

South Dakota Wildlife Action Plan

CHAPTER 2 SPECIES OF GREATEST CONSERVATION NEED

A primary element of the SDWAP is the identification of Species of Greatest Conservation Need (SGCN) across the state. [Table 2-1](#) lists the SGCN for the SDWAP. The previous list was reviewed and updated, and fourteen species were added to the list. Three species, the Bear Lodge Meadow jumping mouse, Blanding's Turtle, and paddlefish, were removed from the SGCN list due to new information on their status or because other species already represented specific habitat needs.

Species were included on the revised SGCN list based on meeting one or more of the following criteria:

1 = State or federal listed species for which the state has a mandate for recovery (listed as threatened or endangered);

2a = Species that are regionally or globally imperiled and for which South Dakota represents an important portion of their remaining range;

2b = Species that are regionally or globally secure and for which South Dakota represents an important portion of their remaining range; or

3 = Species with characteristics that make them vulnerable, including any of the following:

- are indicative of or depend on a unique or declining habitat in South Dakota;
- require large home ranges/use multiple habitats;
- depend on large habitat patch sizes;
- depend on an ecological process (such as fire) that no longer operates within the natural range of variation;
- are limited in their ability to recover on their own due to low dispersal ability or low reproductive rates;
- have a highly localized or restricted distribution (endemics); or
- concentrate their populations during some time of the year.

Globally imperiled or secure status in criteria 2a and 2b was based, in part, on NatureServe conservation status ranking (<http://www.natureserve.org/explorer/index.htm>).

Criteria 2a and 2b focus on the responsibility of each state to provide habitat for species viability to help avoid future endangered species listings. Species included on the SGCN list under criteria 2a, 2b, and 3 illustrate that not all SGCN are rare species within South Dakota.

NatureServe's global and state ranks represent a standardized method of describing a species' abundance and a generalized vulnerability description. Global ranks describe the species' status throughout its range. State ranks are assigned by state Natural Heritage Programs to describe abundance and vulnerability within the state's borders (<http://gfp.sd.gov/wildlife/threatened-endangered/default.aspx>). The system also includes various descriptors to represent uncertain, historical, extirpated, or accidental status. A few SGCN, such as the aquatic insect species, are not assigned a state rank because of a lack of information. State and global ranks are revised with improved information.

South Dakota Wildlife Action Plan

2.1. Conservation Goals for Species of Greatest Conservation Need

The terrestrial and aquatic ecosystem approaches presented in this Plan will accommodate the needs of the majority of wildlife species. The overall advantage to this approach is that fish and wildlife managers presently focus on only a small number of species, when considering the vast array of vertebrates and invertebrates. However, many existing laws and management approaches continue to emphasize a species approach to wildlife management and recovery.

In proposing conservation goals for the 101 SGCN, the specific selection criterion is informative. For species listed because they are state and/or federal threatened or endangered species or candidates for federal listing, recovery is mandated by state and/or federal laws. SDGFP is committed to assisting in recovery of federal listed species through a Cooperative Agreement with the U.S. Fish and Wildlife Service for the Conservation of Endangered and Threatened Animals, first approved on June 30, 1977 and renewed annually since then. South Dakota's endangered species law mandates that state listed species must be recovered

(http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=34A-8).

Twenty-seven species are included as SGCN because they are listed as threatened or endangered under state or federal authority. The overall conservation goal for these species is to recover them to the point that state protection as a threatened or endangered species under the state endangered species law is no longer necessary and to support national recovery efforts for those that are federal listed, proposed for listing, or candidates for federal listing under the Endangered Species Act.

Criteria 2a and 2b were used to justify listing of 24 SGCN. These criteria apply to species for which South Dakota represents an important portion of the species' remaining range. However, that does not necessarily mean these species are rare in South Dakota. For those species that have state heritage ranks of S1, S2, or S3, the conservation goal is to improve the species' abundance and distribution to justify a higher state rank. For species with more secure state ranks of S4 or S5, the conservation goal is to maintain or improve that status by addressing species-specific threats or unique habitat needs that are not addressed through the Plan's coarse filter approaches, which are explained later in this document.

The remaining 50 SGCN were listed because of one or more characteristics that make them vulnerable, which may be life history characteristics, unique habitat needs, or lack of sufficient disturbance regimes to maintain important habitats. State heritage ranks can also assist in proposing conservation goals for this group, as previously described. For many of these species, not enough is known to propose defensible conservation goals aside from efforts to improve status and reduce vulnerability to decline or extirpation. Many of these information gaps are described in the species profiles ([Appendix C](#)) and listed in [Appendices G-K](#). As new information is available, these conservation goals can be defined and refined.

South Dakota Wildlife Action Plan

Table 2-1. List of species of greatest conservation need as updated for the 2014 South Dakota Wildlife Action Plan.

Common Name	Scientific Name	Federal Status ^a	State Status ^b	Global Rank ^c	State Rank ^d	2006 SGCN ^e	2006 Eval. ^f	2014 SGCN ^g	2014 Eval. ^h
BIRDS									
American Dipper	<i>Cinclus mexicanus</i>		T	G5	S2	Y	1	Y	1
American Three-toed Woodpecker	<i>Picoides dorsalis</i>			G5	S2	Y	3	Y	3
American White Pelican	<i>Pelecanus erythrorhynchos</i>			G4	S3B	Y	2	Y	2b
Baird's Sparrow	<i>Ammodramus bairdii</i>			G4	S2B	Y	2	Y	2a
Bald Eagle	<i>Haliaeetus leucocephalus</i>		T	G5	S1B, S2N	Y	1	Y	1
Black Tern	<i>Chlidonias niger</i>			G4	S3B	Y	2	Y	2a
Black-backed Woodpecker	<i>Picoides arcticus</i>			G5	S3	Y	3	Y	3
Burrowing Owl	<i>Athene cunicularia</i>			G4	S3S4B	Y	3	Y	3
Chestnut-collared Longspur	<i>Calcarius ornatus</i>			G5	S4B	Y	2	Y	2a
Ferruginous Hawk	<i>Buteo regalis</i>			G4	S4B	Y	3	Y	3
Greater Prairie-Chicken	<i>Tympanuchus cupido</i>			G4	S4	Y	2	Y	2a
Greater Sage-Grouse	<i>Centrocercus urophasianus</i>	C		G3G4	S2	Y	3	Y	3
Interior Least Tern	<i>Sternula antillarum athalassos</i>	E	E	G4T2Q	S2B	Y	1	Y	1
Lark Bunting	<i>Calamospiza melanocorys</i>			G5	S5B	Y	2	Y	2a
Le Conte's Sparrow	<i>Ammodramus leconteii</i>			G4	S1S2B	Y	3	Y	3
Lewis's Woodpecker	<i>Melanerpes lewis</i>			G4	S3B, S3N	Y	3	Y	3
Long-billed Curlew	<i>Numenius americanus</i>			G5	S3B	Y	2	Y	2a
Marbled Godwit	<i>Limosa fedoa</i>			G5	S5B	Y	2	Y	2a
Northern Goshawk	<i>Accipiter gentilis</i>			G5	S3B, S2N	Y	3	Y	3
Osprey	<i>Pandion haliaetus</i>		T	G5	S1B	Y	1	Y	1
Peregrine Falcon	<i>Falco peregrinus</i>		E	G4	SXB	Y	1	Y	1
Piping Plover	<i>Charadrius melodus</i>	T	T	G3	S2B	Y	1	Y	1
Ruffed Grouse	<i>Bonasa umbellus</i>			G5	S4B, S4N	N		Y	3
Sprague's Pipit	<i>Anthus spragueii</i>	C		G4	S2B	Y	2	Y	2a

South Dakota Wildlife Action Plan

Table 2-1 (continued). List of species of greatest conservation need as updated for the 2014 South Dakota Wildlife Action Plan.

Common Name	Scientific Name	Federal Status ^a	State Status ^b	Global Rank ^c	State Rank ^d	2006 SGCN ^e	2006 Eval. ^f	2014 SGCN ^g	2014 Eval. ^h
BIRDS (continued)									
Trumpeter Swan	<i>Cygnus buccinator</i>			G4	S3B, S3N	Y	2	Y	2b
White-winged Junco	<i>Junco hyemalis aikeni</i>			G5T4	S5B, S5N	Y	2	Y	2b
Whooping Crane	<i>Grus americana</i>	E	E	G1	SNA	Y	1	Y	1
Willet	<i>Tringa semipalmata</i>			G5	S5B	Y	2	Y	2b
Wilson's Phalarope	<i>Phalaropus tricolor</i>			G5	S4B	Y	2	Y	2b
GASTROPODS									
Callused Vertigo	<i>Vertigo arthuri</i>			G5	S2	Y	3	Y	3
Cooper's Rocky Mountainsnail	<i>Oreohelix strigosa cooperi</i>			G5T2T3Q	S2	Y	2	Y	2a
Frigid Ambersnail	<i>Catinella gelida</i>			G1	S1	y	3	Y	3
Mystery Vertigo	<i>Vertigo paradoxa</i>			G4G5Q	S1	Y	3	Y	3
AMPHIBIANS AND REPTILES									
Black Hills Redbelly Snake	<i>Storeria occipitomaculata pahasapae</i>			G5T4Q	S3	Y	2	Y	2b
Blanchard's Cricket Frog	<i>Acris blanchardi</i>			G5	S1	Y	3	Y	3
Cope's Gray Treefrog	<i>Hyla chrysoscelis</i>			G5	S2	Y	3	Y	3
Eastern Hognose Snake	<i>Heterodon platirhinos</i>		T	G5	S2	Y	1	Y	1
False Map Turtle	<i>Graptemys pseudogeographica</i>		T	G5	S3	Y	1	Y	1
Lesser Earless Lizard	<i>Holbrookia maculata</i>			G5	S2	Y	3	Y	3
Lined Snake	<i>Tropidoclonion lineatum</i>		E	G5	S1	Y	1	Y	1
Many-lined Skink	<i>Plestiodon multivirgatus</i>			G5	S1	Y	3	Y	3
Sagebrush Lizard	<i>Sceloporus graciosus</i>			G5	S2	N		Y	3
Short-horned Lizard	<i>Phrynosoma hernandesi</i>			G5	S2	Y	3	Y	3
Smooth Softshell	<i>Apalone mutica</i>			G5	S2	Y	3	Y	3
Western (Ornate) Box Turtle	<i>Terrapene ornata</i>			G5	S2	Y	3	Y	3

South Dakota Wildlife Action Plan

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MAMMALS									
Black-footed Ferret	<i>Mustela nigripes</i>	E	E	G1	S1	Y	1	Y	1
Black Hills Red Squirrel	<i>Tamiasciurus hudsonicus dakotensis</i>			G5TNR	SNR	N		Y	2b
Franklin's Ground Squirrel	<i>Poliocitellus franklinii</i>			G5	S5	Y	2	Y	3
Fringe-tailed Myotis	<i>Myotis thysanodes pahasapensis</i>			G4T2	S2	Y	2	Y	2a
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>			G5	S2	Y	2	Y	2b
Northern Myotis	<i>Myotis septentrionalis</i>	T		G2G3	S3	Y	3	Y	3
Northern River Otter	<i>Lontra canadensis</i>		T	G5	S2	Y	1	Y	1
Richardson's Ground Squirrel	<i>Uroditellus richardsonii</i>			G5	S5	Y	2	Y	2b
Silver-haired Bat	<i>Lasionycteris noctivagans</i>			G5	S4	N		Y	3
Swift Fox	<i>Vulpes velox</i>		T	G3	S1	Y	1	Y	1
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>			G3G4	S2S3	Y	3	Y	3
TERRESTRIAL INSECTS									
American Burying Beetle	<i>Nicrophorus americanus</i>	E		G2G3	S1	Y	1	Y	1
Dakota Skipper	<i>Hesperia dacotae</i>	T		G2	S2	Y	2	Y	2a
Great Plains Tiger Beetle	<i>Amblycheila cylindriformis</i>			G4G5	S1	Y	3	Y	3
Indian Creek Tiger Beetle	<i>Cicindela nevadica makosika</i>			G5T1	S1	N		Y	2a
Iowa Skipper	<i>Atrytone arogos iowa</i>			G3T3	S2	Y	3	Y	3
Little White Tiger Beetle	<i>Cicindela lepida</i>			G3G4	S1	Y	3	Y	3
Northern Sandy Tiger Beetle	<i>Cicindela limbata nympha</i>			G4T4	S4	N		Y	3
Ottoo Skipper	<i>Hesperia ottoe</i>			G3G4	S2	Y	2	Y	3
Pahasapa Fritillary	<i>Speyeria atlantis pahasapa</i>			G5T3	S3	Y	2	Y	3
Poweshiek Skipperling	<i>Oarisma poweshiek</i>	E		G1	S1	Y	2	Y	2a
Regal Fritillary	<i>Speyeria idalia</i>			G3	S3	Y	3	Y	2a

South Dakota Wildlife Action Plan

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AQUATIC INSECTS									
A Mayfly	<i>Anaetris eximia</i>			G3	SNR	N		Y	3
Dakota Stonefly	<i>Perlesta dakota</i>			G3	SNR	N		Y	2a; 3
Dot-winged Baskettail	<i>Eitheca petechialis</i>			G4	SNR	N		Y	3
Elusive Clubtail	<i>Stylurus notatus</i>			G3	SNR	N		Y	3
FRESHWATER MUSSELS									
Creek Heelsplitter	<i>Lasmigona compressa</i>			G5	S1	Y	3	Y	3
Elktoe	<i>Alasmidonta marginata</i>			G4	S1	Y	3	Y	3
Hickorynut	<i>Obovaria olivaria</i>			G4	S1	Y	3	Y	3
Higgins Eye	<i>Lampsilis higginsii</i>	E		G1G2	S1	Y	1	Y	1
Mapleleaf	<i>Quadrula quadrula</i>			G5	S2	Y	3	Y	3
Pimpleback	<i>Quadrula pustulosa</i>			G5	S1	N		Y	3
Rock Pocketbook	<i>Arcidens confragosus</i>			G4	S1	Y	3	Y	3
Scaleshell	<i>Leptodea leptodon</i>	E		G1G2	S1	Y	1	Y	1
Yellow Sandshell	<i>Lampsilis teres</i>			G5	S1	N		Y	3
FISHES									
Banded Killifish	<i>Fundulus diaphanus</i>		E	G5	S1	Y	1	Y	1
Blacknose Shiner	<i>Notropis heterolepis</i>		E	G5	S1	Y	1	Y	1
Blackside Darter	<i>Percina maculata</i>			G5	S2	Y	3	Y	3
Blue Sucker	<i>Cycleptus elongatus</i>			G3G4	S3	N		Y	3
Carmine Shiner	<i>Notropis percobromus</i>			G5	S2	Y	3	Y	3
Central Mudminnow	<i>Umbra limi</i>			G5	S2	Y	1	Y	3
Finescale Dace	<i>Chrosomus neogaeus</i>		E	G5	S1	Y	1	Y	1
Hornyhead Chub	<i>Nocomis biguttatus</i>			G5	S3	Y	3	Y	3
Lake Chub	<i>Couesius plumbeus</i>			G5	S1	Y	3	Y	3

South Dakota Wildlife Action Plan

Table 2-1 (continued). List of species of greatest conservation need as updated for the 2014 South Dakota Wildlife Action Plan.

Common Name	Scientific Name	Federal Status ^a	State Status ^b	Global Rank ^c	State Rank ^d	2006 SGCN ^e	2006 Eval. ^f	2014 SGCN ^g	2014 Eval. ^h
FISHES (continued)									
Logperch	<i>Percina caprodes</i>			G5	S3	Y	3	Y	3
Longnose Sucker	<i>Catostomus catostomus</i>		T	G5	S1	Y	1	Y	1
Mountain Sucker	<i>Catostomus platyrhynchus</i>			G5	S3	Y	3	Y	3
Northern Pearl Dace	<i>Margariscus nachtriebi</i>		T	G5	S2	Y	1	Y	1
Northern Redbelly Dace	<i>Chrosomus eos</i>		T	G5	S2	Y	1	Y	1
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	E	E	G2	S1	Y	1	Y	1
Shovelnose Sturgeon	<i>Scaphirhynchus platorynchus</i>	T		G4	S4	N		Y	1
Sicklefin Chub	<i>Macrhybopsis meeki</i>		E	G3	S1	Y	1	Y	1
Southern Redbelly Dace	<i>Chrosomus erythrogaster</i>			G5	S1	Y	3	Y	3
Sturgeon Chub	<i>Macrhybopsis gelida</i>		T	G3	S2	Y	1	Y	1
Topeka Shiner	<i>Notropis topeka</i>	E		G3	S2	Y	1	Y	1
Trout-perch	<i>Percopsis omiscomaycus</i>			G5	S2	Y	1	Y	3

^a Federal Status - E= Endangered, a species in danger of extinction throughout all or a significant portion of its range; T = Threatened, a species likely to become endangered in the foreseeable future; C = Candidate for federal listing; PE = Proposed for federal listing as endangered; PT = Proposed for federal listing as threatened

^b State Status - E= Endangered, a species in danger of extinction throughout all or a significant portion of its range in South Dakota; T = Threatened, a species likely to become endangered in the foreseeable future in South Dakota

South Dakota Wildlife Action Plan

Table 2-1 (continued). List of species of greatest conservation need as updated for the 2014 South Dakota Wildlife Action Plan.

^{c, d} Global/State Rank Definition (applied rangewide for global rank and statewide for state rank; these may change with new information)

G1 S1 = Critically imperiled because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2 S2 = Imperiled because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3 S3 = Either very rare and local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction throughout its range because of other factors; in the range of 21 of 100 occurrences.

G4 S4 = Apparently secure, though it may be quite rare in parts of its range, especially at the periphery. Cause for long term concern.

G5 S5 = Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.

GU SU = Possibly in peril, but status uncertain, more information needed.

GH SH = Historically known, may be rediscovered.

GX SX = Believed extinct, historical records only.

GNR SNR = Not yet ranked

_T = Rank of subspecies or variety

_Q = Taxonomic status is questionable, rank may change with taxonomy

SZ = No definable occurrences for conservation purposes, usually assigned to migrants

SP = Potential exists for occurrence in the state, but no occurrences

SR = Element reported for the state but no persuasive documentation

SA = Accidental or casual

Bird species may have two state ranks, one for breeding (S#B) and one for nonbreeding seasons (S#N). Example: Ferruginous Hawk (S3B, SZN) indicates an S3 rank in breeding season and SZ in nonbreeding season.

^e2006 SGCN - SGCN selected for the 2006 SDWAP; "Y" = Yes, "N"=No

^f2006 Evaluation – criteria for selection as SGCN in 2006 SDWAP

1 = State or Federal listed species for which the State has a mandate for recovery

2 = Species for which SD represents a significant portion of the species overall range

3 = Species that are indicative of or depend upon a declining or unique habitat in SD

South Dakota Wildlife Action Plan

Table 2-1 (continued). List of species of greatest conservation need as updated for the 2014 South Dakota Wildlife Action Plan.

^g2014 SGCN - SGCN selected for the 2014 SD SDWAP; "Y" = Yes, "N"=No

^h2014 Evaluation = Criteria for selection as SGCN in 2014 SDWAP revision

1 = State or federally listed species for which the state has a mandate for recovery (listed as threatened or endangered);

2a = Species that are regionally or globally imperiled* and for which South Dakota represents an important portion of their remaining range;

2b = Species that are regionally or globally secure* and for which South Dakota represents an important portion of their remaining range; or

3 = Species with characteristics that make them vulnerable, including any of the following:

- are indicative of or depend on a unique or declining habitat in South Dakota;
- require large home ranges/use multiple habitats;
- depend on large habitat patch sizes;
- depend on an ecological process (such as fire) that no longer operates within the historical range of variation;
- are limited in their ability to recover on their own due to low dispersal ability or low reproductive rates;
- have a highly localized or restricted distribution (endemics); or
- concentrate their populations during some time of the year.

*Based, in part, on NatureServe conservation status ranking: <http://www.natureserve.org/explorer/index.htm>

South Dakota Wildlife Action Plan

2.2 Species Profile Description

Individual species profiles were developed for each of the SGCN ([Appendix C](#) and [Appendix D](#)). Although format varies slightly between terrestrial and aquatic species, each species profile contains the following information:

Description – a general physical description of the species.

Protection Status – State and Federal designations for protection of a species. For a definition of the Protection Status codes used in each of species descriptions, see [Table 2-1](#).

Distribution

Historic – The best information on distribution of a species prior to European settlement and while habitat was influenced by historical disturbance regimes.

Current – The current known distribution of a species presented in a mapped format.

Data sources are listed on terrestrial species profile maps. Data sources for aquatic species profile maps were the South Dakota Natural Heritage Database and the Macroinvertebrate Reference Database, maintained by Nels Troelstrup, PhD, Department of Biology and Microbiology, South Dakota State University. See [Figure 2-1](#) and [Table 2-2](#) for descriptions of distribution mapping terminology and sources.

Key Habitat - physical description of the known primary habitat features that a species requires to persist in the landscape.

Conservation Challenges – known or expected causes of concern based on our best knowledge of the species; these concerns are categorized as habitat or non-habitat related challenges recognized range-wide and may or may not affect the species in South Dakota; a discussion of conservation challenges is presented in Chapter 5.

Conservation Actions – habitat and non-habitat related conservation actions for each SGCN; habitat related conservation actions are addressed through the coarse filter strategy for ecosystem diversity; non-habitat related actions are identified; a discussion of conservation actions is presented in Chapter 6.

Current Monitoring and Inventory Programs – relevant ongoing monitoring programs. The overall list ([Appendix E](#)) was drafted by SDGFP and incorporated input from private, governmental, and tribal partners. All species currently monitored as sensitive species by the South Dakota Natural Heritage Program (<http://gfp.sd.gov/wildlife/threatened-endangered/rare-animal.aspx>) benefit from opportunistic data resulting from field surveys, scientific research, activities conducted under various state permits, and on-line reporting from citizen scientists and internal and external technical staff.

State Wildlife Grant (SWG) Accomplishments – State Wildlife Grant-funded projects conducted in South Dakota related to the species, if appropriate. A listing of all SWG projects conducted by the time of the Plan's completion is found in [Appendix F](#). Many of these projects are not listed in individual species profiles because they relate to habitats or apply to multiple species or species groups. Concise

South Dakota Wildlife Action Plan

summaries and end-products of each project, such as graduate theses, dissertations, and publications, are available on the SDGFP website.

Priority Research and Monitoring Needs – relevant projects related to continuing or future research and monitoring needs for the species. The overall lists ([Appendices G-K](#)) were drafted by SDGFP and incorporated input from private, governmental, and tribal partners.

Existing Recovery Plan/Conservation Strategy – a preexisting state or federal recovery plan or conservation strategy developed for the species, if relevant.

[Figure 2-2](#) presents an example of a SGCN profile.

South Dakota Wildlife Action Plan

Figure 2-1. Description of species of greatest conservation need distribution map terminology.

Terrestrial SGCN

Summer 

Migration  Migration corridor with observations occurring in spring and fall

Winter 

Year Round 

Aquatic SGCN

Confirmed 

Probable  Watershed with hydrology connected to adjacent watershed with current species documentation

Historic  Species records from the South Dakota Natural Heritage Database documented pre-1985

Current  Species records from the South Dakota Natural Heritage Database documented from 1985 through 2013

South Dakota Wildlife Action Plan

Table 2-2. Description of sources used in species of greatest conservation need distribution maps

Source Code	Description
Amphibians and Reptiles of SD	Kiesow, A.M. 2006. Field guide to amphibians and reptiles of South Dakota. South Dakota Dept. of Game, Fish, and Parks, Pierre, South Dakota.
Birds of SD	Tallman, D.A., D.L. Swanson, and J.S. Palmer. 2002. Birds of South Dakota. Third edition. South Dakota Ornithologists' Union, Aberdeen, South Dakota.
Butterflies of SD	Marrone, G. 2002. Field guide to butterflies of South Dakota. South Dakota Dept. of Game, Fish, and Parks, Pierre, South Dakota.
Expert Opinion	Internal and external consultation with species experts
Mammals of NGP	Jones, J.K. Jr., D.M. Armstrong, R.S. Hoffman, and C. Jones. 1983. Mammals of the Northern Great Plains. University of Nebraska Press, Lincoln, Nebraska, USA.
Mammals of SD	Higgins, K.F., E.D. Stukel, J.M. Goulet, and D.C. Backlund. 2000. Wild mammals of South Dakota. South Dakota Dept. of Game, Fish, and Parks, Pierre, South Dakota.
SDBBA	South Dakota Breeding Bird Atlas II. 2013. South Dakota Dept. of Game, Fish, and Parks, unpublished data.
SDGFP	Data acquired by the South Dakota Dept. of Game, Fish and Parks
SDNHD	Records from the South Dakota Natural Heritage Database. Historic records=pre 1985, Current records=1985 to 2013. In most cases current records were used for distribution maps with the exception of a few species for which there is limited information.
Tiger Beetles of SD and NE	Spomer, S.M., M.L. Brust, D.C. Backlund, and S. Weins. 2008. Tiger beetles of South Dakota and Nebraska. Dept. of Entomology, University of Nebraska, Lincoln, Nebraska, USA.

South Dakota Wildlife Action Plan

Figure 2-2. Example of information provided in each species of greatest conservation need profile.

American Burying Beetle

AMBE

Nicrophorus americanus

Description:

Large, shiny, black burying beetle with orange patches on wings and head.

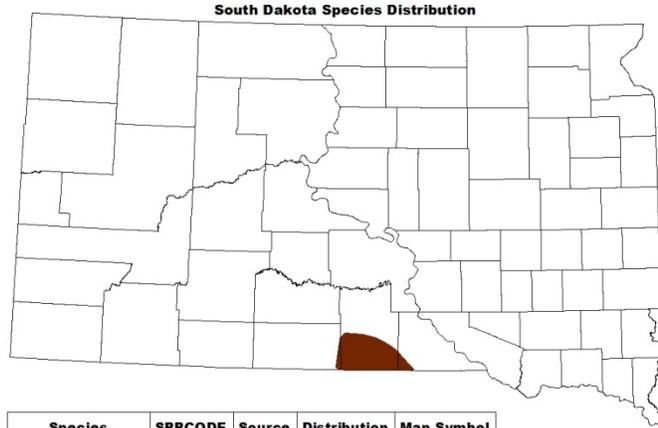
Protection Status:

Federal: Endangered

State: None

Distribution:

This species is believed to have historically occurred in appropriate habitat throughout South Dakota with the possible exception of MLRA 62. Today, it is only known to occur in a small portion of its previous range - see current distribution map at right.



Species	SPPCODE	Source	Distribution	Map Symbol
American burying beetle	AMBE	SDNHD	Year Round	

Key Habitat:

Believed to be a habitat generalist as long as there are abundant carrion sources. However, it has been found to be positively correlated with little bluestem mixed prairies, disturbed grasslands, and fine sandy loams that are well-drained and at least moderately permeable. It is typically negatively correlated with forests, bottomland habitat, clays, and silt loams. Habitat areas must be large enough to allow sufficient distance for movements in search of carrion and mates (e.g., may move as far as 2 miles in 24 hours). A small area of potential habitat is not expected to support a population long term.

Conservation Challenges:

Habitat: see conservation challenges for native ecosystem diversity in Chapter 5

Non-habitat: population declines for this species are poorly understood at this time but some suggestions includes carcass reduction/limitations, pesticide use, disease, light pollution, or a combination of these factors

Conservation Actions:

Habitat: see conservation actions for native ecosystem diversity in Chapter 6

Non-habitat: work with agencies, landowners, and industry to reduce pesticide/herbicide use and excessive light pollution in habitat

Current Monitoring & Inventory Programs ([Appendix E](#)):

Population surveys

SWG Accomplishments ([Appendix F](#)):

Monitoring the American burying beetle in South Dakota (T-17A)

Priority Research & Monitoring Needs ([Appendices G-K](#)):

Periodically survey occupied areas to monitor population status and trends

Existing Recovery Plans/Conservation Strategies:

U.S. Fish and Wildlife Service. 1991. American burying beetle (*Nicrophorus americanus*) recovery plan. Newton Corner, MA. 80pp.

2.3 Case Studies

Two examples are presented to assist the reader in finding information about each species of greatest conservation need.

Burrowing Owl

From the [species profile](#) in Appendix C, we learn the following:

- this species is not protected as a state or federal threatened or endangered species
- the burrowing owl can potentially occur throughout much of South Dakota in colonies created by black-tailed prairie dogs or ground squirrels
- key habitats include burrows in areas with low vegetative cover to allow easy viewing of the surroundings and to aid in finding prey
- the distribution map was created using records from the South Dakota Natural Heritage Database and the South Dakota Breeding Bird Atlas project
- coordination with agencies and landowners will help assure that adequate numbers and distribution of colonial rodents provide the habitat needed by burrowing owls
- monitoring through the North American Breeding Bird Survey provides information on this species, in addition to regular prairie dog mapping efforts to describe its habitat
- several State Wildlife Grant-funded projects have provided useful information on abundance and management needs, but additional information is needed on specific habitat requirements and habitat trends
- a conservation plan for the burrowing owl released in 2003 can help guide management and conservation efforts in South Dakota

From [Table 2.1](#), we learn that this species was included as a SGCN because of criterion 3 (Species with characteristics that make them vulnerable). In this case, the burrowing owl was included because of its dependence on the continued distribution of black-tailed prairie dog and ground squirrel colonies. Table 2.1 also informs us that this species has a global rank of G4 (Apparently secure, though it may be quite rare in parts of its range, especially at the periphery. Cause for long term concern). The burrowing owl's state rank is S3S4B, indicating that its breeding status falls between S3 (Either very rare and local throughout its range, or found locally in a restricted range) and S4 (same definition as G4 above, but with the range defined as its range within South Dakota).

[Table 5.5](#) indicates that this species is predicted to have a variable response to climate change. Because of its dependence on colonial rodent burrows, the burrowing owl's response to climate change will depend on how climate change affects the black-tailed prairie dog and the more abundant ground squirrel species.

From [Appendix E](#), we learn that several entities monitor the status of black-tailed prairie dog colonies in South Dakota. [Appendix F](#) provides the specific objectives of the SWG-funded projects (T-41, T-23, and T-2-5) pertaining to burrowing owls. Recommended monitoring and research needs for this species can be found in [Appendices G](#) through K. Examples include the need to monitor nest success, population trends, and prey availability.

South Dakota Wildlife Action Plan

Blacknose Shiner

From the [species profile](#) in Appendix C, we learn the following:

- this species is a state endangered species, but has no protection under the federal Endangered Species Act
- the blacknose shiner has a limited distribution, occurring only in southcentral South Dakota, which is the western periphery of this species' range; two historic records are also displayed outside the current distribution
- the distribution map was created using records from the South Dakota Natural Heritage Database and the Fish and Macroinvertebrate Reference Database at South Dakota State University (Section 2.2)
- the blacknose shiner inhabits cool, vegetated streams, rivers, and lakes with sandy substrates
- challenges for this species include habitat degradation practices that increase turbidity and siltation and reduce vegetation
- partnerships and cooperation are recommended to improve the species' status, in addition to management to reduce soil erosion and runoff of nutrients and pesticides into water bodies
- the blacknose shiner benefits from monitoring of western streams and rivers by SDGFP and South Dakota State University
- a State Wildlife Grant-funded project in the Sandhills (T-2-8) provided information on this species
- there is currently no conservation plan for the blacknose shiner to guide management and conservation efforts in South Dakota

From [Table 2.1](#), we learn that this species was included as a SGCN because of criterion 1 (State or federal listed species for which the state has a mandate for recovery). Table 2.1 also informs us that this species has a global rank of G5 (Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery). The blacknose shiner's state rank is S1 (Critically imperiled because of extreme rarity or because of some factors making it especially vulnerable to extinction).

[Table 5.6](#) indicates that this species is moderately vulnerable to climate change, possibly due to barriers to dispersal and its reliance on specific habitat variables.

[Appendix F](#) provides the specific objectives of the SWG-funded project pertaining to the blacknose shiner. Recommended monitoring and research needs for this species can be found in [Appendices G](#) through J. Some examples include the need for additional information on distribution, status, population dynamics, critical habitats, limiting factors, seasonal movements, and recolonization potential. [Appendix U](#) lists the selected aquatic conservation opportunity areas for prioritizing efforts to help meet the needs of the blacknose shiner.