

Code of Conduct and Conflict of Interest Policy for Use By State Authority, Board, Commission, and Committee Members

Purpose

The purpose of this code of conduct and conflict of interest policy ("Code") is to establish a set of minimum ethical principles and guidelines for members of state authorities, boards, commissions, or committees when acting within their official public service capacity. This Code applies to all appointed and elected members of state authorities, boards, commissions, and committees (hereinafter "Boards" and "Board member(s)"). A Board may add provisions to, or modify the provisions of, the Code. However, any change that constitutes a substantive omission from the Code must be approved by the State Board of Internal Control.

Conflict of Interest for Board Members

Board members may be subject to statutory restrictions specific to their Boards found in state and federal laws, rules and regulations. Those restrictions are beyond the scope of this Code. Board members should contact their appointing authority or the attorney for the Board for information regarding restrictions specific to their Board.

General Restrictions on Participation in Board Actions

A conflict of interest exists when a Board member has an interest in a matter that is different from the interest of members of the general public. Examples of circumstances which may create a conflict of interest include a personal or pecuniary interest in the matter or an existing or potential employment relationship with a party involved in the proceeding.

Whether or not a conflict of interest requires a Board member to abstain from participation in an official action of the Board depends upon the type of action involved. A Board's official actions are administrative, quasi-judicial or quasi-legislative.

A quasi-judicial official action is particular and immediate in effect, such as a review of an application for a license or permit. In order to participate in a quasi-judicial official action of the Board, a Board member must be disinterested and free from actual bias or an unacceptable risk of actual bias. A Board member must abstain from participation in the discussion and vote on a quasi-judicial official action of the Board if a reasonably-minded person could conclude that there is an unacceptable risk that the Board member has prejudged the matter or that the Board member's interest or relationship creates a potential to influence the member's impartiality.

A quasi-legislative official action, also referred to as a regulatory action, is general and future in effect. An example is rule-making. If the official action involved is quasi-legislative in nature, the Board member is not required to abstain from participation in the discussion and vote on the action unless it is clear that the member has an unalterably closed mind on matters critical to the disposition of the action.

Administrative actions involve the day-to-day activities of the Board and include personnel, financing, contracting and other management actions. Most of the administrative official actions of a Board are done through the Board's administrative staff. To the extent Board members are involved, the conflict of interest concern most frequently arises in the area of state contracting which is addressed in more detail below. If issues arise that are not directly addressed by this Code, the Board member should consult with the attorney for the Board.

"Official action" means a decision, recommendation, approval, disapproval or other action which involves discretionary authority. A Board member who violates any of these restrictions may be subject to removal from the Board to which the member is appointed.

Contract Restrictions

There are federal and state laws, rules and regulations that address conflict of interest for elected and appointed Board members in the area of contracts. As an initial matter, a Board member may not solicit or accept any gift, favor, reward, or promise of reward, including any promise of future employment, in exchange for recommending, influencing or attempting to influence the award of or the terms of a state contract. This prohibition is absolute and cannot be waived.

Members of certain Boards are required to comply with additional conflict of interest provisions found in SDCL Chapter 3-23 and are required to make an annual disclosure of any contract in which they have or may have an interest or from which they derive a direct benefit. The restrictions apply for one year following the end of the Board member's term. The Boards impacted by these laws are enumerated within SDCL 3-23-10. For more information on these provisions, see the State Authorities/Boards/Commissions page in the Legal Resources section of the Attorney General's website at: <http://atg.sd.gov/legal/opengovernment/authorityboardcommission.aspx>.

Absent a waiver, certain Board members are further prohibited from deriving a direct benefit from a contract with an outside entity if the Board member had substantial involvement in recommending, awarding, or administering the contract or if the Board member supervised another state officer or employee who approved, awarded or administered the contract. With the exception of employment contracts, the foregoing prohibition applies for one year following the end of the Board member's term. However, the foregoing prohibition does not apply to Board members who serve without compensation or who are only paid a per diem. See SDCL 5-18A-17 to 5-18A-17.6. For more information on these restrictions see the Conflict of Interest Waiver Instructions and Form on the South Dakota Bureau of Human Resources website at: <http://bhr.sd.gov/forms/>.

Other federal and state laws, rules and regulations may apply to specific Boards. For general questions regarding the applicability of SDCL Chapter 3-23 or other laws, a Board member may contact the attorney for the Board. However, because the attorney for the Board does not

represent the Board member in his or her individual capacity, a Board member should contact a private attorney if the member has questions as to how the conflict of interest laws apply to the Board member's own interests and contracts.

Consequences of Violations of Conflict of Interest Laws

A contract entered into in violation of conflict of interest laws is voidable and any benefit received by the Board member is subject to disgorgement. In addition, a Board member who violates conflict of interest laws may be removed from the Board and may be subject to criminal prosecution. For example, a Board member may be prosecuted for theft if the member knowingly uses funds or property entrusted to the member in violation of public trust and the use resulted in a direct financial benefit to the member. See SDCL 3-16-7, 5-18A-17.4, and 22-30A-46.

Retaliation for Reporting

A Board cannot dismiss, suspend, demote, decrease the compensation of, or take any other retaliatory action against an employee because the employee reports, in good faith, a violation or suspected violation of a law or rule, an abuse of funds or abuse of authority, a substantial and specific danger to public health or safety, or a direct criminal conflict of interest, unless the report is specifically prohibited by law. SDCL 3-16-9 & 3-16-10.

Board members will not engage in retaliatory treatment of an individual because the individual reports harassment, opposes discrimination, participates in the complaint process, or provides information related to a complaint. See SDCL 20-13-26.

Anti-Harassment/Discrimination Policy

While acting within their official capacity, Board members will not engage in harassment or discriminatory or offensive behavior based on race, color, creed, religion, national origin, sex, pregnancy, age, ancestry, genetic information, disability or any other legally protected status or characteristic.

Harassment includes conduct that creates a hostile work environment for an employee or another Board member. This prohibition against harassment and discrimination also encompasses sexual harassment. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexually harassing nature, when: (1) submission to or rejection of the harassment is made either explicitly or implicitly the basis of or a condition of employment, appointment, or a favorable or unfavorable action by the Board member; or (2) the harassment has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment.

Harassment or discriminatory or offensive behavior may take different forms and may be verbal, nonverbal, or physical in nature. To aid Board members in identifying inappropriate conduct, the following examples of harassment or discriminatory or offensive behavior are provided:

- Unwelcome physical contact such as kissing, fondling, hugging, or touching;

- Demands for sexual favors; sexual innuendoes, suggestive comments, jokes of a sexual nature, sexist put-downs, or sexual remarks about a person's body; sexual propositions, or persistent unwanted courting;
- Swearing, offensive gestures, or graphic language made because of a person's race, color, religion, national origin, sex, age or disability;
- Slurs, jokes, or derogatory remarks, email, or other communications relating to race, color, religion, national origin, sex, age, or disability; or
- Calendars, posters, pictures, drawings, displays, cartoons, images, lists, e-mails, or computer activity that reflects disparagingly upon race, color, religion, national origin, sex, age or disability.

The above cited examples are not intended to be all-inclusive.

A Board member who is in violation of this policy may be subject to removal from the Board.

Confidential Information

Except as otherwise required by law, Board members shall not disclose confidential information acquired during the course of their official duties. In addition, members are prohibited from the use of confidential information for personal gain.

Reporting of Violations

Any violation of this Code should be reported to the appointing authority for the Board member who is alleged to have violated the Code.

This Code of Conduct and Conflict of Interest Policy was adopted by the State Board of Internal Control pursuant to SDCL § 1-56-6.

WHERE WE'RE AT - COMPLETED PRIORITIES

WHO DO WE STRIVE TO BE?

VISION

We will conserve our state's outdoor heritage to enhance the quality of life for current and future generations.

WHAT DO WE DO?

MISSION

We provide sustainable outdoor recreational opportunities through responsible management of our state's parks, fisheries and wildlife by fostering partnerships, cultivating stewardship and safely connecting people with the outdoors.

WHAT ARE OUR BELIEFS?

VALUES

EXCELLENCE We believe in a culture of professionalism and accountability to meet the expectations of our customers and empower staff to succeed.

INTEGRITY We believe in being transparent and honest by promoting high ethical standards.

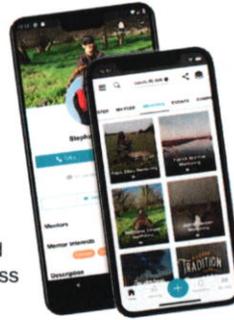
STEWARDSHIP We believe in applying biological and social sciences to conserve and respectfully manage our state's outdoor resources for current and future generations.

COMPASSION We believe in the dignity of each person and genuinely care for the people we serve.

OPPORTUNITIES

PROVIDE OUTDOOR RECREATIONAL OPPORTUNITIES.

- Created a process to identify fishing access opportunities to guide fiscal decisions.
- Improved urban fishing opportunities at over **10 LOCATIONS**.
- Reduced rules to simplify and increase recreational opportunities.
- 4,367 campers completed reviews with **92% RATING THEIR EXPERIENCE AN A**.
- State Park visitation was **7.3% HIGHER** than the average of the previous 5 year period.
- As part of the Education plan: partnered with PowderHook on a digital mentorship forum to direct mentors with mentees and completed **7 HARVESTSD COURSES** across the state.
- Provided **10 DIVERSE** recreational initiatives:
 1. Jay Heath Canoe and Kayak Trail
 2. Mount Rushmore Connector Trail
 3. Savoy Connector Trail
 4. Goat Island
 5. Shadehill Recreation Area Enhancements
 6. Playscape Developments
 7. Newton Hills Modern Cabin
 8. Outdoor Campus-West Archery Range
 9. Outdoor Campus-West Multi-purpose Building
 10. Watertown Rifle/Handgun Range



RESOURCES

SERVE AS STEWARDS OF OUR STATE'S OUTDOOR RESOURCES.

- Established **11 PRIORITY OBJECTIVES** from existing wildlife management plans.
- Introduced **3 NEW AQUATICS RESEARCH PROJECTS** for 2018.
 1. Post-stocking, dispersal and habitat use of stocked age zero muskellunge.
 2. Walleye tagging efforts through a project on walleye dynamics in western South Dakota irrigation reservoirs.
 3. Rainbow trout post-stocking survival of catchable-size trout in the Black Hills.
- Updated fisheries management plans for 2019-2023.
- Developed a formal process to evaluate fish harvest regulations.
- Continued expansion of cooperative positions to deliver conservation on private lands.
- Advocated for Farm Bill conservation programs.
- Continued awareness of cultural and historical resources.
 - **16% OF ALL GFP PROGRAMMING** (Jan - Sept 2018)
- Expanded pollinator habitat on state owned lands across the state.



WHERE WE'RE AT - COMPLETED PRIORITIES

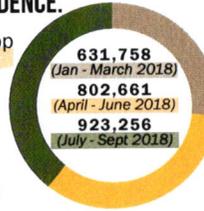
PRIORITIES DASHBOARD OCTOBER 2018



- 3 MONTH REVIEW**
 ● 10 No Progress ● 15 Initiated but Slow ● 30 On Track ● 2 Completed
- 6 MONTH REVIEW**
 ● 2 No Progress ● 8 Initiated but Slow ● 33 On Track ● 14 Completed
- 12 MONTH REVIEW**
 ● 2 No Progress ● 5 Initiated but Slow ● 20 On Track ● 30 Completed
- 16 MONTH REVIEW**
 (added 9 new strategies)
 ● 9 No Progress ● 5 Initiated but Slow ● 16 On Track ● 36 Completed
- 20 MONTH REVIEW**
 ● 4 No Progress ● 8 Initiated but Slow ● 17 On Track ● 37 Completed
- 22 MONTH REVIEW**
 ● 4 No Progress ● 15 Initiated but Slow ● 16 On Track ● 41 Completed

CONFIDENCE INSPIRE CONFIDENCE.

- Increased website sessions and mobile app usage by **10 PERCENT PER YEAR.**
 - Launched the Fisheries Report Viewer.
 - Added waypoint feature within the mobile app.



- Increased awareness for all programs and services by implementing best practices for brand and message management.



- Improved targeted communications by implementing a podcast and a variety of other social media tactics.

- Increased visibility for all programs and services through trade shows, workshops, events and job fairs.

- Surveyed Conservation Digest subscribers to determine demographics and interests.
- Sustained wildlife and parks working capital.
- Reduced barriers and obstacles to public involvement.

- Provided **THREE NEW PUBLIC INPUT CHANNELS.**

- Implemented Board of Internal Controls accountabilities as directed to ensure a transparent state government.

- Continued to increase partner awareness and support for department mission.

- Fostered an abundance of parks and wildlife partnerships and resources to support department mission.

- Continued to increase collaboration between GFP and other state, federal and tribal agencies and local governments.



- Conducted a Customer Service training for statewide support staff.

- Completed effort to have Parks offices sell hunting/angler licenses and for Wildlife offices to sell park entrance licenses.

- Ensured customer security and personally identifiable information (PII) remains at **100 PERCENT.**

EXCELLENCE FOSTER PROFESSIONAL EXCELLENCE.

- Developed an orientation and welcome packet for new employees.
- Implemented a comprehensive leadership program.
- Continued to improve on internal communications through education of the strategic plan, quarterly newsletter, department wide phone list and joint department efforts.



- Developed standard recruitment materials for use in advertising and job fairs.

- Filled over **30 POSITIONS WITH AN AVERAGE OF 8.25 APPLICANTS** qualifying and interviewing for each position.

- **REQUESTED \$50,000** for construction of four additional full service campsites to accommodate work-campers at Randall Creek and Oahe Downstream Recreation Areas.



- Policy Updates:
 - Finalized a consistent department-wide uniform policy and order form.
 - Developed a department-wide cell phone policy.

- Obtained quarterly accident reports from Risk Management to review worker accident claims and discuss preventative measures.



**South Dakota Game, Fish & Parks - Wildlife Division
Land Acquisition and Disposal Report
December 2018**

Final Action Items

South Dakota Parks and Wildlife Foundation Property

Location: Eight miles northeast of Watertown in Codington County

Description: 520 acres

Management Objective: Game Production Area – wildlife habitat management and public hunting access

Acquisition Cost: Donation

Commission Acquisition Priorities: Parcels containing significant habitat and hunting opportunities for pheasants.

Expected Closing: December 2018

Requested Commission Action: To adopt RESOLUTION 18–09 confirming the decision by the Department to accept the property from the South Dakota Parks and Wildlife Foundation, and expressing appreciation to The Parks and Wildlife Foundation for its generosity.

Information Items

None

Early Development Projects

None

RESOLUTION 18 - 09

WHEREAS, The South Dakota Parks and Wildlife Foundation owns real estate (Property) described as:

The Southeast Quarter (SE1/4) of Section 5; the West Half of the West Half of the Northeast Quarter (W1/2W1/2NE1/4), the Northwest Quarter (NW1/4), and the Southwest Quarter (SW1/4) of Section 9; all in Township 117 North, Range 51 West of the 5th P.M., Codington County, South Dakota., subject to any easements, restrictions, covenants, and reservations of record.

Whereas, pursuant to its wishes, South Dakota Parks and Wildlife Foundation desires to gift and transfer title to the Property to the South Dakota Department of Game, Fish and Parks (Department) for use as a Game Production Area; and

Whereas, the Department has evaluated and determined that the Property would serve very well as a Game Production Area, offering wildlife habitat, public hunting, and other wildlife related outdoor recreational opportunities; and

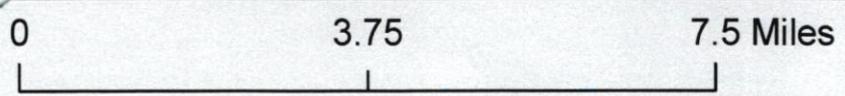
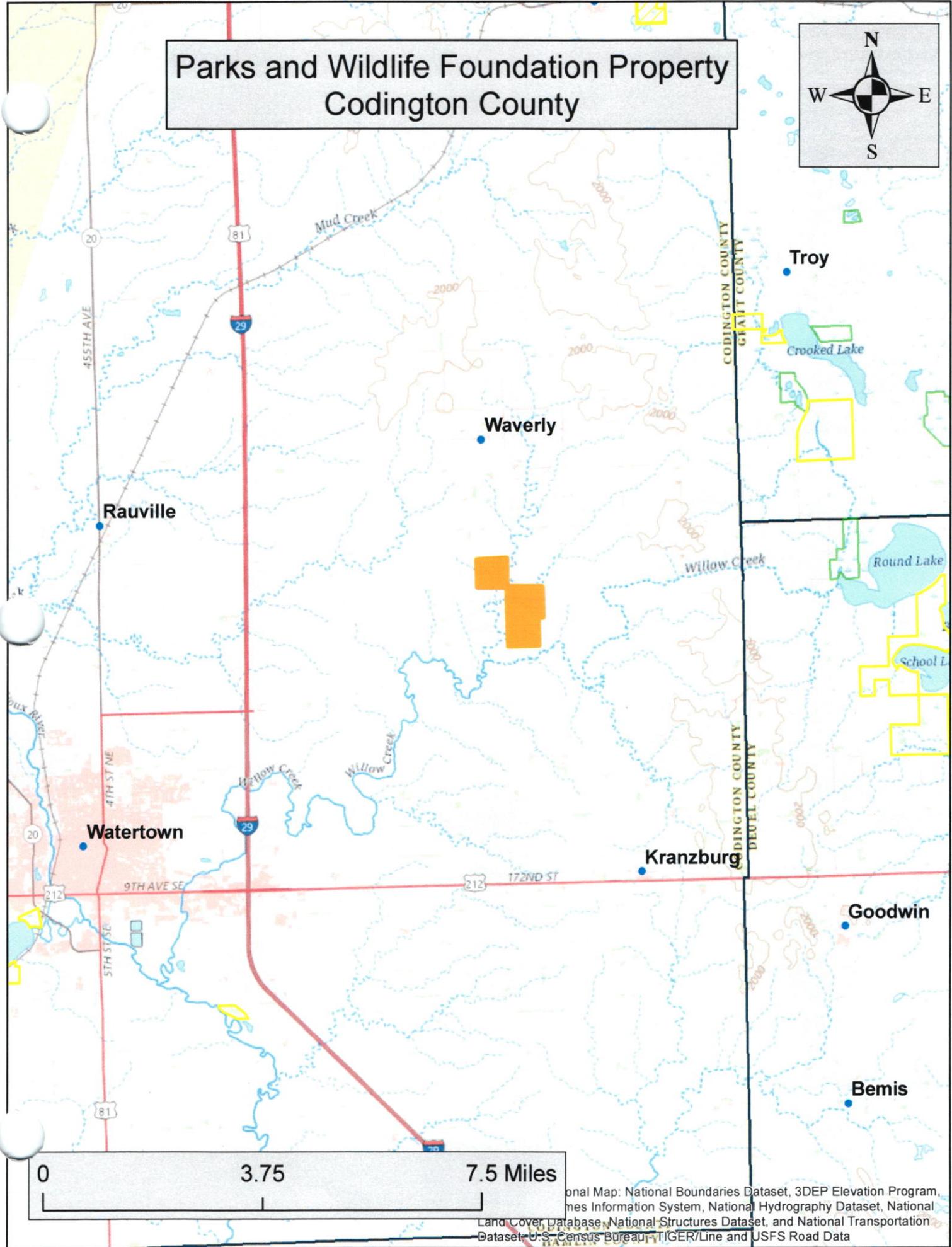
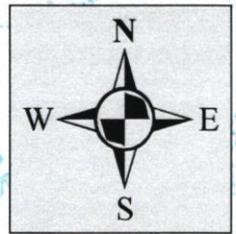
Whereas, the Department is authorized to accept gifts of property for Game Production Area as per SDCL 41-2-19 and desires to accept the gift of the Property upon confirmation of the gift by the Game, Fish and Parks Commission; and

Whereas, the Game, Fish and Parks Commission desires to acknowledge the Department's acceptance of this gift of property from South Dakota Parks and Wildlife Foundation for use as a Game Production Area, and further acknowledge the extreme generosity of South Dakota Parks and Wildlife Foundation.

NOW, THEREFORE, BE IT RESOLVED, that the Game, Fish and Parks Commission does hereby confirm the decision by the Department to accept the transfer and gift of the Property from South Dakota Parks and Wildlife Foundation to be used as a Game Production Area.

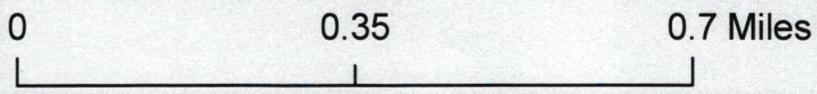
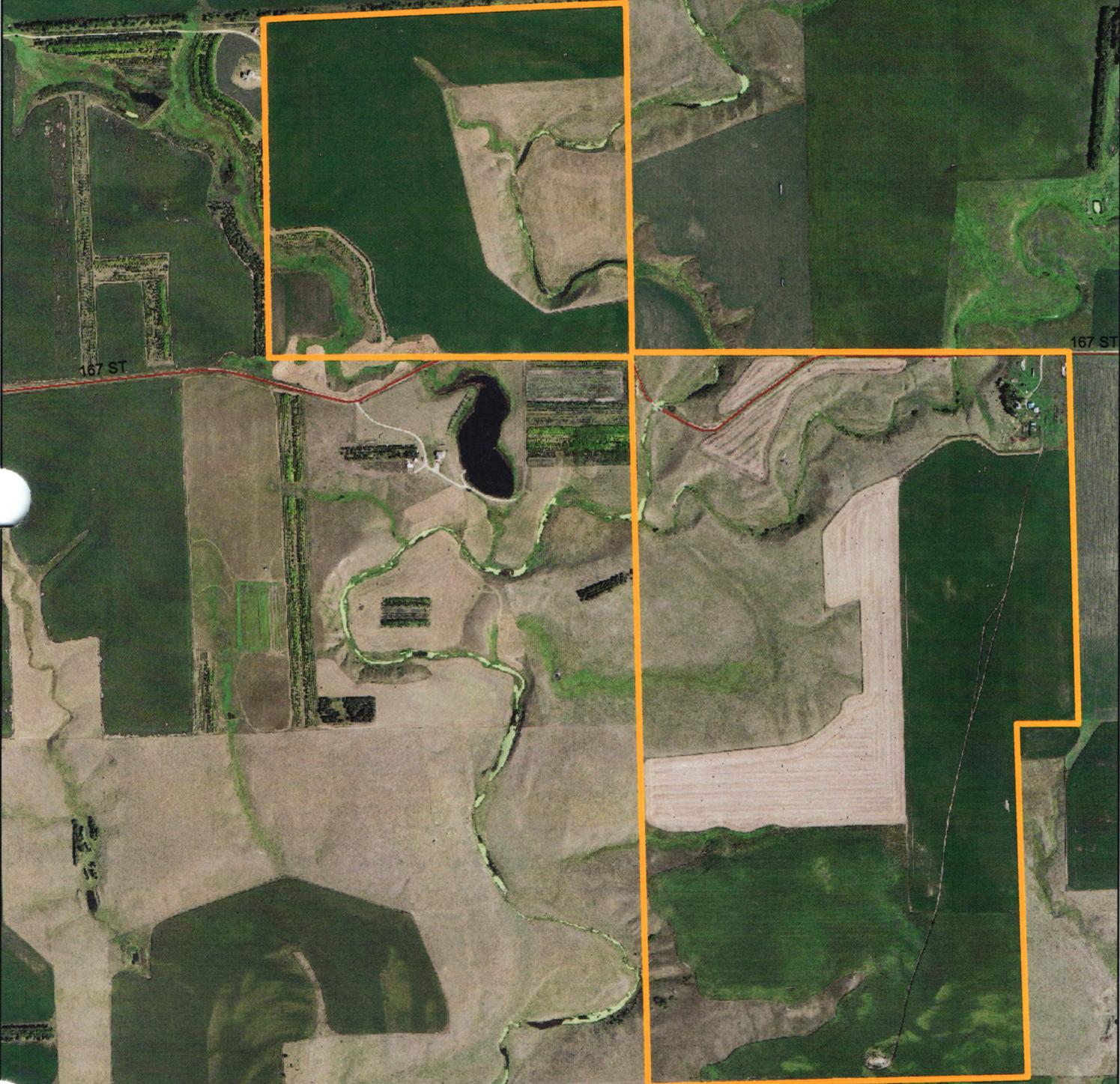
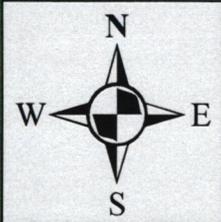
BE IT FURTHER RESOLVED that the Game, Fish and Parks Commission, on behalf of the citizens and sportspersons of South Dakota, does hereby acknowledge and express its deepest appreciation and gratitude to South Dakota Parks and Wildlife Foundation for its generosity, and further acknowledge the outdoor recreation opportunities this gift will provide to South Dakotans for many years to come.

Parks and Wildlife Foundation Property Codington County



Original Map: National Boundaries Dataset, 3DEP Elevation Program, Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau TIGER/Line and USFS Road Data

Parks and Wildlife Foundation Property Codington County



GAME, FISH AND PARKS COMMISSION ADMINISTRATIVE ACTION**Bighorn Sheep Auction License – Action of Approval**

Commission Meeting Dates:	Presented	December 6-7, 2018	Pierre
	Approval	December 6-7, 2018	Pierre

The Midwest Chapter of the Wild Sheep Foundation has submitted a letter of application and supportive information requesting the opportunity to auction a bighorn sheep license at their 2019 fundraiser. No other application letter was submitted. Proceeds of the auction will be returned to South Dakota for bighorn sheep management.

APPROVE _____	MODIFY _____	REJECT _____	NO ACTION _____
----------------------	---------------------	---------------------	------------------------



Wild Sheep Foundation – Midwest Chapter

1806 Aspen Court, Northfield, MN 55057
(507) 645-8811 www.midwestwildsheep.com

October 22th, 2018

Secretary Kelly Hepler
South Dakota Game Fish and Parks
523 East Capitol Avenue
Pierre, SD 57501

Dear Secretary, Hepler, I present this application letter to the South Dakota Game Fish and Parks for the sole purpose of applying to auction off your Bighorn sheep auction tag at our banquet and fundraiser to be held March 15th and 16th, 2019. If selected, WSF-Midwest is prepared to enter into an agreement with SDGF&P as referred to in 41:06:56:11.

We were very privileged to once again auction off the South Dakota tag at our last banquet for \$89,000 to add to the previous tags of \$71,000 and \$75,000. In fact, since the South Dakota tag was first auctioned off 6 years ago, we have directly raised nearly \$500,000 for sheep conservation.

The Wild Sheep Foundation Midwest Chapter has been in existence since 1981 and currently maintains a 501(c)3 nonprofit status, number 41-1628899. I have attached a copy of our good standing.

WSF-Midwest currently operates under the following mission statement:

“To enhance, expand, and preserve wild sheep populations; to educate the public about wild sheep and conservation efforts surrounding wildlife; to encourage lawful hunting and protecting hunters’ rights; and to encourage youth participation in hunting”

WSF-Midwest has worked with all western sheep states, provinces, and tribes. We are currently committed to funding in South Dakota, North Dakota, Wyoming, Nebraska, Arizona, British Columbia, and Oglala Sioux. In the past we have also worked with the University of Washington and Montana State University on different disease and genetic research projects. An example of long-term commitments with a state and their sheep biologist is our agreement with North Dakota. In 1999 WSF-Midwest entered into an agreement with North Dakota Game and Fish to help support their sheep populations and management process. Since that time WSF-Midwest has raised and funded close to \$1,000,000 for North Dakota Fish and Game for their bighorn sheep projects, participated in five transplants, trans-locates, and numerous emergency funding requests. We continue to look for partnerships and opportunities to help wild sheep and the agencies that are responsible for their management. I enclosed our funding for the last 5 years that shows the payee and amount for various projects.

WSF-Midwest currently has one banquet and fundraiser each year with the attendance ranging from 375-500 sportsmen and women. Our auction has continued to grow each with revenues over \$700,000 and we expect that to grow each year. Marketing of our auction will include print, digital, and social media. We will be accepting bids via phone, internet, and in person. This will allow for us to give everyone the opportunity to bid and bring the most for the tag.

Enclosed you will find documentation on our endowment fund. Created just 14 years ago the value of this fund just exceeded \$865,000 in which the interest is directly benefiting wildlife and only solidifying our financial stability. We undergo an independent audit every two years to ensure our members that we are operating correctly. WSF-Midwest is an all-volunteer organization.

Thank you for taking time to review our application and I am hopeful we can continue to work together for the sheep and sheep hunters of South Dakota!

Sincerely,

Nick Negrini

President – Wild Sheep Foundation – Midwest Chapter

CC: Tony Leif

Tom Kirschenmann

Refuge Review Criteria

October 2018

Current Waterfowl Use: This is based on waterfowl observed in the immediate area of the refuge during aerial winter waterfowl counts. These numbers are the closest thing we have to a survey to show which refuges are being utilized by waterfowl. However, flights are not conducted on a consistent schedule on all areas of the river system, creating the potential to miss concentrations. Due to this potential each refuge is ranked as high, medium, or low use rather than using exact numbers. Each ranking includes one-third of the refuges.

Does the refuge provide local hunting opportunities: yes or no, and what type? This is a somewhat subjective criteria and is based on local knowledge of hunting activity in the area. We have tried to identify areas that provide field/decoy hunting vs. pass shooting. Any known commercial waterfowl hunting operations have also been included in opportunities provided.

Miles of shoreline protected from prevailing (Northwest) winds: This is an attempt to assess the amount of the refuge that provides shelter from a majority of winter weather, allowing waterfowl to loaf and relax between feeding.

Boat access: This identifies which refuges have boat ramps within them. If a refuge does not have a ramp contained in its boundaries, the distance the nearest ramp is provided. Easy access by boat may provide added opportunity for water based hunting. Boat traffic, whether hunting related or not, may be seen as detrimental to the purposes of the refuge.

Shoreline access: This identifies areas that have access via land. Areas with easy access may provide added opportunity by providing areas for pass shooting or decoy hunting along shorelines if refuge restrictions are removed.

Non-game use: Areas important to non-game species have been identified to the extent possible. This information is based on South Dakota Natural Heritage Database data for species monitored because they are rare or unique in the state and additional data collected on significant rare species concentrations, such as colonial waterbird colonies and wintering roosts for bald eagles.

Outside agreements: Some refuges may be affected by previous agreements with other entities. These agreements are identified here.

Safety issues: Any known safety concerns are identified here.

Type of refuge: waterline vs. take line refuge. A waterline refuge follows the water's edge. A hunter standing on shore pass shooting birds as they leave the refuge would be legal. A take line refuge includes the water and adjoining land up to the original Corps of Engineers take line, now our Title VI GPA boundary. No waterfowl hunting would be allowed on the public ground within the refuge boundaries.

2019 – 2023 GFP FISHERIES STATEWIDE STRATEGIC PLAN SUMMARY

14



DEPARTMENT MISSION

We provide sustainable outdoor recreational opportunities through responsible management of our state's parks, fisheries, and wildlife by fostering partnerships, cultivating stewardship, and safely connecting people with the outdoors.

WHY IS A FISHERIES PLAN NEEDED?

Outlining management priorities with a strategic plan is a way to optimize use of limited resources (staff, money, facilities and equipment) by prioritizing how these resources are used to best meet fisheries management needs.

The purpose of the Fisheries and Aquatic Resources Adaptive Management System is to guide fisheries and aquatic resource management based on the mission of the South Dakota Department of Game, Fish and Parks (GFP). This Statewide Strategic Plan is a dynamic tool addressing the issues, challenges, and opportunities in managing fisheries and aquatic resources in South Dakota.

This plan begins with an inventory section containing a brief review of the five fisheries management areas (FMA), Aquatics Section staffing and organization, funding and expenditures, and existing infrastructure. Plans with issues and objectives specific to the nine statewide fisheries programs follow the inventory section.

The nine statewide programs are surveys, research, habitat, access, nongame, fish production, bait and private aquaculture, fish health and contaminants, and aquatic invasive species. In addition to this statewide plan, each FMA has its own strategic plan.

Lastly, the Department strategic plan includes a number of measureable outcomes and strategies for aquatics staff. Actions to accomplish the priorities of both the Department plan and numerous Aquatics Section plans are incorporated into Aquatics Section annual work plans.

ISSUE EXAMPLES

1. Standardization of data collection and sampling methodologies.
2. Archival of Aquatics Section authored publications.
3. Prioritization of access funding.
4. Biological information lacking to aid in prevention of species listings.
5. Infrastructure maintenance and improvement as hatchery facilities age.
6. Limiting disease and AIS issues associated with the bait and aquaculture industry
7. Timing of fish health testing associated with spawning efforts.

HIGHEST PRIORITY OBJECTIVES

1. Standardize statewide fish survey protocols for both game and nongame fish species.
2. Annually complete at least five research projects.
3. Utilize updated demographic information to prioritize future access projects.
4. Identify hatchery infrastructure and maintenance needs.
5. Increase production capabilities and post stocking survival of fish raised in hatcheries.
6. Develop a fish habitat plan.
7. Maintain an up-to-date statewide fish health procedural manual.



SOUTH DAKOTA INVASIVE MUSSEL SUMMIT ¹⁵

PLANTING THE SEEDS TO ENCOURAGE ACTIVE PARTICIPATION IN THE STATEWIDE AQUATIC INVASIVE SPECIES TASK FORCE TO SLOW THE SPREAD OF INVASIVE MUSSELS.

BACKGROUND:

Zebra mussels were discovered in Lewis & Clark Marina in 2015. They have spread throughout the lake and Missouri River below Ft. Randall Dam. This area is considered a containment water and eradication is not an option. Efforts are aimed at slowing the spread of invasive mussels to other waters.

The invitation below was sent to stakeholders:

SOUTH DAKOTA INVASIVE MUSSEL SUMMIT



LEARNING FROM
EXPERIENCE TO
BETTER MANAGE
MUSSELS

DETAILS

THURSDAY, DECEMBER 13
9:00 A.M. - 5:00 P.M.
Check-in 8:00 - 9:00 a.m.

KELLY INN, YANKTON SD

Lodging available at the Kelly Inn
1.855.680.3239 | bestwesternyankton.com

FREE OF CHARGE, LUNCH PROVIDED

SUMMIT ATTENDEES MUST

PRE-REGISTER AT: <https://arcg.is/0GHayn>

Deadline for registration is December 1.

JOIN US

FOR SURFACE WATER USERS INCLUDING MUNICIPALITIES, IRRIGATORS, HYDROPOWER, POWER PLANTS, RURAL WATER SYSTEMS, STATE AND FEDERAL PARTNERS AND INDUSTRY LEADERS.

Talks will provide information on:

- Mussel biology, research, and raw water operational solutions
- Zebra mussel impacts at Gavins Point Dam
- Zebra mussel treatment efforts at Cunningham and Zorinsky Lakes in Nebraska
- Impacts of mussels on power production in western states
- Mussel impacts on the Wolf Creek Nuclear Generating Station in Kansas
- Mussel impacts on municipal water systems in South Dakota, Iowa, and Nebraska
- Mitigating impacts of mussels for irrigators
- A variety of other topics



 SDLEASTWANTED.COM



U.S. Fish & Wildlife Service

Black-footed Ferret

Mustela nigripes



Black-footed ferret peeks out of a burrow / Mike Lockhart, USFWS

Species Description

The black-footed ferret (BFF) (*Mustela nigripes*) is a medium-sized mustelid (a member of the weasel family), typically weighing 1.4 to 2.5 pounds and measuring 19 to 24 inches in total length, including a 5 to 6 inch tail. It is a slender, wiry, animal with black feet, a black face mask, and a black-tipped tail. Its short, sleek fur is a beige-buff color, lighter on the belly and nearly white on the forehead, muzzle, and throat. Black-footed ferrets have short legs with large front paws, and claws developed for digging. The BFF's large ears and eyes suggest it has acute hearing and sight, but smell may be its most important sense for hunting prey underground in the dark. Its large skull and strong jaw and teeth are adapted for eating meat.



Black-footed ferret in the wild
Kimberly Fraser, USFWS

Specialization

Black-footed ferrets are highly specialized predators that depend upon prairie dogs (*Cynomys spp.*) for survival. Prairie dogs make up more than 90% of the BFF's diet. Prairie dog burrows provide BFF's with suitable dens to raise their young as well as escape predators and harsh weather. In the past, this dependence was a good survival strategy because prairie dogs were plentiful. However, in the modern era, as human activities and disease decimated prairie dog populations, this unique survival strategy proved detrimental to BFF survival.

Habitat & Range

Black-footed ferrets depend exclusively on prairie dog burrows for shelter. Historically, BFF habitat coincided with habitats of black-tailed prairie dog (*C. ludovicianus*), Gunnison's prairie dog (*C. gunnisoni*), and white-tailed prairie dog (*C. leucurus*). The BFF is the only ferret species native to the Americas. Its historical range spanned much of western North America's intermountain and prairie grasslands, extending from Canada to Mexico. BFF's have been reintroduced in the wild at 29 sites across 8 states, Canada, and Mexico.



Black-footed ferret in preconditioning pens / USFWS

Reproduction

The mating season for BFF's is March-April. Gestation time is 41 to 43 days, and kits are born May through June. Litter sizes are typically three to five kits. Kits are born blind and helpless, staying below ground until they are about two months old. At this age BFF mothers move their litters to various burrows within their home range and begin to take them on hunting forays. At approximately 90 days of age, kits reach 90% of their adult size, and are adept at killing prairie dogs.



Learning to hunt a prairie dog
Mike Lockhart, USFWS



Black-footed ferret newborn kit / Kimberly Fraser, USFWS

Threats

Despite significant recovery successes, the BFF remains one of the most endangered mammals in North America. The primary reasons the species remains at risk are the same that nearly caused the animal's extinction: disease, loss of habitat, and related declines in prey. Conversion of native grasslands to agricultural land, widespread prairie dog eradication programs, and fatal, non-native diseases, such as plague, have reduced BFF populations to less than 2% of their original range. Much of the remaining habitat is now fragmented, with prairie dog towns separated by expanses of agricultural land and other human developments.

Legal Status Under the Endangered Species Act

Since March 11, 1967, BFFs have been listed as endangered across their entire range, with the exception of several reintroduced populations designated as experimental. In 2014, the U.S. Fish and Wildlife Service (Service) completed a five-year review of the



Black-footed ferret on the Soapstone Prairie / Bruce Gill

BFF's status. This review found that this species continues to warrant federal endangered status.

Population Numbers and Recovery Efforts

Black-footed ferrets once numbered in the tens of thousands, but due to a combination of human-induced threats, they were believed to be extinct twice in the 20th century. In 1981, a small population of the species was rediscovered in Meeteetse, Wyoming. However, by 1986, due to disease, only eighteen individuals were known to exist in this isolated wild population. Scientists captured these remaining BFFs and they became the foundation for a successful captive breeding and reintroduction program that continues today.

This Service-led BFF program has annually released BFFs into the wild at a number of different reintroduction sites across the West. Currently, there are approximately 280 BFFs living at captive breeding facilities. These recovery efforts are managed by the Service's National Black-Footed Ferret Conservation Center in northern Colorado and partners in multiple states.

Recovery Partners

Despite the many threats facing BFFs, wildlife managers believe recovery of the species is attainable. There are more than 50 federal, state, tribal and

non-governmental agencies working together in a recovery team effort to conserve this native species. Due to these partnerships, BFF recovery goals are within reach.

Information

To learn more about the BFF and conservation efforts on behalf of the species please contact: The National Black-footed Ferret Conservation Center at (970) 897-2730.

Or visit the following sites:
Black-footed Ferret Recovery Program: www.blackfootedferret.org

National Black-footed Ferret Conservation Center Facebook Page: www.facebook.com/FerretCenter/

The Service's ECOS page: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A004>



Black-footed ferret release into the wild
USFWS

**U.S. Fish and Wildlife Service
Mountain-Prairie Region 6
PO Box 25486
Denver Federal Center
Denver, Colorado 80225
308 / 382 6468**

**For State relay service
TTY / Voice: 711**

**U.S. Fish & Wildlife Service
<http://www.fws.gov>**

November 2017



ENDANGERED BLACK-FOOTED FERRET (BFF) RECOVERY UPDATE

12.1.2018

CURRENT STATUS

- BFFS have recovered from 18 individuals removed from the wild in 1986-1987 to several hundred at 30 sites in 8 states, Mexico, and Canada.
- Approximately 1,000 BFFS occurred in the wild ca. 2010 before increasing, recurring non-native disease impacts (sylvatic plague) became widespread.
- The BFF's high reproductive rate and resilient prairie dog prey allow rapid BFF population growth if sylvatic plague is constrained by continuing management actions.
- The 2013 BFF Recovery Plan has a de-listing goal of 3,000 adults in at least nine of the 12 states within the species' historical range, with sub-populations no smaller than 30 individuals.



CAPTIVE BREEDING

- The USFWS National Black-footed Ferret Conservation Center in northeastern Colorado houses 60% of 300 captive BFFS managed to ensure the survival of the species and to provide animals for reintroduction; five American Zoo Association (AZA) facilities care for additional BFFS to complement these efforts.
- Husbandry for captive BFFS is provided pursuant to a Service Managed Care Operations Manual that the AZA BFF Species Survival Plan has adopted.
- Genetic conservation, as well as emerging genetic management, is an important captive breeding consideration.



REINTRODUCTION

- BFFS have been reintroduced into the wild annually since 1991.
- Reintroduced BFF populations persist if not constrained by sylvatic plague and/or drought conditions (RMA NWR 2018 survey count = a minimum of 79 caught/50 of the 79 were wild born kits and 14 wild born BFF kits translocated to AZ for release).
- BFFS released each Fall routinely produce young the following Spring.
- BFF management in the wild is guided by a Service BFF Field Operations Manual
- The Moore Ranch, NM, is a new BFF reintroduction site. The BFFs were released by the Moore grandchildren, September 2018.



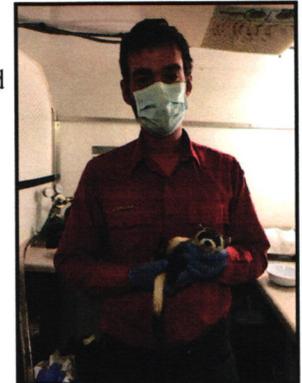
DISEASE MANAGEMENT

- Insecticide use to limit flea vectors of sylvatic plague to both BFFS and their prairie dog prey has been successful, but costly and logistically challenging. Moreover, flea resistance to specific products has been observed.
- BFFS can be vaccinated against sylvatic plague, but immunity is not passed to offspring.
- The recent development of an oral bait with Sylvatic Plague Vaccine (SPV) and the use of Fipronil insecticide shows promise as potential landscape scale management tools for BFF recovery.



PARTNERS

- The Service has coordinated a BFF Recovery Implementation Team since 1996 comprised of representatives from State, Tribal, Federal, and NGO representatives.
- AZA, Tribal Nations, and the Western Association of Fish and Wildlife Agencies have been particularly supportive of BFF recovery, but all BFF Team Partners have made significant contributions.
- Notably, the Service has provided relaxed regulatory approaches to BFF reintroduction efforts; NRCS has provided landowner incentives in some States, and APHIS Wildlife Services has been supportive of prairie dog management efforts.



STATE T&E SPECIES STATUS REVIEW

Species Name: Black-footed Ferret, *Mustela nigripes*

South Dakota Status, including legal status and special listings:

- State endangered (SD Administrative Rule 41:10:02:03, List of endangered mammals)
- Monitored by South Dakota Natural Heritage Program
- State Heritage Rank S1 (critically imperiled species)
- Included as a Species of Greatest Conservation Need in the South Dakota Wildlife Action Plan

Federal Status:

- NatureServe global rank G1 (critically imperiled species); last reviewed 12 March 2007
- Federal endangered. This species was listed as endangered in 1967 pursuant to precursor legislation to the Endangered Species Act (ESA) of 1973. Second revision of the recovery plan was published in 2013 (U.S. Fish and Wildlife Service 2013).

Basis for new listing, status change (T to E, or E to T), or continued listing with same status:

Specific justification for including the black-footed ferret on the list of state endangered mammals is unknown, but was presumably intended to mirror its federal status. In the event that this species is down-listed or delisted by the U.S. Fish and Wildlife Service (USFWS), we will reevaluate whether continued listing as a state endangered species is warranted.

Description, biology and life history:

The black-footed ferret is a mink-like mammal that is 20-24 inches long and weighs from 1.5 to 2.5 lbs. As indicated by its common name, feet and legs are black. It also has a black face mask and black-tipped tail. Upper body parts are yellowish buff.

Black-footed ferrets are solitary except during breeding. Breeding begins at approximately one year of age in March through early April. Gestation is approximately 42 days with an average litter of 3.5 kits born in an underground burrow and cared for exclusively by the female. Kits appear above ground in July and are ready to disperse in September or October. Young of the year may stay in the mother's home range; males disperse farther than females.

This nocturnal predator is extremely specialized relying almost exclusively on prairie dogs for both food and shelter. Hunting occurs underground. Prey is cached and one prairie dog is consumed every three to four days. Little information exists on life expectancy, but individuals have been known to live up to five years in the wild.

Habitat:

Black-footed ferrets need prairie dogs for food and their burrows for shelter.

Distribution within the state:

Historical black-footed ferret distribution in South Dakota corresponds with black-tailed prairie dog (*Cynomys ludovicianus*) distribution which includes most of western South

Dakota and those areas in eastern South Dakota that had burrowing rodents, especially black-tailed prairie dogs. Current distribution reflects original reintroduction areas (Figure 1).

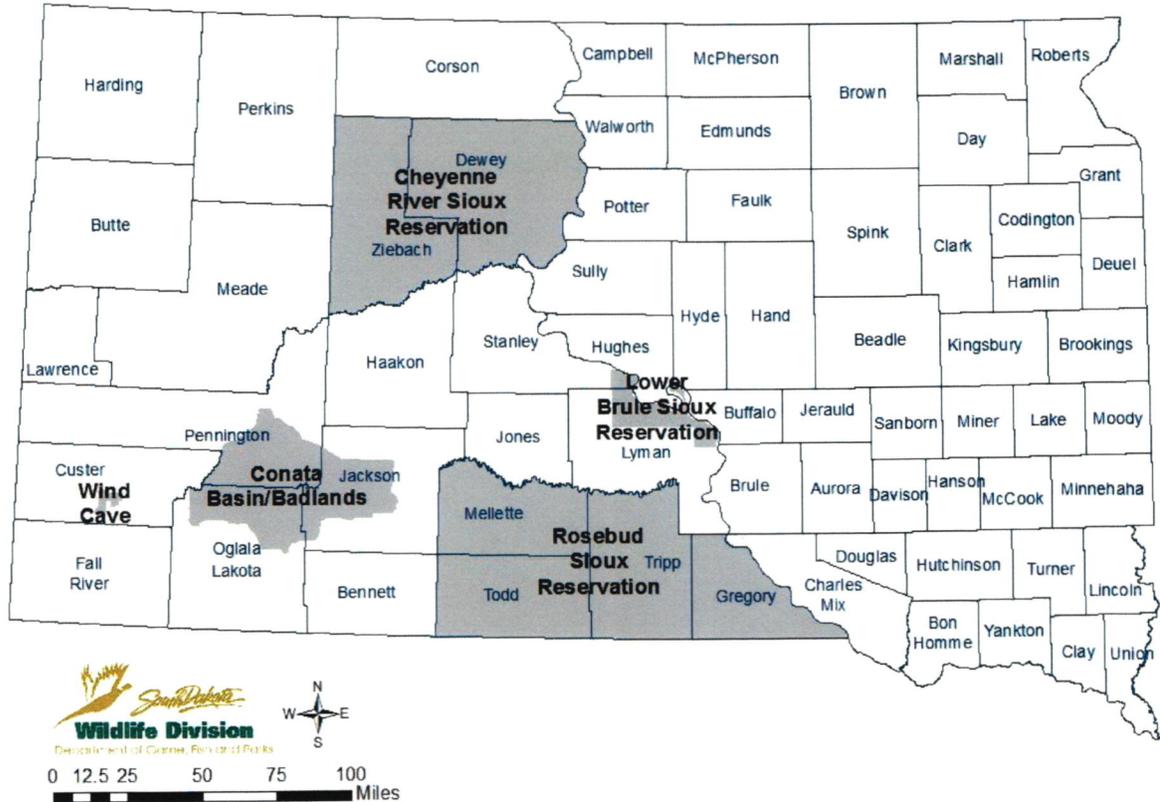


Figure 1. Black-footed ferret reintroduction areas in South Dakota.

Conservation / Management Considerations:

Historically, the close association of black-footed ferrets with prairie dogs has also been the primary reason for its decline. Up until the 1960's, the number of prairie dog colony acres and prairie dogs was in steep decline. This decrease was due to the conversion of black-footed ferret habitat to cropland, prairie dog poisoning campaigns and disease in both prairie dogs and ferrets. Some of those same conservation challenges remain today. Current threats to black-footed ferret recovery include prairie dog (maintaining colony acres of sufficient size and juxtaposition) and disease management (e.g. sylvatic plague). A minimum of approximately 1,500 acres of occupied black-tailed prairie dog habitat is required to support a population of 30 adult black-footed ferrets. Natural predation (coyote, fox, badger, great horned owl and golden eagle) also poses challenges for black-footed ferret recovery. Future research should focus on understanding sylvatic plague ecology, improving sylvatic plague mitigation methods (e.g. vaccination, insecticide application), improving reintroduction methods (e.g. captive rearing, captive release, and translocation of wild animals) as well as determining the influence of predators and prey on black-footed ferret populations. The distribution and prevalence of sylvatic plague should be monitored. Incentive programs for

landowners who manage for habitat should be developed. Site specific management actions may include the development of predator control programs, where appropriate.

Conservation Efforts in South Dakota:

Past

The last known stronghold of ferrets in South Dakota occurred in Mellette County. After the discovery of this population in 1964, extensive research was conducted before the last black-footed ferret in this population was observed in 1974. The species was thought extinct in South Dakota and throughout its range until another population was discovered in Wyoming in 1981.

Since 1996, South Dakota Department of Game, Fish and Parks (SDGFP) has been a part of the Black-footed Ferret Recovery Implementation Team (BFFRIT). The team was created under the authority of the ESA to help implement recovery plans and work towards recovery by integrating the expertise and resources of various partners. The first recovery plan was drafted in 1978 and a second plan was finalized in 1988. The most recent recovery plan was published in 2013 (U.S. Fish and Wildlife Service 2013). SDGFP is also a participant in the South Dakota Recovery Implementation Team.

Six reintroductions have occurred in South Dakota:

1. Since 1994, 225 black-footed ferrets were released at Badlands National Park (Pennington County). At least 50 individuals were detected in the park as of January 2017.
2. Since 1996, 161 black-footed ferrets were released onto U.S. Forest Service (USFS) property (Buffalo Gap National Grassland) in the Conata Basin (Pennington County), just south of Badlands National Park. At least 64 individuals were detected in this portion of the basin as of January 2017.
3. Since 2000, 379 black-footed ferrets have been released on tribal property of the Cheyenne River Sioux Tribe in Dewey County. At least three individuals are suspected to still be in this area as of December 2015.
4. Since 2003, 162 black-footed ferrets were released on tribal property of the Rosebud Sioux Tribe in Todd County. It is thought five individuals remain at this site as of December 2015.
5. Since 2006, 112 black-footed ferrets were released on tribal property of the Lower Brule Sioux Tribe in Lyman County. Five individuals are known to remain at this site as of January 2017.
6. Since 2007, 72 black-footed ferrets were released at Wind Cave National Park in Custer County. Approximately 30 individuals were estimated to be present as of January 2017.

The reintroductions that occurred on Badlands National Park and Buffalo Gap National Grassland have since merged into one population (Conata Basin/Badlands). Before the outbreak of plague that occurred in the Conata Basin in 2008, this population was considered to be the result of the most successful reintroduction site in the United States so much so that wild-born animals from this area were translocated to other reintroduction sites to augment those populations. The reintroduction on the Cheyenne River Sioux Reservation has also

been considered successful; however black-footed ferret numbers are currently quite low at this site. Black-footed ferrets have also been documented in Corson County. The most recent report was that of a roadkill in November 2012. Genetic testing strongly suggested this individual originated from the reintroduced population on Cheyenne River Sioux Reservation. Soon after the reintroduction of black-footed ferrets in Wind Cave National Park, black-footed ferrets have been sighted annually in Custer State Park. The USFS, National Park Service, USFWS, Cheyenne River, Rosebud and Lower Brule Sioux tribes monitor the success of reintroductions in South Dakota. Results are shared annually with SDGFP through the BFFRIT.

Black-footed ferrets are highly susceptible to plague and mortality rates are high for black-tailed prairie dogs. The first documented active outbreak (epizootic) in black-tailed prairie dogs in South Dakota occurred in 2005 in Shannon County. Based on available information (plague positive animals, flea samples or confirmed reports of prairie dog die-offs), plague has a likely distribution across much of western South Dakota (Figure 2). This does not mean that an epizootic is or has occurred in all of these areas, but that the bacterium *Yersinia pestis* that causes plague is present. SDGFP collects and tests samples for plague if a landowner reports a possible colony die-off or if reports of colony die-offs come from areas that are not currently known to have plague.

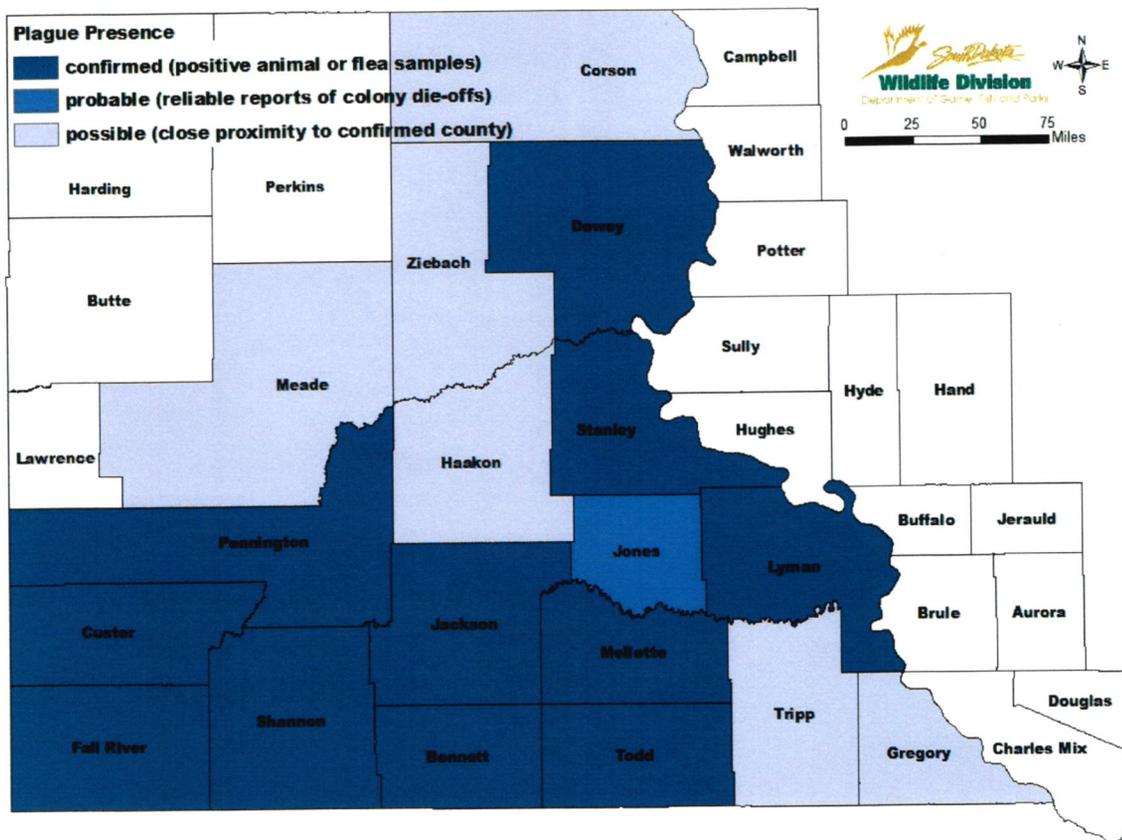


Figure 2. Known and predicted distribution of plague (*Yersinia pestis*) in South Dakota as of 2012.

A landowner incentive program was developed in May of 2006 using a Cooperative Endangered Species Grant from the USFWS. Money from this match-grant (25% state funds: 75% federal funds) was used to provide monetary incentives to private landowners to maintain black-tailed prairie dog colonies in areas occupied by black-footed ferrets. This incentive program was targeted towards private landowners within the Conata Basin/Badlands black-footed ferret reintroduction area (Figure 1). A total of \$317, 787 was allocated for use during a five year period. Willing landowners agreed to a minimum \$12.20 per acre annual payment in exchange for their cooperation in carrying out actions to improve, enhance, or maintain black-footed ferret habitat (at a minimum no shooting or poisoning prairie dogs). This minimum payment reflected the 3-year average pasture land rental rates of the counties involved. Over time, the payment per acre changed to reflect changes in average pasture land rental rates and the conservation value of properties enrolled. Over \$35,000 in payments were made to two landowners. Given the changing environmental conditions, the presence of plague in the reintroduction area, limited interest in the program and the amount of remaining funds, we extended the scope of the grant to cover other black-footed ferret conservation activities. After a request for proposals was advertised in late 2011, we selected and worked with the World Wildlife Fund to purchase over 15,000 lbs. of deltamethrin insecticide and other dusting supplies to help manage plague in the Conata Basin. The last of these supplies was used during dusting efforts in the Basin in 2015 (Griebel 2015).

The application of Deltamethrin, an insecticide used to control the fleas that carry *Y. pestis*, has occurred regularly at the Conata Basin/Badlands, Lower Brule Sioux Reservation, and Wind Cave National Park reintroduction sites.

The U. S. Geological Survey (USGS) National Wildlife Health Center and other cooperators have developed a sylvatic plague vaccine (SPV) for prairie dogs that is delivered through an oral bait. The efficacy of this vaccine was tested in field trials at 29 sites in seven states from 2013 to 2015 (Rocke et al. 2017). Three test sites were located in South Dakota: Wind Cave National Park, Buffalo Gap National Grassland and Lower Brule Sioux Reservation. The vaccine had a positive effect on prairie dog abundance and increased survival rates for both adult and juvenile prairie dogs. The Western Association of Fish and Wildlife Agencies (WAFWA) supported the development of such a vaccine and efforts to reduce the occurrence of plague. A National Fish and Wildlife Foundation grant has been secured to fund the application of this oral vaccine at the Conata Basin/Badlands, Wind Cave National Park and Bad River Ranch reintroduction sites for 2017-2019 (see the *Ongoing* portion of this section for more information on the planned Bad River Ranch reintroduction).

SDGFP has provided support for two research projects through South Dakota State Wildlife Grants (SWG). “Understanding the relationship between prairie dog ecology and black-footed ferret resource selection” (SWG T-35-R-1) has resulted in the following publications:

- Eads, D. A. 2009. Evaluation and development of black-footed ferret resource selection models. M.S. Thesis, University of Missouri, Columbia.
- Eads, D.A., D.E. Biggins, D.S. Jachowski, T.M. Livieri, J.J. Millspaugh, and M. Forsberg. 2010. Morning ambush attacks by black-footed ferrets on emerging prairie dogs. *Ethology, Ecology & Evolution* 22:345-352.

- Eads, D. A., J. J. Millspaugh, D. E. Biggins, D. S. Jachowski, and T. M. Livieri. 2011. Evaluation of a black-footed ferret resource selection model. *Journal of Wildlife Management* 75:1155-1163.
- Eads, D. A., J. J. Millspaugh, D. E. Biggins, T. M. Livieri, and D. S. Jachowski. 2011. Post-breeding resource selection by adult black-footed ferrets in the Conata Basin, South Dakota. *Journal of Mammalogy* 92:760-770.
- Eads, D. A., D. E. Biggins, D. Marsh, J. J. Millspaugh, and T. M. Livieri. 2012. Black-footed ferret digging activity in summer. *Western North American Naturalist* 72:140-147.
- Eads, D. A., D. S. Jachowski, D. E. Biggins, T. M. Livieri, M. R. Matchett, and J. J. Millspaugh. 2012. Resource selection models are useful in predicting distributions of black-footed ferrets in prairie dog colonies. *Western North American Naturalist* 72:206-215.
- Eads, D. A., D. S. Jachowski, J. J. Millspaugh, and D. E. Biggins. 2012. Importance of lunar and temporal conditions for spotlight surveys of adult black-footed ferrets. *Western North American Naturalist* 72:179-190.
- Jachowski, D. S., J. J. Millspaugh, D. E. Biggins, T. M. Livieri, M. R. Matchett. 2008. Implications of black-tailed prairie dog spatial dynamics to black-footed ferrets. *Natural Areas Journal* 28:14-25.
- Jachowski, D. S., J. J. Millspaugh, D. E. Biggins, T. M. Livieri and M. R. Matchett. 2010. Home-range size and spatial organization of black-footed ferrets *Mustela nigripes* in South Dakota, USA. *Wildlife Biology*. 16:66-76.
- Jachowski, D.S., J.J. Millspaugh, D.E. Biggins, T.M. Livieri, M.R. Matchett, and C.D. Rittenhouse. 2011. Resource selection by black-footed ferrets in South Dakota and Montana. *Natural Areas Journal* 31:218-225.

The second research project investigated factors that affect territoriality and productivity of black-footed ferrets (SWG T-38-R-1) and resulted in the following publications:

- Grassel, S. M. 2015. Ecological relationships of black-footed ferrets, American badgers, and black-tailed prairie dogs in South Dakota. Ph.D. Dissertation, University of Idaho, Moscow.
- Grassel, S. M., J. L. Rachlow, and C. J. Williams. 2016. Reproduction by black-tailed prairie dogs and black-footed ferrets: Effects of weather and food availability. *Western North American Naturalist* 76(4):405-416.

A SDGFP Wildlife Diversity Small Grant provided a portion of the funding to assess the risk of plague to black-footed ferrets in Conata Basin (Livieri 2013).

Ongoing

Given the dependence of black-footed ferrets on prairie dogs, conservation of this species facilitates black-footed ferret recovery. Since 2002, SDGFP has been monitoring colony acreage and distribution of black-tailed prairie dogs in the state. This information is collected as part of the state conservation and management plan for the black-tailed prairie dog (Cooper and Gabriel 2005). These data are used not only for determining changes in state

management actions related to black-tailed prairie dogs, but have proven beneficial for the conservation and management of other wildlife species.

In an effort to encourage private and tribal landowners to become willing participants in black-footed ferret reintroductions on their property, the USFWS established a Programmatic Black-footed Ferret Safe Harbor Agreement (SHA) in 2013. This agreement provides participating landowners assurances that they will not be subject to additional future regulatory restrictions or commitments. This SHA is applicable across the 12-state historical range of the black-footed ferret, including South Dakota. As part of the SHA, the Natural Resources Conservation Service (NRCS) has made technical and financial assistance available to landowners to help recover the black-footed ferret. The development of the SHA and the NRCS landowner incentive program is supported by a Memorandum of Understanding (MOU) among the USFWS, NRCS, USGS, U.S. Animal and Plant Inspection Service and WAFWA, of which SDGFP is a member.

On 27 September 2017, 25 captive-raised black-footed ferrets are planned for release at the Bad River Ranch southwest of Ft. Pierre. This will be the seventh reintroduction site in South Dakota and is the first reintroduction in the state located on privately-owned land. This reintroduction was made possible by landowner enrollment in the SHA. The Bad River Ranch is owned by Turner Enterprises, Inc.

A preliminary investigation of the role of small mammals in the maintenance of plague is currently being funded by a South Dakota SWG grant (T-60-R-1). Dr. Hugh Britten at the University of South Dakota and Ph.D. candidate Lauren Maestas are working on Lower Brule black-tailed prairie dog colonies to address the following study objectives:

- Estimate the effect of deltamethrin on the survival, density, and diversity of small rodents on black-tailed prairie dog colonies.
- Estimate the prevalence of *Yersinia pestis* in burrow-collected fleas on black-tailed prairie dog colonies pre- and post-treatment with deltamethrin and in fleas from prairie dogs collected in 2010 to obtain an estimate of *Y. pestis* prevalence in the study colonies.
- Estimate and detect any differences in *Y. pestis* prevalence in fleas on small rodents on treated, untreated, inactive colony, and off-colony plots and compare these prevalence estimates to *Y. pestis* prevalence of fleas collected from prairie dog burrows.
- Measure the exposure of small rodents to plague on and near black-tailed prairie dog colonies by titers for plague antibodies in blood samples.
- Detect any change in flea abundance and flea species diversity on small rodents on treated, untreated, inactive colony, and off-colony plots and in black-tailed prairie dog burrows on dusted and undusted plots.

Recovery Criteria/Goals

SDGFP will cooperate with the USFWS in meeting downlisting and delisting goals detailed in the recovery plan (U.S. Fish and Wildlife Service 2013). State-specific delisting guidelines are suggested in the USFWS recovery plan for the species. The recommended contribution from South Dakota is 204 adult ferrets that would require 30,000 colony acres.

Primary Reviewer: Silka Kempema, wildlife biologist

Other Staff or Experts Involved in the Review: Eileen Dowd Stukel, Senior Wildlife Biologist

Date Review Finalized:

Dates of Other Reviews, if appropriate:

References or Information Sources:

- Cooper, J., and L. Gabriel. 2005. South Dakota black-tailed prairie dog conservation and management plan.
- Griebel, R. L. 2015. Conata Basin/Badlands Area 2015 Plague Management Report. Buffalo Gap National Grassland, Wall Ranger District.
- Higgins, K. F., E. D. Stukel, J. M. Goulet, and D. C. Backlund. 2000. Wild Mammals of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, SD.
- Livieri, T. L. 2013. Assessing the risk of plague to black-footed ferrets in Conata Basin, South Dakota. Final Report to South Dakota Department of Game, Fish and Parks 28 April 2013. Prairie Wildlife Research, Wellington, Colorado. 12 pages.
- Rocke, T. E., D. W. Tripp, R. E. Russell, R. C. Abbott, K. L. D. Richgels, M. R. Matchett, D. E. Biggins, R. Griebel, G. Schroeder, S. M. Grassel, D. R. Pipkin, J. Cordova, A. Kavalunas, B. Maxfield, J. Boulerice, M. W. Miller. 2017. Sylvatic Plague Vaccine Partially Protects Prairie Dogs (*Cynomys* spp.) in Field Trials. EcoHealth. DOI: 10.1007/s10393-017-1253-x.
- U.S. Fish and Wildlife Service. 2013. Recovery plan for the black-footed ferret (*Mustela nigripes*).

STATE T&E SPECIES STATUS REVIEW

Species Name: North American River Otter, *Lontra canadensis*

South Dakota Status, including legal status and special listings:

- State threatened (SD Administrative Rule 41:10:02:04, List of threatened mammals)
- Monitored by South Dakota Natural Heritage Program
- State Heritage rank S2 (imperiled species)
- Included as a Species of Greatest Conservation Need in the South Dakota Wildlife Action Plan
- Considered a game species with no season

Federal Status:

- NatureServe global rank G5 (species apparently secure); last reviewed 18 November 1996
- Considered a sensitive species in Region 2 of the U.S. Forest Service
- Listed as an Appendix II species under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) because of similarity of appearance to other species listed under CITES.

Basis for new listing, status change (T to E, or E to T), or continued listing with same status:

The justification for including the river otter on the first list of state threatened mammals is unknown but was presumably due to likely extirpation from the state due to unregulated harvest. Continued listing as a state threatened species is recommended at this time with an additional review of species status again within one year.

Description, biology and life history:

The river otter is a semiaquatic carnivore adapted to life in the water. Their cylindrical body shape, short legs and webbed feet make them agile swimmers. Eyes sit high on the head and small, rounded ears are set far back to allow a mostly submerged river otter to see and hear above water. River otters range from 35 to over 50 inches long. The tail comprises 30-40% of the total body length and is useful for diving and steering. River otter fur is extremely dense, providing insulation that is needed for life in the water. River otters are brown with a tan to silvery-white chin and chest.

Female river otters can give birth to their first litter at two years of age. Males typically do not become successful breeders until 5-7 years of age. The breeding season begins in late winter and can extend until early spring. River otters have delayed implantation. This means when an egg is fertilized, it remains unattached and undeveloped in the uterus. After this delay, the fertilized egg will attach to the uterus and grow during a 50-60-day gestation period. Two to four young are then born in early spring almost a year after conception. Pups leave the natal den with the female at two months of age and are weaned at three months, but may stay with the adult until she gives birth to her next litter. Males are typically solitary except during breeding. River otters are most active during the evening and early morning. Life expectancy in the wild is typically 6-7 years with some living close to 20 years.

River otters primarily eat fish. They also eat crayfish, frogs, aquatic invertebrates, birds, and small mammals. River otters take fish species based on abundance and ease of capture.

Habitat:

River otters can be found in a variety of aquatic environments including rivers, streams, lakes, and marshes with deep pools, all of which should have abundant vegetation and prey. Good water quality, year-round access to open water and limited disturbance are often important habitat characteristics. River otters have a commensal relationship with beavers as beaver dams provide year-round open water and beaver bank dens and lodges are used by river otters as rest and natal sites.

Distribution within the state:

This species is thought to have historically occurred throughout South Dakota in appropriate habitat (Toweill and Tabor 1982, Jones Jr. et al. 1983). Melquist et al. (2003) estimated that in 1977 river otters occupied less than 75% of their historical range in North America. South Dakota was not included in this occupied range. Kiesow and Dieter (2003) also reported no indication of a remnant population of river otters in South Dakota. A small population existed as the result of a reintroduction in Moody County. See Figure 1 for predicted current distribution of river otters in South Dakota.

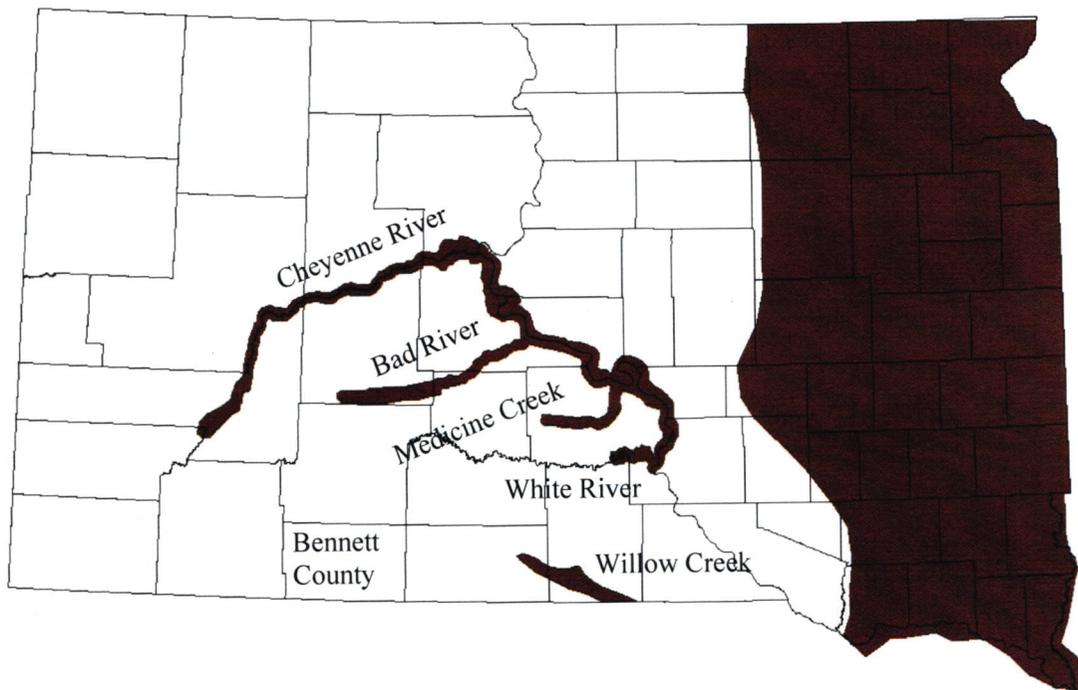


Figure 1. Predicted current distribution of river otters in South Dakota as determined by reports (verified, probable and unverified) submitted to the South Dakota Department of Game, Fish and Parks (South Dakota Department of Game Fish and Parks 2015).

Conservation / Management Considerations:

Known threats to river otters in South Dakota include incidental trapping and road kills. Of 117 reported river otters killed in South Dakota from 1979 through 2016, 73% were killed incidental to legal trapping activities; 15% of the 117 reported river otter mortalities resulted from being struck by vehicles (South Dakota Department of Game, Fish and Parks, unpublished data). Degradation of streams, loss of riparian habitat and seasonal variations in water levels also threaten long-term population stability. The impact of agricultural chemical run-off is unknown. A year-round beaver trapping season west of the Missouri River and a focus on non-native trout management in Black Hills streams will impair statewide recovery of river otters. Due to these issues and evidence of more suitable habitat in eastern South Dakota, the focus of recovery is on watersheds within the eastern part of the state.

Conservation Efforts in South Dakota:

Past

The Flandreau Santee Sioux Tribe conducted a reintroduction along the Big Sioux River near Flandreau in Moody County by releasing 35 river otters. Ten males and seven females were released on 23 May 1998. On 14 May 1999, eight males and 10 females were released. The released animals were not marked or monitored and subsequent information on current distribution or reproduction of these released otters was limited.

In 2001, South Dakota Department of Game, Fish and Parks (SDGFP) worked with South Dakota State University's Biology Department to determine the current distribution of river otters in the state and assess the feasibility of river otter reintroduction (Kiesow 2003). Kiesow and Dieter (2003) reported that 89% of 34 reported river otter sightings occurred in the eastern third of South Dakota, particularly along the Big Sioux River and that those reported sightings were likely the result of the release conducted by the tribe. The authors' survey efforts provided no indication that there was a naturally occurring remnant river otter population in the state. As such, the authors recommended additional reintroductions of river otters. Kiesow and Dieter (2005) further identified suitable areas for reintroduction: Bad River, Big Sioux River, James River, North Fork of the Whetstone River and the Little White River. River otter reintroductions were not a high SDGFP Wildlife Division priority at that time and did not occur.

For three winters beginning in 2005, SDGFP contracted with Jacquie Ermer, currently the Regional Terrestrial Resources Supervisor in SDGFP Wildlife Division Region Four, to collect additional information on river otter distribution, evaluate suitable survey methods, solicit and collect otter observations and conduct necropsies on incidentally killed river otters. Ermer's work was focused on eastern South Dakota.

Ermer (2006, 2007, 2008) proposed using a combination of methods to monitor river otters in South Dakota: sign surveys (aerial snow track and bridge sign surveys), survey of licensed trappers, continued collection of river otter sightings, carcass collection and necropsy as well as population modeling to determine the status of river otters in the state. If feasible, a small-scale study to estimate home range, fecundity and survival should be conducted (Ermer 2006). In addition, the origin of South Dakota otters should be determined and river otter awareness programs developed.

A brochure was created in 2008 that provided basic information on river otters, requested reports of any river otter observed in South Dakota and illustrated ways to reduce incidental river otter captures while trapping for other furbearing species. This brochure was made available at all SDGFP offices and on the Department website. An updated version was created in 2010, is available at SDGFP offices, through the SDGFP website and was mailed to all resident furbearer license holders in South Dakota in 2010.

In December of 2010, a group of SDGFP staff began developing a plan for river otter conservation and management. This team produced the *South Dakota River Otter Management Plan* (South Dakota Department of Game Fish and Parks 2012). The 5-year plan is intended to provide general, strategic guidance to SDGFP and potential partners for the recovery and sustained management of river otter in South Dakota. More specifically, it recognizes the need to collect updated information on the distribution and population of river otters in South Dakota and to establish delisting criteria. As such, a State Wildlife Grant-funded project was initiated with Dr. Wayne Melquist in 2011 to determine current river otter distribution and evaluate habitat of unoccupied sites with the potential for population expansion. A final report was submitted to SDGFP in May 2015 (Melquist 2015).

Neither river otters nor their sign were observed during visits to over 300 bridge crossings and 135.2 km (84 miles) of stream (17.7 km [11 miles] walked, 117.5 km [73 miles] boated) (Melquist 2015). River otter tracks on the East Fork of the Vermillion River and an observation of a river otter on a dammed tributary of the East Fork were detected during aerial surveys of major drainages conducted 6-8 March 2013. Current confirmed distribution as identified by Melquist (2015) of river otters in South Dakota includes the Big Sioux, Vermillion and James River drainages, Jorgenson River, Little Minnesota River, Whetstone River, Yellow Bank River, Jim Creek/Big Slough and the Missouri River downstream from Pierre. Melquist (2015) also reported that the Bad and Cheyenne River drainages and Medicine Creek may have or had river otters based on unconfirmed reports previously submitted to SDGFP. Reports submitted to SDGFP in the early 1990's and late 2000's indicate that otters may have been or are found on the Bad, Cheyenne and White rivers and Medicine and Willow creeks. The intermittent flow of water in several of these streams limits the year-round use by river otter.

Suitable reintroduction or translocation sites to address river otter depredation complaints were selected based upon riparian habitat, water permanence, available prey, evidence of current beaver activity and banks with suitable resting sites (Melquist 2015). Potential reintroduction sites were located on the Cheyenne, Belle Fourche and Little White rivers. No evidence of recent otter occurrence exists in the areas selected for reintroduction. Note that current conservation challenges west of the Missouri River (as listed above) impair recovery at these sites. Translocation sites were recommended on the James, Missouri and Vermillion rivers. At least one site was recommended in each administrative Wildlife Division region of SDGFP.

Two incidentally captured otters (one male and one female) were radio-marked and released on the Little White River Game Production Area in Bennett County (Figure 1) on 14 November 2013 to further evaluate habitat suitability on the Little White River (Melquist

2015). Radio contact with the male was last obtained on 25 March 2014. The female occupied both the Little White River and Lacreek National Wildlife Refuge giving birth to at least one pup on the refuge during the spring of 2014. The adult female was found dead on 19 January 2015. Hypertrophic cardiomyopathy is the suspected cause of death (U.S. Geological Survey, National Wildlife Health Center Diagnostic Services case report #26185). Portions of the Little White River and the Lacreek National Wildlife Refuge have suitable year-round otter habitat.

Ongoing

Since the late 1970's, the South Dakota Natural Heritage Program, housed within SDGFP, has collected reports of river otter observations (Figure 2). These reports have included the sighting of a live animal, incidental catch, river otter sign (tracks, slides or scat) or road kill.

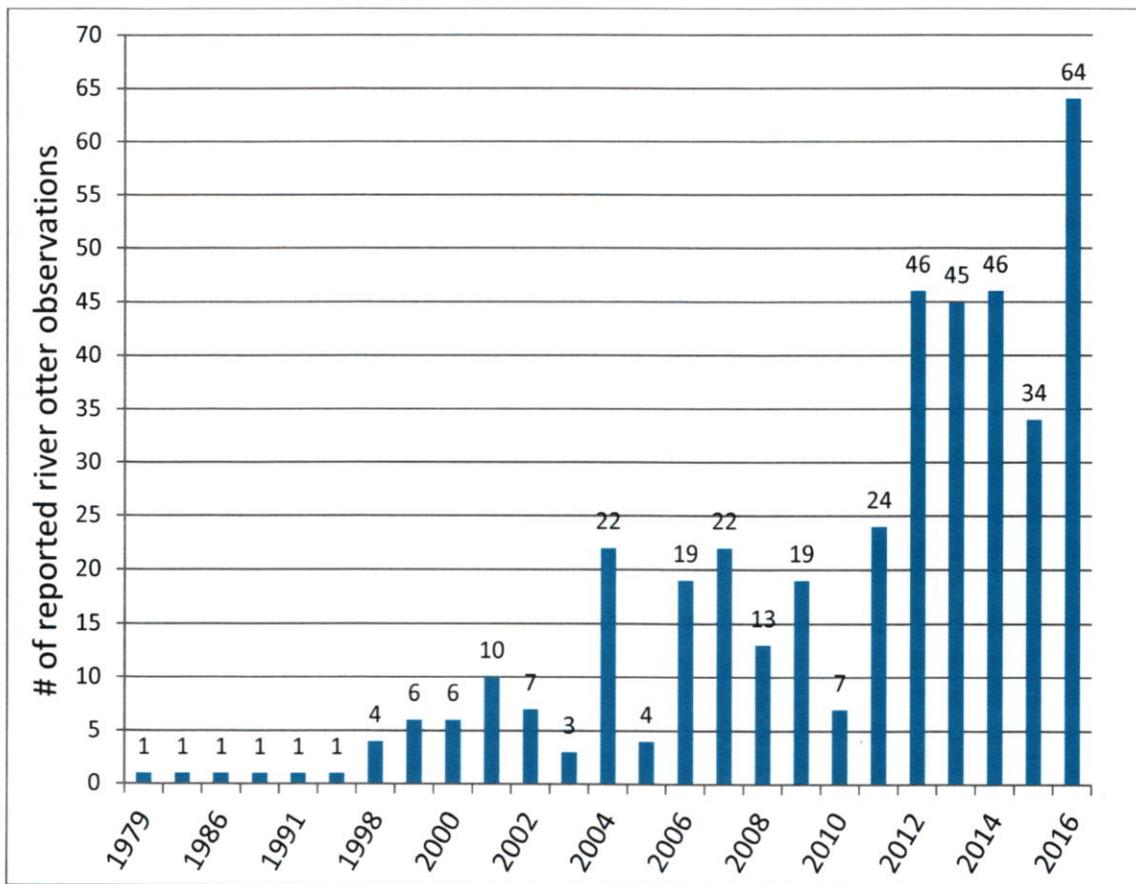


Figure 2. Reports of river otters in South Dakota from 1979 through 2016. An observation is based on a sighting of a live animal, incidental catch, river otter sign (tracks, scat or sign) or road kill. An observation can be an individual animal or a group of animals.

According to South Dakota Administrative Rule 41:08:02:12, if a wild animal is found dead in a trap or snare when the established season is closed the animal shall remain in the trap or snare and a SDGFP representative must be contacted within twelve hours. If the animal is found alive, it must be released. Currently, there is no season on river otters in South Dakota.

SDGFP collects biological information from reported dead river otter including size, sex, age, body condition, stomach contents and reproductive status. The lower canine teeth are collected for accurate aging, tongue or muscle tissue is collected for DNA analysis and liver tissue is collected for future contaminants testing.

Future

Refer to the South Dakota River Otter Management Plan (South Dakota Department of Game Fish and Parks 2012) for conservation and management strategies and objectives proposed through 2017.

Recovery Criteria/Goals

Delisting of the river otter will be recommended when the following conditions are met:

- confirmed reports of reproduction are documented in three of the five basins (60%) within the recovery area, AND
- within each of these basins, the presence of river otters has been documented by verified reports in at least 40% of the subbasins.

Both of these criteria shall be met during two of the five years prior to proposed delisting.

Reproduction is confirmed by verified reports of family groups (>2 individuals), observation of corpora lutea during necropsy of a female river otter, evidence of lactation, and presence of known age individuals (1 year or younger) as determined by laboratory analysis of cementum annuli. Cementum annuli analysis of teeth is an aging technique useful in many mammal species.

Basins are hydrological unit level six watersheds and defined by the U. S. Geological Survey (USGS) National Watershed Boundary Dataset. *Subbasins* are hydrological unit level eight watersheds, also defined by USGS (Figure 3).

A *verified* report of a river otters is one of a carcass or live-captured individuals or where evidence exists that proves the report was a river otter. Photos where the animal can clearly be identified as a river otter may also be considered verified. Tracks associated with sliding marks in the snow, if confirmed by knowledgeable reviewers can also be considered a confirmed sighting. Knowledgeable reviewers may include agency staff familiar with river otters or river otter experts.

A *probable* report is a sighting not accompanied by a photo only if the observer is experienced and knowledgeable. In addition, tracks and scats not in snow are considered probable reports in part because of the difficulty of correctly identifying them. Photos will be evaluated by knowledgeable reviewers.

Unverified reports are those with no evidence to support or reject the report.

Probable or unverified reports will not contribute to delisting benchmarks, but may help identify sites for follow-up monitoring.

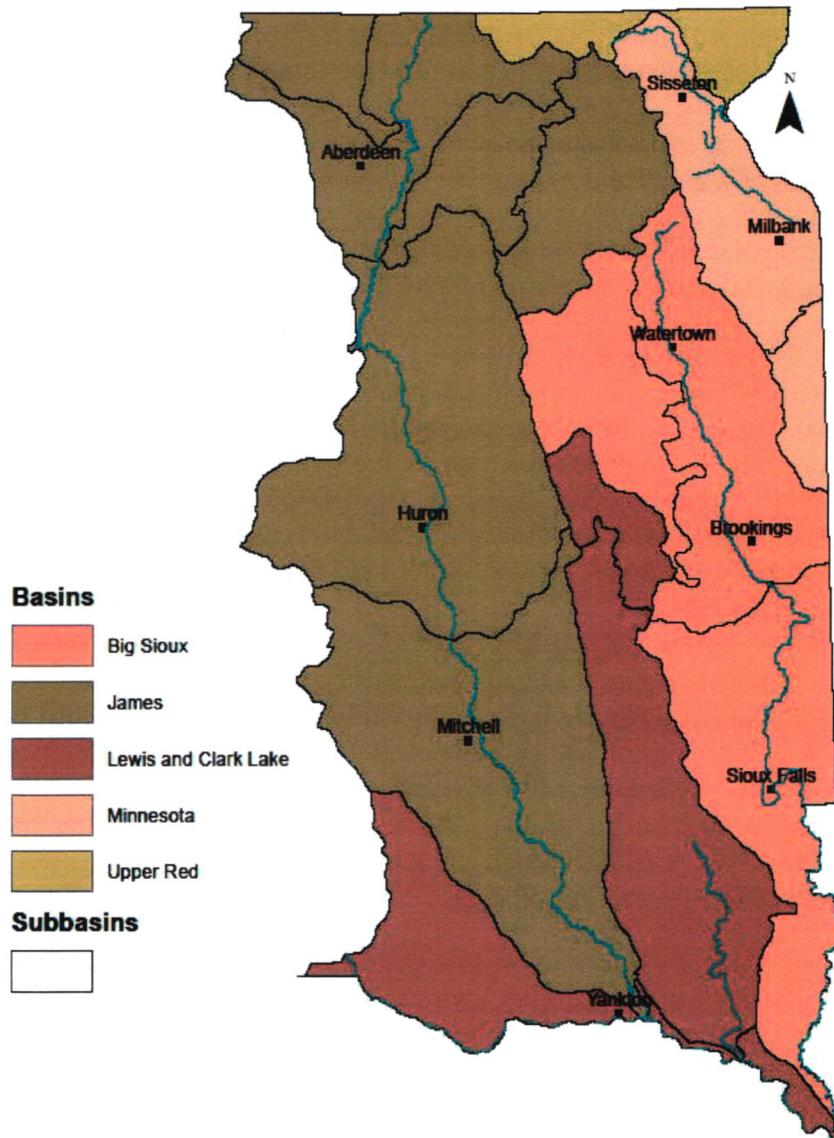


Figure 3. River otter recovery watershed basins and subbasins. Basins are hydrological unit level six watersheds defined by the U. S. Geological Survey (USGS) National Watershed Boundary Dataset. Subbasins are hydrological unit level eight watersheds, also defined by USGS.

Primary Reviewer: Silka Kempema, wildlife biologist

Other Staff or Experts Involved in the Review: Julie DeJong, Jacquie Ermer, Eileen Dowd Stukel and Chad Switzer, SDGFP

Date Review Finalized:

Dates of Other Reviews, if appropriate:

References or Information Sources:

- Ermer, J. 2006. Preliminary investigation to determine presence or absence of river otters in northeastern South Dakota. Final Report to South Dakota Department of Game, Fish and Parks.
- _____. 2007. Investigation to determine presence/absence of river otters (*Lontra canadensis*) in eastern South Dakota. Final Report to South Dakota Department of Game, Fish and Parks.
- _____. 2008. Investigation to determine presence/absence of river otters (*Lontra canadensis*) in eastern South Dakota. Final Report to South Dakota Department of Game, Fish and Parks.
- Jones Jr., J. K., D. M. Armstrong, R. S. Hoffmann, and C. Jones. 1983. Mammals of the Northern Great Plains. University of Nebraska Press, Lincoln, NE.
- Kiesow, A. M. 2003. Feasibility of reintroducing the river otter (*Lontra canadensis*) in South Dakota. M.S. Thesis. South Dakota State University, Brookings, SD.
- Kiesow, A. M., and C. D. Dieter. 2003. Status and distribution of river otters, *Lontra canadensis*, in South Dakota. Proceedings of the South Dakota Academy of Science 82:79-87.
- _____. 2005. Availability of suitable habitat for northern river otters in South Dakota. Great Plains Research 15:31-43.
- Melquist, W. E. 2015. Determination of river otter (*Lontra canadensis*) distribution and evaluation of potential sites for population expansion in South Dakota. South Dakota Department of Game, Fish and Parks State Wildlife Grant T-55-R-1 Final Report.
- Melquist, W. E., P. J. Polechla, Jr., and D. Toweill. 2003. River Otter (*Lontra canadensis*). Pages 708-734 in G. A. Feldhammer, B. C. Thompson, and J. A. Chapman, editors. Wild Mammals of North America: Biology, Management, and Conservation. The Johns Hopkins University Press, Baltimore and London.
- _____. 2012. South Dakota River Otter Management Plan. Wildlife Division Report Number 2012-07.
- South Dakota Department of Game, Fish and Parks. 2015. South Dakota Wildlife Action Plan. South Dakota Department of Game, Fish and Parks. Wildlife Division Report 2014-03.
- Toweill, D. E., and J. E. Tabor. 1982. River otter. Pages 688-703 in J. A. Chapman, and G. A. Feldhamer, editors. Wild Mammals of North America: Biology, Management, and Economics. The Johns Hopkins University Press, Baltimore, MD.

License Sales Totals

(as of Nov 29)

date updated: 30 Nov 2018

Resident	2014	2015	2016	2017	2018	+/- Licenses	+/- Revenue
Combination	45,003	47,061	47,897	46,968	45,250	-1,718	\$ (94,490)
Junior Combination	8,210	8,198	8,142	7,752	7,025	-727	\$ (19,629)
Senior Combination	6,781	7,730	8,435	8,958	9,416	458	\$ 18,320
Small Game	23,607	23,119	20,818	16,220	16,616	396	\$ 13,068
Youth Small Game	5,163	5,132	4,815	4,373	4,085	-288	\$ (1,440)
1-Day Small Game	954	1,219	1,177	1,090	1,018	-72	\$ (864)
Migratory Bird Certificate	31,717	28,992	27,162	26,469	25,654	-815	\$ (4,075)
Predator/Varmint	1,519	1,625	1,807	1,505	1,595	90	\$ 450
Furbearer	3,506	3,255	2,924	2,983	3,202	219	\$ 6,570
Annual Fishing	65,137	63,289	62,449	61,204	56,797	-4,407	\$ (123,396)
Senior Fishing	12,877	12,703	12,833	13,171	12,900	-271	\$ (3,252)
1-Day Fishing	5,163	6,306	6,483	6,189	5,552	-637	\$ (5,096)
Gamefish Spearing/Archery	2,774	2,711	2,740	2,918	2,994	76	\$ 380
Nonresident	2014	2015	2016	2017	2018		
Small Game	74,405	80,480	77,542	63,426	65,836	2,410	\$ 291,610
Youth Small Game	2,327	2,451	2,351	1,861	1,824	-37	\$ (370)
Annual Shooting Preserve	287	387	387	386	318	-68	\$ (8,228)
5-day Shooting Preserve	9,449	9,810	9,951	10,758	11,089	331	\$ 25,156
1-day Shooting Preserve	1,098	1,169	1,242	1,102	1,199	97	\$ 4,462
Spring Light Goose	4,572	4,249	3,965	4,494	4,711	217	\$ 10,850
Youth Spring Light Goose	165	161	142	159	179	20	\$ 520
Migratory Bird Certificate	1,416	1,041	1,099	1,118	1,554	436	\$ 2,180
Predator/Varmint	3,992	4,641	4,799	4,870	5,006	136	\$ 5,440
Furbearer	11	12	7	14	11	-3	\$ (825)
Annual Fishing	25,009	26,595	27,901	26,144	25,928	-216	\$ (14,472)
Family Fishing	9,010	9,346	9,684	9,330	8,733	-597	\$ (39,999)
Youth Annual Fishing	1,492	1,483	1,621	1,340	1,238	-102	\$ (2,550)
3-Day Fishing	23,478	24,589	25,461	24,151	24,096	-55	\$ (2,035)
1-Day Fishing	22,317	21,722	23,811	22,131	19,937	-2,194	\$ (35,104)
Gamefish Spearing/Archery	686	654	709	679	739	60	\$ 300
TOTALS =	392,125	400,130	398,354	371,763	364,502	-7,261	\$ 23,481