SOUTH DAKOTA BIGHORN SHEEP ACTION PLAN 2023–2027

SOUTH DAKOTA DEPARTMENT OF GAME, FISH AND PARKS
PIERRE, SOUTH DAKOTA

WILDLIFE DIVISION REPORT 2023–02AP

SEPTEMBER 2023

This document is for general, strategic guidance for the South Dakota Department of Game, Fish and Parks (SDGFP) and serves to identify what we strive to accomplish related to bighorn sheep management. By itself this document is of little value; the value is in its implementation. This process will emphasize working cooperatively with interested publics in both the planning process and the regular program activities related to bighorn sheep management. This plan will be used by Department staff and Commission on an annual basis and will be formally evaluated every four years. Plan updates and changes, however, may occur more frequently as needed.

ACKNOWLEDGEMENTS

This plan is a product of substantial discussion and input from many wildlife professionals and the South Dakota public sector. In addition, those comments and suggestions received from private landowners, hunters, and those who recognize the value of bighorn sheep and their associated habitats were also considered.

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All text and data contained within this document are subject to revision for corrections, updates, and data analyses.

Cover photo courtesy of Dennie Mann.

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EXECUTIVE SUMMARY

This action plan will outline bighorn sheep management priorities, objectives and strategies for 2023-2027. We encourage readers to reference the "Bighorn Sheep Management Document, 2018-2027" for information not contained in this document.

Mountain sheep, also known as bighorn sheep in some geographic areas, embody wildness as they are legendary in their ability to negotiate precipitous terrain and survive in some of the most desolate areas of North America. Bighorn sheep were numerous on the prairies of western South Dakota and the Black Hills before their extirpation in the late 1890s. United States Senator Peter Norbeck orchestrated their reintroduction in the early 1920s and this began a conservation success story where bighorns once again occupied their native habitats. This management action plan provides important historical background and relevant biological information for the sustainable management of bighorn sheep. Current bighorn sheep survey methodology and relevant biological literature are presented, along with a thorough discussion of objectives and strategies to guide management of this important resource into the future. This plan is intended to guide managers and biologists over the next four years but should be considered a working document that will be amended as new biological and social data provide opportunities to improve management of bighorn sheep resources in South Dakota. Since their successful reintroduction in the early 1920s, bighorn populations have fluctuated greatly over time in western South Dakota. Respiratory disease largely caused by bacteria remains the most prominent factor impacting bighorn sheep restoration in western South Dakota, consistent across other North American herds. Several herds have been decimated by pneumonia die-offs and trapping and translocation efforts have either restored or helped maintain bighorn populations in South Dakota. Disease research and advancements in methodologies may provide important tools for managers to maintain healthy populations of this species into the future. For the management of bighorn sheep, the following objectives have been identified: 1) management and monitoring of disease pathogens in bighorn sheep herds across South Dakota; 2) annually determine status of bighorn sheep populations; 3) bi-annually review and formulate bighorn sheep management objectives; use harvest strategies to manage the population with the available resource; 4) maintain, manage, and protect existing bighorn sheep habitat and augment populations to either maintain or start new herds in vacant habitat in South Dakota; 5) continue to use science-based research, habitat inventories, and surveys to answer questions related to bighorn sheep ecology and public attitudes towards bighorn sheep management; and 6) the SDGFP will inform and educate the public on bighorn sheep ecology, management, research, and provide viewing opportunities.

The "*South Dakota Bighorn Sheep Action Plan 2023-2027*" will serve as the guiding document for decision making and implementation of actions to ensure bighorn sheep populations and their habitats are managed appropriately. The SDGFP will work closely with other public land managers, private landowners, and sportsmen and women to overcome the challenges and take advantage of opportunities regarding the future management of bighorn sheep in South Dakota.

Introduction

Mountain sheep, also known as bighorn sheep in some geographic areas, embody wildness as they are legendary in their ability to negotiate precipitous terrain and survive in some of the most desolate areas of North America. Bighorn sheep were numerous on the prairies of western South Dakota and the Black Hills before their extirpation in the late 1890s. After extirpation, the reintroduction of Rocky Mountain bighorn sheep (*O. c. canadensis*) began in the early 1900s. In 1922, Peter Norbeck worked with Alberta Canada to obtain eight Rocky Mountain bighorns for release into Custer State Park (CSP) within the Black Hills. Since their successful reintroduction in the early 1920s, bighorn populations have fluctuated greatly over time in western South Dakota. Respiratory disease largely caused by bacteria, remains the most prominent factor impacting bighorn sheep restoration in western South Dakota which is consistent across other North American herds. Several herds have been decimated by pneumonia die-offs and trapping and translocation efforts have either restored or helped maintain bighorn populations in South Dakota. Translocation efforts have continued as populations have fluctuated over time and the most recent efforts included bighorns from Alberta being released in the Deadwood area of the Black Hills, and from Badlands National Park to CSP.

Surveys and Monitoring

Bighorn sheep are surveyed using ground counts to obtain minimum counts, lamb:ewe ratios, ram:ewe ratios, and using radio-telemetry with mark-resight techniques to estimate population size. Ground counts are used to estimate the minimum number of sheep for herds in the Badlands and Black Hills (Table 1). Ratio data includes lamb:ewe and ram:ewe for each herd (Table 2). Bighorn sheep are classified as lambs, ewes, and rams using body form and horn size; rams are further classified into categories I, II, III, and IV (Geist 1968).

Harvest Strategy

For the management of a bighorn sheep herd, it is recommended to potentially close a Bighorn Sheep Hunting Unit (Figure 1) when <50 sheep are observed during surveys. Further, it is recommended opening a season on bighorn sheep when 3 criteria are met: 1) ≥50 sheep are observed during surveys, 2) observe a ram:ewe ratio of ≥30 rams/100 ewes, and 3) observe a lamb:ewe ratio of ≥30 lambs/100 ewes. Generally, ram harvest will be set at 10% of the available rams in a herd for management units in South Dakota. However, harvest could be set above 10% of the available rams in a herd during disease events or under special circumstances depending upon sex and age ratios and population size (Table 3).

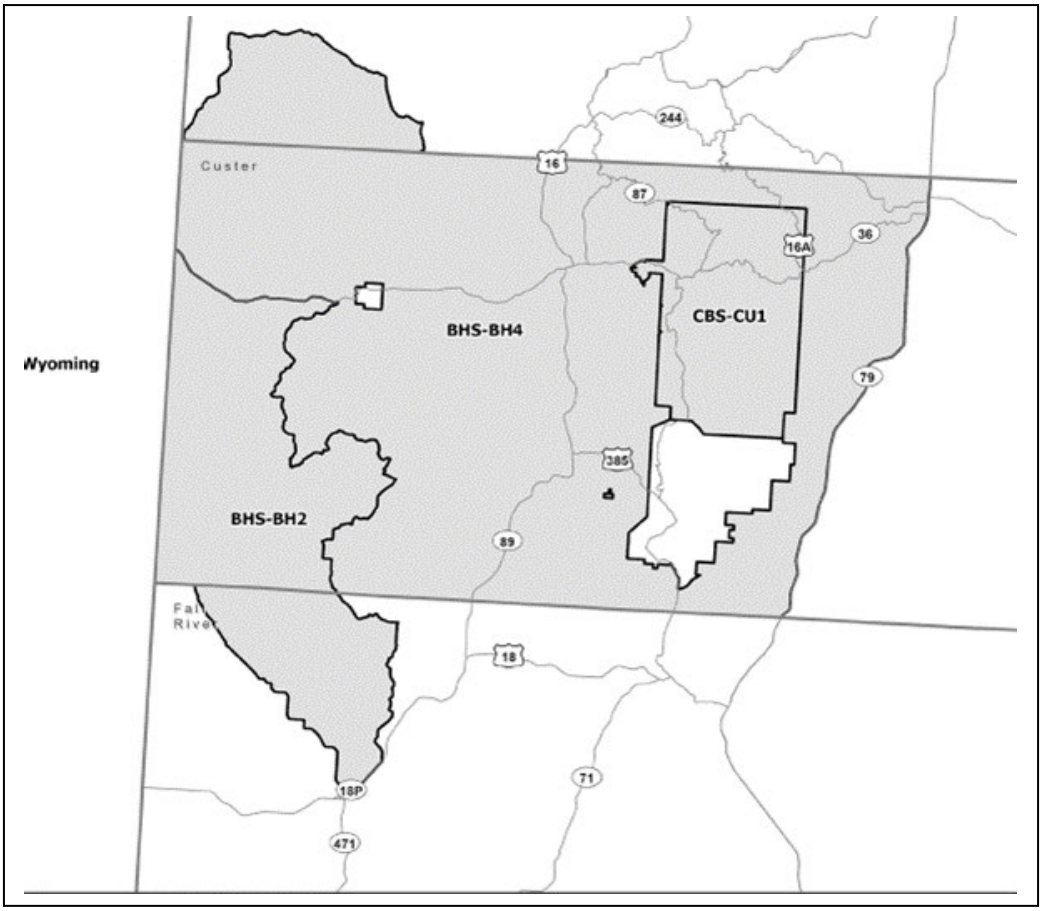

Figure 1. Bighorn Sheep Hunting Units Map (BHS-BH2- Custer and Fall River counties, BHS-BH4- Custer and Pennington counties, and CBS-CU1- Custer State Park) for South Dakota in 2023.

Carrying capacity of South Dakota's bighorn ranges is currently unknown; however, the decision support table in Table 4 can be used to guide management of ewes. Research evaluating ewe harvest suggests a harvest of 7% of the preseason population, 10% of the total winter population, or 12% of the summer population of ewes is needed to stabilize a herd under normal conditions. It is assumed a harvest rate of 10% or more is needed to reduce the size of individual herds that are stable or growing. Translocation of excess ewes should always be considered prior to the implementation of harvest.

Table 1. Survey data from ground counts which represent the minimum number of sheep estimated for each population in the Badlands and Black Hills, South Dakota, 2007-2022.

Year	Badlands	Custer State Park	Rapid City	Elk Mountain	Hell Canyon	Deadwood
2007	89	35	81	NA	NA	NA
2008	97	35	84	54	NA	NA
2009	67	37	100	52	NA	NA
2010	64	29	98	48	NA	NA
2011	86	26	72	75	NA	NA
2012	110	25	68	87	NA	NA
2013	85	26	65	70	20	NA
2014	85	25	56	57	25	NA
2015	151	25	55	46	47	26
2016	147	26	55	70	34	24
2017	191	29	45	67	41	18
2018	205	43	43	83	57	18
2019	166	63	33	57	76	20
2020	201	86	30	48	82	23
2021	60	80	36	69	78	18
2022	60	99	37	77	69	26

Disease

Respiratory disease largely caused by bacteria (*Mycoplasma ovipneumoniae* [*M. ovi*]) remains the most prominent negative factor impacting bighorn sheep restoration in North America. A host of other diseases can inflict bighorn sheep such as infectious keratoconjunjunctivitis, contagious ecthyma, partuberculosis (Johne's disease), sinus tumors, lungworm, and hemorrhagic disease. Bighorn sheep can be hosts for internal and ectoparasites as well. However, *M. ovi* induced pneumonia outbreaks have been the dominant mortality factor impacting bighorns in South Dakota and across the west.

Several *M. ovi* strains have been documented to occur in bighorn sheep, domestic sheep and goats, and mountain goats across South Dakota bighorn sheep range. Researchers in South Dakota have documented bighorn disease die-offs in 4 populations related to pneumonia from *M. ovi* since 2004. To recover these populations, SDGFP and its collaborators have implemented the test-and-remove method in all 4 populations. In 3 of the populations (CSP, Rapid City, and Deadwood herds) this method has successfully removed the *M. ovi* pathogen and allowed lamb survival to recover to normal levels. Most recently, the test-and-remove method was initiated in the Badlands herd in 2023. The test-and-remove method was important in reducing pneumonia related mortality in both adults and lambs and allowed recovery in 3 populations. Although test-and-remove has proven successful in restoring bighorn populations in South Dakota, this method is very expensive and time consuming as a management option.

Table 2. Ground counts using the maximum number of ewes, lambs, and rams counted for the given year. Counts provide ratio data of sheep estimated for each population in the Badlands and Black Hills, South Dakota, 2007-2022.

Lamb:Ewe Ratios						
Year	**Badlands**	**Custer State Park**	**Rapid City**	**Elk Mountain**	**Hell Canyon**	**Deadwood**
2007	0.77	0.07	0.10	NA	NA	NA
2008	0.66	0.07	0.28	0.51	NA	NA
2009	0.48	0.06	0.32	0.42	NA	NA
2010	0.48	0.00	0.17	0.47	NA	NA
2011	0.48	0.00	0.06	0.60	NA	NA
2012	0.50	0.33	0.06	0.54	NA	NA
2013	0.47	0.50	0.14	0.63	0.27	NA
2014	0.47	0.28	0.19	0.22	0.75	NA
2015	0.44	0.21	0.11	0.63	0.44	0.81
2016	0.38	0.82	0.22	0.72	0.67	0.17
2017	0.39	0.25	0.21	1.10	0.45	0.06
2018	0.58	0.38	0.11	0.73	0.71	NA
2019	0.53	0.38	0.40	0.16	0.47	0.29
2020	0.51	0.82	0.62	0.60	0.54	0.31
2021	NA	0.49	0.41	0.14	0.34	0.30
2022	NA	0.78	0.43	0.47	0.41	1.10
Ram:Ewe Ratios						
Year	**Badlands**	**Custer State Park**	**Rapid City**	**Elk Mountain**	**Hell Canyon**	**Deadwood**
2007	0.46	0.53	0.78	NA	NA	NA
2008	0.34	0.53	0.54	0.03	NA	NA
2009	0.24	0.53	0.41	0.58	NA	NA
2010	1.09	0.43	0.29	1.35	NA	NA
2011	0.48	0.50	0.41	0.90	NA	NA
2012	0.44	0.50	0.38	0.81	NA	NA
2013	0.51	0.88	0.35	0.96	0.07	NA
2014	0.51	0.32	0.32	0.89	0.33	NA
2015	0.31	0.57	0.34	0.79	0.30	0.05
2016	0.31	0.55	0.31	1.08	1.17	0.17
2017	0.62	0.56	0.41	1.10	0.60	0.06
2018	1.01	0.67	0.48	0.79	1.65	NA
2019	0.66	0.47	0.60	1.84	0.76	0.14
2020	0.75	0.39	0.69	1.60	0.80	0.13
2021	NA	0.68	0.71	0.73	0.71	0.50
2022	NA	0.70	1.21	0.67	0.62	0.50

Table 3. Decision support table to guide harvest of bighorn rams in South Dakota.

Guiding Factors
[a]Ram harvest will occur when: 1) ≥50 sheep are observed during surveys, 2) observe a ram:ewe ratio of ≥30 rams/100 ewes, and 3) observe a lamb:ewe ratio of ≥30 lambs/100 ewes.
⬇
Survey of available rams in population
⬇
Ram harvest will be set at 10% of the available rams in a herd. However, harvest could be set above 10% of the available rams in a herd during disease events or under special circumstances depending upon sex and age ratios and population size.

[a]General guidelines to follow in setting harvest; however, special circumstances may exist where seasons may be closed or opened where these requirements may not be met.

Table 4. Decision support table to guide harvest of bighorn ewes in South Dakota[a].

Guiding Factors	No Harvest	Maintenance Harvest	Reduction Harvest
Lamb to ewe ratio of lambs >4 months of age	Decreasing, stable or increasing	Stable	Stable or increasing
Three-year population trend	Decreasing, stable or increasing	Stable	Stable or increasing
Habitat degradation	Low	Moderate	High
Body condition	Moderate to good	Poor to good	Poor to good
Management action	⬇	⬇	⬇
Targeted harvest percent of adult ewe population	0%	5-9%	10-15%

[a]Translocation of excess ewes should always be considered prior to the implementation of harvest.

Guiding Principles

The following statements have guided the development of the bighorn sheep management goals and objectives (Table 10) and reflect the collective values of SDGFP in relation to management of bighorn sheep in South Dakota:

- that wildlife, including bighorn sheep, contributes significantly to the quality of life in South Dakota and therefore must be sustained for future generations.
- that recreational hunting is a legitimate use of bighorn sheep and must be encouraged and preserved.
- that the collaboration among various agencies, including NPS, USFS, BLM, Tribes, and the State, is critical for the future of bighorn sheep and their habitats in South Dakota, and is deserving of recognition and respect.
- that reasonable regulations are necessary for equitable distribution of the benefits of wildlife, including bighorn sheep, and to promote ethical and safe behavior.
- that the future of wildlife, including bighorn sheep, depends on a public that appreciates, understands, and supports wildlife and in the public's right to participate in decisions related to wildlife issues.

GOALS, OBJECTIVES & STRATEGIES

The goal for bighorn sheep management in South Dakota is to maximize user opportunity while maintaining populations consistent with ecological, social, aesthetic, and economic values of the people of South Dakota and our visitors.

Objectives and Strategies

Objective 1. Management and monitoring of disease pathogens in bighorn sheep herds across South Dakota.

Strategy A. Continue to inventory and document domestic sheep and goats in areas adjacent to wild bighorn herds.

Strategy B. Work with conservation organizations to develop cooperative programs to discourage domestic sheep and goat ownership in areas adjacent to wild bighorn herds.

Strategy C. Continue to educate the public about bighorn sheep disease and the risk that domestic sheep and goats pose to wild sheep.

Strategy D. Continue to offer assistance to owners of domestic sheep and goats in an effort to minimize the risk of disease transmission to wild sheep.

Strategy E. Manage and monitor bighorn sheep disease events and attempt to mitigate losses of bighorns through disease mitigation management when feasible; implement testing and removal of bighorns that are identified as shedders of *M. ovi.* in populations that are experiencing pneumonia die-offs in an attempt to recover these populations at a faster rate.

Strategy F. Through trap-and-transfer augment established populations recovering from disease events that are at critically low population levels once *M. ovi.* are no longer detected.

Strategy G. Implement Department policy (Appendix 1 Management Document) for the lethal take of bighorn sheep when associated with domestic sheep or goats.

Objective 2. Monitor the status of bighorn sheep populations.

Strategy A. Annually conduct surveys including ground and hunter harvest. Males will be classified during surveys according to body and horn size (Geist 1968).

Strategy B. Where feasible, conduct aerial surveys and obtain abundance estimates utilizing mark-resight or other methodologies.

Strategy C. Supplement survey data with research findings when available.

Objective 3. Bi-annually review and set bighorn sheep management objectives; use harvest strategies to provide the public with the available resource.

Strategy A. Bi-annually review bighorn harvest strategies, license allocation, and unit boundaries and develop 2-year recommendations based on available biological data, public input, and staff recommendations.

Strategy B. Generally, ram harvest will be set at 10% of the available rams in a herd (Table 2). Harvest could be above 10% of the available rams in the herd during disease events or under additional special circumstances depending upon sex and age ratios and population size. We will take into account: 1) population size and trend, 2) lamb recruitment (lamb:ewe ratios), 3) some index to the number or availability of rams in the population (ram:ewe ratios, the number of mature rams estimated or seen during surveys, average age of harvested rams), and 4) trends in hunter success or hunter effort, or both, from recent hunting seasons.

Strategy C. When feasible, use subunits and create new units to maximize hunting opportunities, distribute hunters, and minimize hunter conflicts. For the management of bighorn sheep a unit will be closed when <50 sheep are observed during surveys. A unit may get opened or reopened when 3 criteria are met: 1) ≥50 sheep are observed during surveys, 2) observed a ram:ewe ratio of ≥30 rams/100 ewes, and 3) observed a lamb:ewe ratio of ≥30 lambs/100 ewes.

Strategy D. Maintain high hunter success rates (>90%) and/or high hunter satisfaction in all units.

Strategy E. Ewe harvest can be implemented depending upon guiding factors found in the decision support table (Table 3). Translocation of excess ewes should always be considered prior to the implementation of sport harvest.

Objective 4. Maintain, manage, and protect existing bighorn sheep habitat and augment populations to either maintain or establish herds in vacant habitat in South Dakota.

Strategy A. Maintain existing partnerships with the USFS, BLM, NPS, private landowners, and other state, local, and private conservation partners to support programs and practices encouraging proper bighorn sheep habitat management on public and private lands.

Strategy B. Continue to support and utilize SDGFPs forest service liaison position in USFS planning processes to assure bighorn sheep habitat needs are considered.

Strategy C. Through trap-and-transfer augment established populations that are at critically low population levels or create new populations in vacant habitat.

Strategy D. Avoid disturbance during critically sensitive parturition and nursery periods. Parturition for ewes can occur from April 15-June 15. Nursery groups can be raising lambs in sensitive areas during May 1- August 31.

Objective 5. Continue to use science-based research, habitat inventories, and surveys to answer questions related to bighorn sheep ecology and public attitudes towards bighorn sheep management.

Strategy A. Annually evaluate and prioritize research/survey needs for bighorn sheep. Develop research/survey proposals and seek funding opportunities.

Strategy B. Use research/survey findings to guide bighorn sheep management where available and feasible.

Objective 6. The SDGFP will inform and educate the public on bighorn sheep ecology, management, research, and provide viewing opportunities.

Strategy A. By March 2024, provide an electronic copy of the "South Dakota Bighorn Sheep Action Plan 2023–2027" on the department's website. Printed copies will be available upon request.

Strategy B. Use all available media to educate and inform the public regarding bighorn sheep status, ecology, and harvest. Work with the South Dakota Animal Industry Board and the public to discuss potential risks to bighorn sheep from domestic sheep and goats in South Dakota.

Strategy C. Brief bighorn sheep hunters annually to provide them useful information on habits, ecology, and sound management of bighorn sheep.

Strategy D: Promote viewability of bighorn sheep for the enjoyment of the public. Opportunities exist where tourism viewsheds such as CSP, Rapid City, and Deadwood provide the public a unique setting to observe their behavior as a quality experience.

Table 10. Implementation schedule and primary responsibility, 2023-2027.

Goals, Objectives & Strategies	2023	2024	2025	2026	2027	Primary Responsibility
GOAL: Goal for bighorn sheep management in South Dakota is to maximize user opportunity while maintaining populations consistent with ecological, social, aesthetic, and economic values of the people of South Dakota and our visitors.						
OBJECTIVE 1: Management and monitoring of disease pathogens in bighorn sheep herds across South Dakota.						
Strategies						
Strategy A: Continue to inventory and document domestic sheep and goats in areas adjacent to wild bighorn herds.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Game Survey Coordinator
Strategy B: Work with conservation organizations to develop cooperative programs to discourage domestic sheep and goat ownership in areas adjacent to wild bighorn herds.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers
Strategy C: Continue to educate the public about bighorn sheep disease and the risk that domestic sheep and goats pose to wild sheep.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers
Strategy D: Continue to offer assistance to owners of domestic sheep and goats in an effort to minimize the risk of disease transmission to wild sheep.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers
Strategy E: Manage and monitor bighorn sheep disease events and attempt to mitigate losses of bighorns through disease mitigation management when feasible; implement testing and removal of bighorns that are identified as shedders of *M. ovi.* in populations that are experiencing pneumonia die-offs in an attempt to recover these populations at a faster rate.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers
Strategy F: Through trap-and-transfer augment established populations recovering from disease events that are at critically low population levels once *M. ovi.* are no longer detected.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers

Strategy G: Implement Department policy (Appendix 1 Management Document) for the lethal take of bighorn sheep when associated with domestic sheep or goats.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Regional Program Managers
OBJECTIVE 2: Monitor the status of bighorn sheep populations.						
Strategies						
Strategy A: Annually conduct surveys including ground and hunter harvest. Males will be classified during surveys according to body and horn size (Geist 1968).	✓	✓	✓	✓	✓	Senior Biologists Regional Program Managers Regional Staff
Strategy B: Where feasible, conduct aerial survey and obtain abundance estimates utilizing mark-resight or other methodologies.	✓	✓	✓	✓	✓	Senior Biologists Regional Program Managers Regional Staff
Strategy C. Supplement survey data with research findings when available.	✓	✓	✓	✓	✓	Senior Biologists Regional Program Managers Administration
OBJECTIVE 3: Bi-annually review and set bighorn sheep management objectives; use harvest strategies to manage the population with the available resource.						
Strategies						
Strategy A: Bi-annually review bighorn harvest strategies, license allocation, and unit boundaries and develop 2-year recommendations based on available biological data, public input, and staff recommendations.		✓		✓		Senior Biologists Regional Program Managers Administration

Strategy B: Generally, ram harvest will be set at 10% of the available rams in a herd (Table 2). Harvest could be above 10% of the available rams in the herd during disease events or under additional special circumstances depending upon sex and age ratios and population size. We will take into account: 1) population size and trend, 2) lamb recruitment (lamb:ewe ratios), 3) some index to the number or availability of rams in the population (ram:ewe ratios, the number of mature rams estimated or seen during surveys, average age of harvested rams), and 4) trends in hunter success or hunter effort, or both, from recent hunting seasons.	✓	✓	✓	✓	✓	Senior Biologists Regional Program Managers Administration
Strategy C: When feasible, use subunits and create new units to maximize hunting opportunities, distribute hunters, and minimize hunter conflicts. For the management of bighorn sheep a unit will be closed when <50 sheep are observed during surveys. A unit may get opened or reopened when 3 criteria are met: 1) ≥50 sheep are observed during surveys, 2) observed a ram:ewe ratio of ≥30 rams/100 ewes, and 3) observed a lamb:ewe ratio of ≥30 lambs/100 ewes.		✓		✓		Senior Biologists Regional Program Managers Administration
Strategy D: Maintain high hunter success rates (>90%) and/or high hunter satisfaction in all units.	✓	✓	✓	✓	✓	Regional Program Managers Administration
Strategy E: Ewe harvest can be implemented depending upon guiding factors found in the decision support table (Table 3). Translocation of excess ewes should always be considered prior to the implementation of sport harvest.		✓		✓		Regional Program Managers Administration
OBJECTIVE 4: Maintain, manage, and protect existing bighorn sheep habitat and augment populations to maintain healthy populations in South Dakota.						
Strategies						
Strategy A: Maintain existing partnerships with the USFS, BLM, NPS, private landowners, and other state, local, and private conservation partners to support programs and practices encouraging proper bighorn sheep habitat management on public and private lands.	✓	✓	✓	✓	✓	Regional Staff Senior Biologists Game Survey Coordinator Habitat Staff USFS–SDGFP liaison

Strategy B: Continue to support and utilize SDGFP's forest service liaison position in USFS planning processes to assure bighorn sheep habitat needs are considered.	✓	✓	✓	✓	✓	Administration USFS–SDGFP liaison
Strategy C: Through trap-and-transfer augment established populations that are at critically low population levels or create new populations in vacant habitat.	✓	✓	✓	✓	✓	Administration Regional Staff Senior Biologists
Strategy D: Avoid disturbance during critically sensitive parturition and nursery periods. Parturition for ewes can occur from April 15-June 15. Nursery groups can be raising lambs in sensitive areas during May 1-August 31.	✓	✓	✓	✓	✓	Administration Regional Staff Senior Biologists
OBJECTIVE 5: Continue to use science-based research, habitat inventories, and surveys to answer questions related to bighorn sheep ecology and public attitudes towards bighorn sheep management.						
Strategies						
Strategy A: Annually evaluate and prioritize research/survey needs. Develop research/survey proposals and seek funding opportunities.	✓	✓	✓	✓	✓	Administration Regional Staff Senior Biologists
Strategy B: Use research/survey findings to guide bighorn sheep management where available and feasible.	✓	✓	✓	✓	✓	Administration Regional Staff Senior Biologists
OBJECTIVE 6: The SDGFP will inform and educate the public on bighorn sheep ecology, management, research, and provide viewing opportunities.						
Strategies						
Strategy A: By March 2024, provide an electronic copy of the "South Dakota Bighorn Sheep Action Plan 2023–2027" on the department's website. Printed copies will be available upon request.	✓					Communications Staff
Strategy B: Use all available media to educate and inform the public regarding bighorn sheep status, ecology, and harvest. Work with the South Dakota Animal Industry Board and the public to discuss potential risks to bighorn sheep from domestic sheep and goats in South Dakota.	✓	✓	✓	✓	✓	Communication Staff Administration Regional Staff Senior Biologists

Strategy C: Brief bighorn sheep hunters annually to provide them useful information on habits, ecology, and sound management of bighorn sheep.	✓	✓	✓	✓	✓	Wildlife Manager Regional Staff
Strategy D: Promote viewability of bighorn sheep for the enjoyment of the public. Opportunities exist where tourism viewsheds such as CSP, Rapid City, and Deadwood provide the public a unique setting to observe their behavior as a quality experience.	✓	✓	✓	✓	✓	Wildlife Manager Regional Staff