Unprotected Bird; PB=Protected Bird; PWA=Protected Wild Animal; UWA=Unprotected Wild Animal.

^d **Federal Legal Status(2014):** T=Federal Threatened; E=Federal Endangered; P=Federal Protection by Migratory Bird Treaty Act and/or Bald Eagle Protection Act and/or CITES.

^e **ECS Subsection Resident Status(2006):** B=Minnesota breeding record exists for the species; P=Presence known or predicted, as year around resident; (L)=Limited distribution within ECS Subsection; M=Spring or fall migrant, non-breeder; SV=Summer visitor, non-breeder; WV=Winter visitor, non-breeder; A=Absent.

^A **MNWRAP Disclaimer:** This species list is a representation of the occurrence of these species as of 2006, based upon Minnesota Ecological Classification System Subsections. The species may not occur everywhere within the Subsection. Animal distributions are dynamic and occurrence revisions may be made as new information becomes available.

Habitat Relationships by Minnesota GAP Analysis Project (MN-GAP) land cover type

Table 8.3.a. Mammal habitat relationships

SPECIES GROUP Species common name		habitat Feature	Mammal habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type														NSU Section														Forest size class																									
			Non-Forest land cover types>>>														Forest land cover types>>>																																							
			Urban/ Dev.		Ag./Grass		Shrub		Aquatic		Upland Coniferous Forest								Lowland Coniferous Forest				Upland Deciduous Forest				Lowland Deciduous Forest																													
			Barren	High intensity urban	Low intensity urban	Transportation	Cropland	Grassland	Prairie	Upland shrub	Lowland deciduous shrub	Lowland evergreen shrub	Water	Floating aquatic	Sedge Meadow	Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix	Seedling	Sapling	Pole timber	Saw timber	Uneven									
INSECTIVORES																																																								
Northern Short-tailed Shrew	D			Y					Y	Y	Y							Y	Y	Y					Y	Y		Y											Y	Y	Y	Y	Y	Y	Y	Y	Y	Y								
Arctic Shrew	R									Y	Y															Y	Y	Y	Y	Y	Y	Y	Y														Y	Y	Y	Y	Y					
Cinereus Shrew	D						Y	Y	Y	Y	Y									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y							
Smoky Shrew	D		Y																Y		Y					Y				Y																		Y	Y	Y	Y	Y				
Pygmy Shrew	D						Y	Y	Y	Y	Y						Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y													Y	Y	Y	Y				
Water Shrew	DR									Y	Y	Y														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y														Y	Y	Y	Y				
Star-nosed Mole	DR									Y	Y															Y	Y	Y	Y	Y	Y	Y	Y	Y																Y	Y	Y	Y			
BATS																																																								
Big Brown Bat	CRS			Y				Y	Y				Y				Y	Y	Y		Y	Y		Y	Y									Y	Y	Y		Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Silver-haired Bat	CRS												Y				Y	Y		Y			Y	Y	Y	Y		Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Eastern Red Bat	CR		Y	Y			Y		Y	Y			Y		Y						Y	Y												Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Hoary Bat	R			Y			Y		Y				Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Eastern Pipistrelle	MCE R			Y			Y	Y	Y				Y	Y																				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Little Brown Myotis	CRS						Y	Y	Y	Y			Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Northern Myotis	CRS		Y	Y			Y	Y	Y				Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
CARNIVORES																																																								
Coyote	M		Y				Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gray Wolf	M						Y	Y		Y	Y	Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Gray Fox	CDM						Y	Y	Y	Y	Y																								Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Red Fox			Y				Y	Y	Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Bobcat	CD						Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Canada Lynx							Y	Y	Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Northern River Otter										Y	Y	Y	Y																																		
American Marten	CDS													Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
Fisher	CDR																																														
Ermine	S							Y													Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
American Mink	DR						Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
American Badger	DR						Y			Y	Y	Y	Y																																		
Striped Skunk	DM				Y	Y	Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Northern Raccoon	CMR																																														
	S	Y			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Black Bear	CDM						Y																																								
	R						Y							Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
EVEN-TOED UNGULATES																																															
White-tailed Deer					Y	Y	Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
Moose	R				Y	Y		Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
RODENTS																																															
Northern Flying Squirrel	CDM																																											Y	Y		
Woodchuck			Y		Y	Y		Y	Y																																		Y	Y			
Eastern Gray Squirrel	CDM		Y		Y																																							Y			
Franklin's Ground Squirrel			Y			Y	Y	Y																																					Y	Y	
Thirteen-lined Ground Squirrel			Y		Y	Y	Y																																								
Least Chipmunk	DM					Y	Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Eastern Chipmunk	DM		Y		Y		Y	Y							Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Red Squirrel	CDM																																													Y	
American Beaver	R						Y	Y		Y																																			Y		
Woodland Jumping Mouse	DM																	Y	Y	Y		Y																						Y	Y		
Meadow Jumping Mouse						Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y		Y																								Y	
Woodland Deer Mouse						Y		Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
White-footed Mouse	CDM							Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Southern Red-backed Vole	DM							Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Meadow Vole						Y		Y					Y	Y	Y	Y																															
Eastern Heather Vole																																															
Vole		Y						Y	Y			Y																																			
Rock Vole	Ro	Y						Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Bird habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type>>																NSU Section																																																																																					
SPECIES GROUP Species Common Name	Habitat feature	Non-Forested types>>>										Forest land cover types>>>																																																																																									
		Urban/ Dev.	Ag./Grass			Shrub		Aquatic			Upland Coniferous Forest					Lowland Coniferous Forest					Upland Deciduous Forest					Lowland Deciduous Forest																																																																											
		High intensity urban	Low intensity urban	Transportation	Cropland	Grassland	Prairie	Upland shrub	Lowland deciduous shrub	Lowland evergreen shrub	Water	Floating aquatic	Sedge Meadow	Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix																																																													
Great Crested Flycatcher	CS		Y					Y	Y													Y										Y	Y	Y	Y	Y	Y	Y	Y				Y	Y																																																									
SHRIKES																																																																																																					
Northern Shrike						Y		Y																									Y	Y	Y	Y	Y							Y	Y																																																								
Loggerhead Shrike					Y	Y	Y	Y																								Y	Y	Y	Y	Y																																																																	
VIREOS																																																																																																					
Yellow-throated Vireo	R		Y					Y	Y													Y										Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																								
Blue-headed Vireo															Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																																							
Warbling Vireo	R		Y					Y																							Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																							
Philadelphia Vireo	ER																														Y			Y	Y																																																																		
Red-eyed Vireo															Y	Y		Y	Y	Y	Y	Y								Y	Y	Y	Y	Y																																																																			
JAYS, CROWS AND RAVENS																																																																																																					
Gray Jay	M														Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																						
Blue Jay	M														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																						
American Crow	M		Y		Y	Y	Y	Y	Y	Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																					
Common Raven	M														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																					
SWALLOWS																																																																																																					
Purple Martin	RS	Y	Y			Y					Y			Y																																																																																							
Tree Swallow	CS					Y	Y		Y	Y	Y	Y	Y	Y																	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																					
Northern Rough-winged Swallow	BR	Y		Y							Y																																																																																										
Bank Swallow	BR	Y		Y		Y	Y				Y	Y																																																																																									
Cliff Swallow	R		Y	Y	Y	Y					Y																																																																																										
Barn Swallow			Y	Y	Y	Y					Y	Y	Y	Y																																																																																							
CHICKADEES																																																																																																					
		Seedling																				Sapling																				Pole timber																				Saw timber																				Uneven																			

SPECIES GROUP Species Common Name	Habitat feature	Bird habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type>>> Non-Forested types>>>>											Forest land cover types>>>>											NSU Section																																	
		Urban/ Dev.			Ag./Grass			Shrub		Aquatic			Upland Coniferous Forest					Lowland Coniferous Forest			Upland Deciduous Forest				Lowland Deciduous Forest			Forest size class																													
		High intensity urban	Low intensity urban	Transportation	Cropland	Grassland	Prairie	Upland shrub	Lowland deciduous shrub	Lowland evergreen shrub	Water	Floating aquatic	Sedge Meadow	Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix	Seedling	Sapling	Pole timber	Saw timber	Uneven												
Black-capped Chickadee	CS		Y						Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y													
Boreal Chickadee	CS								Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y													Y					Y	Y	Y									
NUTHATCHES																																																									
Red-breasted Nuthatch	CS														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																			Y			Y	Y	Y						
White-breasted Nuthatch	CS																												Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				Y	Y	Y					
CREEPERS																																																									
Brown Creeper	CS																																													Y	Y		Y	Y	Y						
WRENS																																																									
House Wren	CS		Y				Y	Y																					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y								
Sedge Wren							Y	Y				Y	Y														Y		Y		Y	Y																									
Winter Wren	SD													Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y							
KINGLETS																																																									
Golden-crowned Kinglet															Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																										Y	Y	Y		
Ruby-crowned Kinglet															Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																											Y	Y	Y	
THRUSHES																																																									
Eastern Bluebird	CS		Y			Y	Y	Y	Y																				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Veery	M														Y									Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Swainson's Thrush	M														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y																										Y	Y	Y
Hermit Thrush	M														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Wood Thrush	M		Y																									Y																										Y	Y	Y	
American Robin	M		Y			Y									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
MIMICS AND																																																									

		Bird habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type>>>																			NSU Section																														
		Non-Forested types>>>										Forest land cover types>>>																																							
SPECIES GROUP Species Common Name	Habitat feature	Urban/ Dev.		Ag./Grass		Shrub		Aquatic		Upland Coniferous Forest									Lowland Coniferous Forest					Upland Deciduous Forest					Lowland Deciduous Forest																						
		High intensity urban	Low intensity urban	Transportation	Cropland	Grassland	Prairie	Upland shrub	Lowland deciduous shrub	Lowland evergreen shrub	Water	Floating aquatic	Sedge Meadow	Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix	Forest size class										
		Seedling	Sapling	Pole timber	Saw timber	Uneven																																													
THRASHERS																																																			
Gray Catbird	MR		Y				Y	Y	Y															Y		Y		Y	Y	Y	Y	Y						Y	Y	Y	Y	Y									
Brown Thrasher	M		Y				Y																																		Y	Y									
WAXWINGS																																																			
Cedar Waxwing	MR		Y				Y							Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y											Y	Y	Y	Y	Y					
WARBLERS																																																			
Golden-winged Warbler	R						Y	Y						Y	Y	Y	Y						Y															Y	Y				Y	Y	Y	Y					
Tennessee Warbler																									Y		Y		Y	Y																Y	Y				
Nashville Warbler							Y	Y						Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Northern Parula														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Yellow Warbler	R		Y				Y	Y																																									Y	Y	
Chestnut-sided Warbler			Y				Y																																												
Magnolia Warbler														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Cape May Warbler																																																			
Black-throated Blue Warbler																																																			
Yellow-rumped Warbler														Y	Y		Y	Y	Y					Y	Y	Y	Y																						Y	Y	
Black-throated Green Warbler														Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Blackburnian Warbler														Y	Y	Y	Y	Y	Y				Y	Y																											
Pine Warbler														Y	Y	Y							Y	Y																											
Palm Warbler																																																			
Bay-breasted Warbler																																																			
Black-and-white Warbler	D						Y	Y						Y	Y	Y								Y	Y																										

SPECIES GROUP Species Common Name	Habitat feature	Bird habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type>>												NSU Section												Forest size class													
		Non-Forested types>>>				Forest land cover types>>>								Lowland Coniferous Forest			Upland Deciduous Forest			Lowland Deciduous Forest																			
		Urban/ Dev.	Ag./Grass	Shrub	Aquatic	Upland Coniferous Forest								Lowland Coniferous Forest			Upland Deciduous Forest			Lowland Deciduous Forest																			
	Barren	High intensity urban Low intensity urban Transportation	Cropland Grassland Prairie	Upland shrub Lowland deciduous shrub Lowland evergreen shrub	Water Floating aquatic Sedge Meadow Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix	Seedling	Sapling	Pole timber	Saw timber	Uneven			
Grosbeak																																							
Indigo Bunting																																							
BLACKBIRDS AND ORIOLES																																							
Bobolink			Y	Y	Y	Y	Y	Y																															
Red-winged Blackbird	R		Y	Y		Y	Y		Y	Y	Y	Y																											
Eastern Meadowlark			Y	Y	Y		Y																Y																
Rusty Blackbird	RS					Y	Y								Y		Y		Y	Y																			
Brewer's Blackbird	R		Y	Y	Y	Y	Y	Y							Y		Y		Y	Y	Y	Y							Y										
Common Grackle			Y	Y	Y		Y	Y																															
Brown-headed Cowbird				Y	Y	Y	Y																Y	Y	Y	Y	Y												
Baltimore Oriole	MR		Y											Y									Y	Y	Y	Y	Y		Y	Y	Y	Y							
FINCHES																																							
Purple Finch	M		Y									Y	Y	Y	Y		Y		Y	Y	Y	Y																Y	
House Finch	M	Y	Y																																				
White-winged Crossbill	M													Y	Y	Y																				Y	Y		
Pine Siskin	M		Y								Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																	Y	
American Goldfinch			Y			Y	Y																Y	Y	Y	Y	Y												
Evening Grosbeak	M													Y	Y	Y	Y	Y	Y	Y	Y																		

SPECIES GROUP	Habitat feature	Amphibian habitat relationships by Minnesota Gap Analysis Project (MN-GAP) land cover type																				NSU Section																													
		Non-Forest land cover types>>>										Forest land cover types>>>																																							
		Urban/ Dev.			Ag./Grass			Shrub		Aquatic		Upland Coniferous Forest										Lowland Coniferous Forest					Upland Deciduous Forest					Lowland Deciduous Forest	Forest type size class																		
Species Common Name		High intensity urban	Low intensity urban	Transportation	Cropland	Grassland	Prairie	Upland shrub	Lowland deciduous shrub	Lowland evergreen shrub	Water	Floating aquatic	Sedge Meadow	Broadleaf sedge/Cattail	Jack Pine	Red Pine	White Pine mix	Balsam Fir mix	White Spruce	Upland Black Spruce	Up. N. White Cedar	Upland Conifer	Up. coniferous/deciduous mix	Lowland Black Spruce	Stagnant black spruce	Tamarack	Stagnant tamarack	Low. N. White Cedar	Stagnant N. White Cedar	Stagnant conifer	Aspen/White Birch	Bur/White Oak	Red Oak	Maple/Basswood	Upland deciduous mix	Black Ash	Silver Maple	Cottonwood	Lowland deciduous mix	Low. deciduous/coniferous mix	Seedling	Sapling	Pole timber	Saw timber	Uneven						
																																														Redbelly Snake	D				
Ringneck Snake	DS		Y	Y																													Y	Y	Y	Y															
Common Garter Snake	D	Y	Y			Y	Y	Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y								
TURTLES																																																			
Snapping Turtle	R										Y	Y		Y																																					
Painted Turtle	DR									Y	Y	Y		Y																																					
Wood Turtle	DR	Y		Y		Y	Y	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y								Y	Y	Y	Y	Y		Y	Y	Y	Y	Y										
Blanding's Turtle						Y	Y				Y	Y	Y	Y																																					