

## **Appendix A**

### **Definition of Species in Greatest Conservation Need**

**Species in greatest conservation need (SGCN)** are animal species whose populations are rare, declining, or vulnerable in Minnesota and meet one or more of the following criteria:

**A. Species whose populations are identified as being rare, declining, or vulnerable in Minnesota<sup>1</sup>**

**B. Species at risk because they depend upon rare, declining, or vulnerable habitats<sup>2</sup>** (such as native prairies and grasslands; lakeshores and riparian corridors; wetlands; brushlands; unimpounded river and stream channels; unfragmented interior forest).

**C. Species subject to other specific threats that make them vulnerable, such as:**

- Over-exploitation
- Invasive species
- Disease
- Contaminants
- Lack of citizen understanding and stewardship (such as killing large snakes thought to be venomous)

**D. Species with certain characteristics that make them vulnerable, such as species that:**

- Require large home ranges/use multiple habitats
- Depend upon large habitat patch sizes
- Need special resources
- Depend upon an ecological process (such as fire) that no longer operates within the natural range of variation (RNV)
- Are limited in their ability to recover on their own due to low dispersal ability or low reproductive rate
- Have a highly localized or restricted distribution (Endemics).
- Concentrate their populations during some time of the year (such as bats clustering in hibernacula and migratory stop-overs).

**E. Species whose Minnesota populations are stable, but are declining in a substantial part of their range outside of Minnesota** (such as common loon or black tern).

## **Criteria for adding to or removing from the set of Minnesota Species in Greatest Conservation Need** *Minnesota Comprehensive Wildlife Conservation Strategy*

**Overview:** The set of species in greatest conservation need is dynamic and can change over time as new information becomes available or the status of a species changes.

### **I. Criteria for adding species to the set of Minnesota Species in Greatest Conservation Need**

a. Species identified on formal lists<sup>3</sup>:

- **Federally listed species**
- **Heritage Global Rank:** Species ranked G1, G2, or G3 (excluding bird species<sup>4</sup>)
- **Minnesota's List of Endangered, Threatened, or Special Concern species**
- **Partners in Flight (PIF)<sup>5</sup> Continental Watch List** bird species that breed in Minnesota.
- **Partners in Flight (PIF)<sup>5</sup> Landbird Regional Plans:** Tier 1, 2A, and 2C species in at least one of Physiographic areas 16, 20, 32, and 40 and breed in Minnesota. (PA32 covers only a small portion of Minnesota and species were individually reviewed to determine if they meet the SGCN definition for Minnesota).
- **Regional Shorebird Conservation Plans:** Species identified as Highly Imperiled (5) or High Concern (4) in at least one of bird conservation regions (BCR) 11, 12, 22, 23, and either breed or are significant migrants in Minnesota.
- **Minnesota Waterbird Conservation Plan:** species identified as high or moderate concern in at least one of bird conservation regions (BCR) 11, 12, 22, 23 and breed in Minnesota.
- **US Fish and Wildlife Service Region 3 Species of Concern** (excluding bird species<sup>4</sup>)
- **MN DNR Watch List** (excluding bird species<sup>4</sup>)
- **Convention on International Trade in Endangered Species (CITES)** (excluding bird species<sup>4</sup>)
- **The World Conservation Union (IUCN) Red List of Threatened Species** (excluding bird species<sup>4</sup>)
- **NRRI Breeding Bird Monitoring:** Bird species showing significant ( $P \leq 0.05$ ) declines in all 4 sample areas (Superior, Chippewa, Chequamegon/Nicolet National Forests and the St. Croix Region of E. Central MN) as well as overall regionally, and are supported by corroborative information from other regional surveys (e.g. PIF regional or continental plans).

b. Species, other than those on the above lists, identified through an expert review process to meet the CWCS Species in Greatest Conservation Need definition (items A-E).

### **II. Criteria for excluding species from the set of Minnesota Species in Greatest Conservation Need**

- a. Does not meet the definition of Species in Greatest Conservation Need (items A-E).
- b. Species has not been documented to occur in Minnesota.
- c. Species is presumed extirpated from Minnesota, with no expectation of it returning as a resident in the next 10 years.
- d. Species is abundant in Minnesota and regionally, nationally, or globally
- e. Species occurrence is occasional as a result of the wandering behavior of individuals and no resident populations are established or likely to become established in the next ten years. Regular migrating species that depend on habitat within Minnesota (such as shorebirds) are not included in this group.

## SGCN Definition: Supporting information

<sup>1</sup> Rare Species: species whose low population densities, few occurrences, or restricted distributions warrant concern about their viability in Minnesota. Consider global population status for determining a species' inclusion in the set. Declining species: Species whose populations have substantially declined, and declines are not part of a recognized population cycle.

Vulnerable species: Species with life-history, habitat needs, or other specific threats that make them vulnerable to population declines.

<sup>2</sup> Rare habitats: habitats with few occurrences or restricted distributions in Minnesota that may impact the viability of species that depend on them.

Declining habitats: Acreage or overall quality of habitat has substantially declined.

Vulnerable habitats: Habitats most likely to be altered or degraded.

<sup>3</sup> Use of the lists shown above were based on:

1. Geographical scale – selected lists that considered species populations at the global (Heritage Global Rank, CITES, and IUCN), Continental (PIF Continental Plan), National (Federal Endangered Species List), Regional (PIF Regional plans, Waterbird, Shorebird plans), and State (Minnesota's List of Endangered, Threatened, or Special Concern) scales.
2. Quantitative – preference given to lists that have an organized scoring system based on multiple attributes of species' populations, habitats, and threats. Included in this process are groups of taxonomic experts to conduct this scoring process.
3. Original – some lists are based on the results of other lists (such as the USFWS Species of Concern using results from PIF) and original sources of information were used instead.

<sup>4</sup> Plans for bird species are the most developed in terms of population abundance and trends information. Therefore, after federal and state listed species, the PIF Landbird, Shorebird, and Waterbird plans, and NRRI Breeding Bird Monitoring are the sole lists used. Birds may be added through an expert review process if they meet the SGCN definition (items A-E) and criteria.

<sup>5</sup> Partners in Flight (PIF) Regional plans. See <http://www.blm.gov/wildlife/pifplans.htm> for information on the tiering criteria. Region plans that cover Minnesota are the following:

- PA20: Boreal Hardwood Transition or Physiographic Area 20. Roughly equivalent to the N. American Bird Conservation Initiative (NABCI) Bird Conservation Region 12 (BCR 12)
- PA40: Northern Tallgrass Prairie (~BCR11)
- PA16: Upper Great Lakes Plain (~BCR 23)
- PA32: Dissected Till Plains (~BCR 22).

For more information on the lists, please see the following websites.

**-Heritage Global Rank:** <http://www.natureserve.org/explorer/ranking.htm>

**-Federal Endangered Species Act:** <http://endangered.fws.gov/>

- Minnesota Endangered, Threatened & Special Concern Species: <http://www.dnr.state.mn.us/ets/index.html>
- Partners in Flight Regional Landbird Plans: <http://www.blm.gov/wildlife/pifplans.htm>
- Waterbird Conservation Plan: <http://www.waterbirdconservation.org/>
- US Fish and Wildlife Service Region 3 Resource Conservation Priorities: <http://midwest.fws.gov/Endangered/lists/concern.html>
- U.S. Shorebird Conservation Plan: <http://shorebirdplan.fws.gov/>
- Convention on International Trade in Endangered Species(CITES): <http://www.cites.org/>
- IUCN Red List (The World Conservation Union): <http://www.iucn.org/>
- NRRI Breeding Bird Monitoring: <http://www.nrri.umn.edu/mnbirds/default.htm>