Chapter Overview

Chapter 1 – Introduction

This chapter sets the stage by describing the history behind the need for state wildlife action plans and the voluntary, proactive philosophy behind the SDWAP. Also discussed are the challenges associated with traditional funding sources and the opportunities that new users and expanded programs present in keeping state wildlife agencies relevant with changing times.

The importance of State Wildlife Grant (SWG) funding is discussed in the context of understanding the critical need for expanded funding to meet the ambitious goals of state wildlife action plans. The most significant changes since the previous SDWAP are summarized. Updates include incorporating new data; discussing emerging conservation challenges; considering species groups of recent national concern, such as native insect pollinators; discussing expanded opportunities for standardization and collaboration; including a revised list of SGCNs and revised terrestrial and aquatic COAs. Also included is an expanded discussion of the importance of environmental education and wildlife-associated recreation.

This chapter lists the 8 key (required) elements that must be satisfied for the SDWAP to be approved by the U.S. Fish and Wildlife Service. Eleven specific goals of the SDWAP are presented. Overview sections are included for SGCNs and the plan's overall conservation strategy.

Chapter 2 – Species of Greatest Conservation Need

In this chapter, we describe the procedures followed for the review and revision of the state list of plant and animal Species of Greatest Conservation Need (SGCN), including involvement of internal and external taxonomic experts and the opportunity for the public, other agencies, and Native American tribes to review the revised draft list. One minor modification was made to the selection criteria, with the addition of a subcategory for species with significant information or data needs. The 245 SGCNs are composed of 5 amphibian species, 10 aquatic insects, 52 birds, 4 crayfish, 28 fishes, 11 freshwater mussels, 5 gastropods, 28 mammals, 40 plants, 17 reptiles, and 45 terrestrial insects.

New species profiles were generated for this revision. A sample profile is presented with an explanation of the content. The full set of SGCN species profiles are presented as appendices in this plan.

Chapter 3 – Conservation Background – Terrestrial and Riparian-wetland Ecosystems

Chapter 3 describes the ecological framework for terrestrial ecosystems that defines South Dakota habitats in two primary ways. The MLRA framework developed by the Natural Resources Conservation Service (NRCS) matches our most critical terrestrial habitats by providing detailed descriptions and predictive species compositions for the many and varied grassland habitat types in the state.

We also introduce a simple habitat classification system that may be more meaningful to those not familiar with MLRAs. We used various data sources and well-established landscape classification systems to sort the state's general habitat types into 8 categories. Also in this chapter is a description of natural disturbance factors, such as climate, fire, grazing, black-tailed prairie dogs and other herbivores, beaver, and flood events.

These disturbances have been modified or controlled to suit modern land uses. Those management decisions have altered the habitats and dependent fish and wildlife, which is noted in later sections where conservation threats and actions are described for SGCNs.

We present the ecological concepts and data sources associated with understanding riparian-wetland ecosystems. The dynamic and complex nature of these systems is described to acknowledge impacts of South Dakota's extreme fluctuations in temperature and precipitation and other influences, such as beavers and other herbivores.

Chapter 4. Aquatic Ecosystems

This chapter describes the goals of aquatic ecosystems, particularly related to meeting the needs of aquatic SGCNs. The aquatic COA process is introduced. The overall planning approach of using coarse and fine filters is reviewed. We describe steps involved in the aquatic COA process at a general level, with more detailed descriptions and illustrations found in Chapter 6.

The riverine ecosystems' hierarchical framework for the 14 major river basins is detailed, with additional descriptions provided to the Basin (HUC_6) level.

Chapter 5. Conservation Challenges and Threats to Native Ecosystems

This chapter presents a brief overview of the ecological planning model that forms the basis of designing the actions component of South Dakota's Wildlife Action Plan; that is, the impact of direct and indirect habitat and ecosystem changes since European settlement. Potential conservation threats associated with changes to native ecosystems are initially discussed from a broad perspective.

A change from the previous SDWAP is the use of a standardized approach to describing conservation threats. This allows easier categorization within the state and across state and international boundaries. The Conservation Measures Partnership (CMP) and the International Union for the Conservation of Nature (IUCN) developed this system, which is used for habitat systems, SGCNs, and the 8 habitat categories defined for this revision.

Conservation challenges associated with terrestrial, riparian-wetland, and aquatic systems are examined in detail, using the relevant CMP/IUCN categories. Following this evaluation is a similar assessment of conservation threats to SGCNs, which are evaluated individually and results available in a conservation threats appendix. Within the chapter is a discussion of the most common conservation threats categories by SGCN taxonomic groups. An additional discussion of climate change impacts to SGCNs shares relevant results of a Competitive-State Wildlife Grant (CSWG) project award to the Midwest Association of Fish and Wildlife Agencies (MAFWA).

Chapter 6. Conservation Actions

Similar to Chapter 5, this chapter reviews the ecological background for South Dakota's planning approach, but from the perspective of habitat- and species-specific actions needed to address the loss of ecosystem function and diversity and associated historical disturbance regimes.

Also, in common with Chapter 5, is the use of a standardized approach to describing conservation actions. This standardization facilitates sharing species and habitat goals and partnering across political boundaries. Conservation actions associated with terrestrial, riparian-wetland, and aquatic systems are examined in detail, using the relevant CMP categories. Following this evaluation is a similar assessment of conservation actions relevant to SGCNs. SGCNs are evaluated individually, with results available in a conservation actions appendix. Also discussed are the most prevalent conservation actions categories for each SGCN taxonomic group.

One of the most meaningful conservation actions is the identification of terrestrial and aquatic COAs, which were introduced in the previous SDWAP. This process also reinforces the importance of this document as a statewide planning document. The COA identification process, including data sources and resulting maps, can assist partners interested in prioritizing rare species and native habitat efforts. This chapter includes detailed descriptions of how COAs were developed.

Chapter 7. Agency Coordination, Cooperator Interactions, and Public Involvement

This chapter describes efforts made by SDGFP to engage internal staff, other agencies, Native American tribes, and the public to inform them of the SDWAP revision process and its various opportunities for input. To better engage internal staff, a more formalized working group structure was used. Lists were generated of appropriate contacts with agencies and Native American tribes with significant land and water areas and programs affecting relevant species and habitats. SDGFP's website was the primary input tool for the public and partners, which is consistent with other similar SDGFP planning activities.

In keeping with the original Plan and the previous major revision in 2014, SDGFP conducted two attitude surveys. The first was a public attitude survey to monitor opinions about wildlife and habitat issues. The second survey dealt with relevancy of the SDWAP, to assist the agency in identifying and improving upon weaknesses in how and where the information is presented. Highlights of the surveys are included, with links to final reports.

Chapter 8. Monitoring

We present examples of ongoing monitoring in South Dakota for species, species groups, habitats, and relevant land uses. Most are programs conducted by SDGFP or other efforts relevant to the agency's work. Monitoring may include discrete, time-limited projects, such as those accomplished with SWG or Section 6 endangered species match dollars as well as programs supported by more extensive and longer-term funding sources.

Without significant additional funding, a comprehensive monitoring program is not feasible for all species and habitats. We encourage partnerships with other agencies, Native American tribes, and NGOs to identify potential duplication, evaluate current shortfalls in monitoring, and address those deficits as funding and personnel allow. We have described 4 potential monitoring prioritization methods, based on threatened or endangered species designations, established rare species classifications systems, and primary habitat types.

Chapter 9. Review Schedule

This chapter describes the timing and general process for reviewing and revising the SDWAP. SDGFP will comply with the 10-year maximum interval unless changes are needed beforehand.

Chapter 10. Engaging the Public and Partners Through Watchable Wildlife, Environmental Education, and Wildlife-associated Recreation

This chapter begins with a discussion of outdoor recreation's importance in the state, including the extensive participation rates of hunters, anglers, and birders; the economic importance of these activities; and the relationship between outdoor experiences and mental health. The two opinion surveys discussed in Chapter 7 are mentioned in the context of South Dakotans' strong commitment to wildlife and natural resources.

The role and activities of a working group on this topic are discussed. Included is a preliminary list of outdoor education and recreation needs, based on internal expertise.

AFWA's Fish and Wildlife Relevancy Roadmap is introduced and, in combination with South Dakota's 2020 census results and attitude survey findings, the potential applicability of this tool is discussed as a way SDGFP can broaden its reach and impact with lapsed and untapped outdoor users.

Appendices

Critical material is included in the plan's appendices, either in the appendices package or as linked content. These include concise species accounts for the 245 plant and animal SGCNs, summaries of SDWAP completion accomplishments since the 2014 SDWAP, a climate change assessment report created during the previous plan revision and a more recent analysis relevant to some SGCNs using different methodology, conservation threats and conservation actions spreadsheets for SGCNs, current monitoring programs for species and habitats, supplemental data related to COA revisions, reports from 2 public opinion surveys conducted during this plan revision, and a summary of comments received and resolution of comments received during the public input opportunity.

The Power of Partnerships

"Alone we can do so little; together we can do so much." Helen Keller

South Dakota Game, Fish and Parks is responsible for leading the review and revision of this plan and for the wise use of funds allocated to the state to help implement actions identified for species and habitats. However, the SDWAP is intended as a statewide, multi-partner strategic vision to benefit fish, wildlife, and plant species, particularly SGCNs, and the habitats they need. Enhancing existing connections and establishing relationships with new conservation partners must happen for this effort to succeed.