Sand Creek
Wildlife Management Area

Photo by Terry R. Thomas

Management Plan
2014

Upper Snake Region

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Wildlife Management Area

2014 – 2023 Management Plan
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Idaho Department of Fish and Game
Upper Snake Region
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Executive Summary

Idaho Department of Fish and Game (Department) manages 32 Wildlife Management Areas (WMAs). Researchers from the University of Idaho and The Nature Conservancy evaluated the value of Idaho's WMAs to wildlife. They found the WMA network, created to support game species, "also conserves the full range of Idaho's wildlife and other ecological features" (Karl et al. 2005). Surveys and monitoring work conducted by Department biologists on Upper Snake Region WMAs confirm their value to big game, nongame, and many at-risk species identified in Idaho's State Wildlife Action Plan. In many cases, WMAs provide the principal habitat for at-risk species in the Upper Snake Region.

Wildlife Management Areas often abut other protected lands such as National Forests, Bureau of Land Management (BLM) lands, or private lands protected by conservation easement. Due to wildlife-focused management, WMAs often serve as highly productive core areas of the landscapes in which they exist. Management of these areas involves a combination of restoring and maintaining important natural habitats to contribute to landscape-level habitat function (e.g., sage-steppe, slough wetlands) and creating hyper-productive habitats (e.g., food plots, impounded wetlands) to enhance the carrying capacity for certain wildlife species.

Wildlife Management Area management plans strive to direct management that upholds these values. They may also be bounded by legislative and/or funding mandates, Department species plans, the State Wildlife Action Plan, conservation partner objectives, national wildlife conservation strategies and plans (federal and non-government organizations) and especially the Department's own strategic plan, *The Compass*. Priorities, Management Directions, Performance Targets, and Strategies have been developed to be as consistent as possible with all of these documents and to capture the broader conservation values already provided by WMAs and ensure these values are protected and enhanced.

The Department's Upper Snake Region manages seven WMAs that collectively comprise about 85,000 acres of land. WMA management focus is to maintain highly functional wildlife habitat and provide wildlife-based recreation. These areas include:

- Tex Creek WMA in Bonneville County, a crucial wintering area for the region's deer and elk
- Market Lake and Mud Lake WMAs, two deep marsh units that are vital waterbird migratory stopover and production areas in Jefferson County
- Chilly Slough Wetland Conservation Area (WCA), a protected complex of wet meadow and wetland habitats in Custer County
- Cartier Slough WMA, a natural wetland associated with slough channels of the Henrys Fork River in Madison County
- Deer Parks Complex Wildlife Mitigation Units (WMU), managed cooperatively with the BLM and Shoshone-Bannock Tribes to restore and protect highly functional habitats along the Snake River in Jefferson and Madison counties

- Sand Creek WMA (including the Chester Segment), a mosaic of deep-water and shallow wetlands, wet meadow, marsh, and sagebrush-steppe habitats in Fremont County that provide winter refuge for mule deer, elk, and moose from surrounding high-elevation public lands including Yellowstone National Park

Examples of at-risk species partially dependent on Upper Snake Region WMAs include: Ute ladies' tresses orchid, northern leopard frog, greater sage-grouse, Columbian sharp-tailed grouse, sandhill crane, trumpeter swan, lesser scaup, northern pintail, white-faced ibis, long-billed curlew, and yellow-billed cuckoo.

All regional wildlife areas (WMAs, WMUs, and WCAs) are funded through a combination of hunting license dollars, appropriations from federal excise taxes derived from the sale of ammunition and firearms, and funding provided by the Bonneville Power Administration and Bureau of Reclamation to mitigate habitat loss from construction of various dams in the region. Hunters pay a large portion of the management tab, and they are rewarded with habitat management areas that sustain many of the region's big game herds and provide consistent waterfowl and upland game bird production and hunting opportunities. Non-hunters, who value the varied benefits provided by the Upper Snake Region's WMAs, also benefit from the broad ranging conservation values associated with Department WMAs.

The Sand Creek WMA (SCWMA) was originally acquired in 1947, when Federal Aid to Wildlife Restoration (Pittman-Robertson) funds was used to acquire private property for wintering big game. Since the inception of SCWMA, the Department has purchased additional properties adjacent to and in proximity to the original property, leases property from Idaho Department of Lands (IDL), and has entered into an agreement with the BLM to reserve additional federal lands primarily for wildlife. The area consists of lands owned by the BLM, IDL, and the Department. The Department has primary management responsibility.

Through careful consideration and development, four Conservation Targets were selected from a list of focal species that have either been documented utilizing SCWMA or they are likely to occur on SCWMA based on habitat types. Conservation Targets must reflect regional threats, existing conservation partnerships, and the limitations of WMA personnel and funding while centered on SCWMA management priorities. These Conservation Targets help to focus management actions on specific species that provide conservation benefits for multiple species that share similar habitat requirements or life history traits. Conservation Targets of elk, greater sage-grouse, trumpeter swan, and breeding waterfowl were selected for SCWMA.

This document provides direction in the form of Priorities, Management Direction, Performance Targets, and Strategies for the management of SCWMA. The Priorities for SCWMA were determined through a combination of public and staff input, mitigation requirements identified in the cooperative agreements that formed SCWMA, and Department statewide priorities identified in *The Compass*. A draft version of the SCWMA Management Priorities, Management Directions, Performance Targets, and Strategies was offered for public inspection and comment in October 2013.

This plan will serve as a guide for current and future managers in planning where to direct efforts and resources for maximum wildlife benefit, public enjoyment, and efficient operation. As new information and technology becomes available, and as more property is acquired, Strategies may be modified to most effectively reach the Management Directions and Performance Targets in this plan. All Management Directions, Performance Targets, and Strategies are dependent on adequate funding, personnel, and public support.

Introduction

This management plan is designed to provide broad guidance for the long-term management of Sand Creek Wildlife Management Area (SCWMA). It replaces an earlier management plan written in 1999. This new plan was completed during 2012 and 2013 with extensive public input. This plan is coordinated with other Idaho Department of Fish and Game (Department) plans and policies summarized below:

- State Wildlife Action Plan (2005)
- Statewide management plans for:
    - waterfowl (1991)
    - upland game (1991)
    - mule deer (2010)
    - white-tailed deer (2005)
    - elk (2014)
    - moose (1991)
    - furbearer (1991)
- Statewide big game depredation management plan (1988)
- Conservation Plan for the Greater Sage-grouse in Idaho (2006)
- Policy for Avian and Mammalian Predation Management (2000)

Other plans this document references include:

- North American Waterfowl Management Plan (2012)
- Intermountain West Waterbird Conservation Plan (2006)
- U.S. Shorebird Conservation Plan (2001)
- Intermountain West Regional Shorebird Plan (2000)
- Partners in Flight Tri-National Vision for Landbird Conservation
- Idaho Partners in Flight: Idaho Bird Conservation Plan (2000)
- Idaho's Invasive Species Plan (2012)

Department Mission

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing and trapping (Idaho Code Section 36-103).

Department Strategic Goals

The Department's 2005 Strategic Plan, *The Compass*, is the primary guiding document for all other Department plans and outlines four goals for the Department:

- Fish, Wildlife and Habitat: Sustain Idaho's fish and wildlife and the habitats upon which they depend.
- Fish and Wildlife Recreation: Meet the demand for fish and wildlife recreation.
- Working With Others: Improve public understanding of and involvement in fish and wildlife management.
- Management Support: Enhance the capacity of the Department to manage fish and wildlife and serve the public.

The 2014 Wildlife Management Area (WMA) plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* objectives and strategies relevant to WMAs are included in Appendix I.

Statewide WMA Vision

Our WMAs are managed to provide and showcase important habitat for all wildlife and to offer high quality, wildlife-based public recreation.

Sand Creek WMA Vision

Protect and manage the wildlife resources of the SCWMA by protecting intact natural habitat from fragmentation, ensuring sufficient quantities of high quality and secure habitat for all species of wildlife. Provide high quality wildlife-based recreational opportunities and nature viewing compatible with this primary mission for the benefit of the public.

Modification of Plan

This plan provides broad, long-term management direction for SCWMA. It will be evaluated at least every five years to determine if adjustments are needed. The plan will be modified as needed to accommodate changing conditions and goals and to incorporate available advancements in management knowledge and techniques.

Other Considerations

All strategies proposed in this plan are guided and bound by the contractual agreements between cooperating agencies, the mission of SCWMA, and all applicable Department species management plans and policies. Issues and strategies that are inconsistent with the mission were not considered. In addition, the implementation of all strategies will be subject to available funding, personnel, and safety considerations.

Area Description and Current Status

The SCWMA is located in Fremont County. The headquarters and office are located six miles northeast of St. Anthony along the northwest bank of the Henry's Fork of the Snake River accessible by the public along North River Road (Figure 1). Department housing is located two miles north of Parker, Idaho and at the WMA headquarters. A cabin is located 17 miles north of St. Anthony on the Sand Creek road at the Sand Creek ponds complex (Figure 2).

Sand Creek WMA was created in 1947, when Federal Aid to Wildlife Restoration (Pittman-Robertson) funds was used to acquire the Chapman Ranch, 17 miles north of St. Anthony. This 4,763-acre parcel of private land was purchased to perpetuate the small herd of elk that wintered on the property. From this beginning, the primary focus of SCWMA has been to provide winter range in sufficient quantity and quality to support the Sand Creek elk herd during the winter months.

Since 1947, both the elk herd and the size of their winter range have expanded. Most of the present winter range is not owned by the Department, but is a mixture of state, federal, and private lands. This situation has made it necessary to develop a cooperative management program involving the various landowners and has been accomplished by subsequent land acquisitions, cooperative agreements and leases with other public land agencies, and use-trade agreements with key private landowners (Appendix IX).

Today, SCWMA consists of 18,788 acres of Department-owned land, 11,901 acres of Bureau of Land Management (BLM) land vacated or unallocated from livestock grazing, 920 acres of Idaho Department of Lands (IDL) lands that are leased by the Department for wildlife use, and approximately 880 acres in use trade agreements with private landowners (Appendix IX). This use trade agreement of 880 acres is the only active grazing on the WMA.

The general topography of the area is rolling hills with broken lava reefs and moving sand dunes. The northern boundary of SCWMA lies on the southwest slope of Big Bend Ridge, at an elevation of 6,200 feet. Although not a continuous tract of land, SCWMA extends from the forests of Big Bend Ridge 20 miles to the southwest into semi-arid sagebrush-steppe (Figure 3). The elevation drops to approximately 5,000 feet at the southwestern corner of the area.

Most of SCWMA is under laid with basalt lava flows resting on rhyolytic rocks and mantled by sediment of several different types. Alluvial deposits during the Pleistocene and more recent eras consist largely of horizontal clay beds with lesser amounts of silt and sand.

The summers are warm and winters generally long and cold. Snow depths range from two feet on the south end up to six feet or more on Big Bend Ridge to the north. The mean annual temperature is approximately 40° F with summer temperatures reaching 100° F at times and winter temperatures dipping to -40° F. Typically there are only 90 frost-free days each year. Annual precipitation varies from 14-16 inches in the south to 32 inches in the north and is distributed nearly evenly throughout the year with slightly less in July, August, and September.

The dominant habitat found on SCWMA is sagebrush-steppe, ranging from Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) and threetip sagebrush (*Artemisia tripartita*) at low elevation to mountain big sagebrush (*A. tridentata* ssp. *vaseyana*) at higher elevations. This habitat is interspersed with bitterbrush (*Purshia tridentata*), chokecherry (*Prunus virginiana*), and rubber rabbitbrush (*Ericameria nauseosa*), especially on stabilized dunes. Shiny-leaf ceanothus (*Ceanothus velutinus*), snowberry (*Symphoricarpos* spp.), and other shrubs are common from the lower slopes of Big Bend Ridge through the sagebrush-steppe. The principal grass species are Needle-and-thread (*Hesperostipa comata*), various wheatgrasses (including bluebunch wheatgrass, *Pseudoroegneria spicata*), bluegrasses (*Poa* spp.), Indian ricegrass (*Achnatherum hymenoides*), Idaho fescue (*Festuca idahoensis*), and bromes (*Bromus* spp.). Some of the forb species include balsamroot (*Balsamorhiza sagittata*), geranium (*Geranium* spp.), buckwheat (*Eriogonum* spp.), prickly pear cactus (*Opuntia polycantha*), and lupine (*Lupinus* spp.). There are several stands of juniper (*Juniperus* spp.) along the edges of the sand dunes providing important habitat for wintering game. This high desert range is one of the most important shrub-grass wildlife ranges in Eastern Idaho. At the north end of Big Bend Ridge, quaking aspen (*Populus tremuloides*), lodgepole pine (*Pinus contorta*), and Douglas-fir (*Pseudotsuga menziesii*) are the primary tree species. Riparian habitats, predominantly willows, especially Geyer's willow (*Salix geyeriana*) and shining willow (*Salix lucida* ssp. *caudata*), and aspen groves are found adjacent to the Sand Creek Ponds, Blue Creek Reservoir, and Sand Creek. Riparian woodland and shrub land also occurs in wetlands at Chester wetlands segment as well as on the Henry's Fork.

The SCWMA plays a key role in the perpetuation of wildlife in the upper Snake River Plain and the Greater Yellowstone ecosystem. Sand Creek WMA, adjacent public lands, specific private properties, and this cooperative management program are all critical to the continued existence of several wildlife species including but not limited to elk, deer, and moose, as well as sage- and sharp-tailed grouse.

Additionally, the Sand Creek Ponds, which were created from the 1950s through the 1970s, have had a significant percentage of the region's annual trumpeter swan production. Diverse wetlands habitat have developed around these ponds and Sand Creek. These ponds support aquatic plant communities, such as yellow pond-lily (*Nuphar lutea* ssp. *polysepala*). Pond margins support tall emergent marsh dominated by hardstem bulrush (*Schoenoplectus acutus*) and cattail (*Typha latifolia*) with patches of interspersed short marsh dominated by common spikerush (*Eleocharis palustris*). Ponds and natural depression wetlands occur within a matrix of Geyer's willow stands and sedge (*Carex* spp.). Seasonally flooded vernal pool-like depressions also occur throughout the landscape.

The Chester Wetlands property was acquired by The Nature Conservancy on August 1, 2001 and was sold over the next two consecutive years to the Department. Some of the funds to acquire the property were the result of land exchanges by the Department. Through an interim cooperative agreement, the Department assumed management responsibilities on August 2, 2001.

The Chester Wetlands consists of 1,498 acres of deeded land, 1,481 acres of which is irrigated. Wetlands cover 762 acres, and 371 acres of the property have been farmed and grazed

historically. Baltic rush (*Juncus balticus*) and Nebraska sedge (*Carex nebrascensis*) are the most abundant species, dominating wet and mesic meadows from marsh edge to uplands. Introduced forage grasses, primarily redtop bentgrass (*Agrostis stolonifera*) and Kentucky bluegrass (*Poa pratensis*) are common throughout, and locally dominant. Ute ladies' tresses (*Spiranthes diluvialis*), an orchid listed as Threatened under the Endangered Species Act, grows in transitional habitat between wet and mesic meadows. Invasion by noxious weeds, especially Canada thistle (*Cirsium arvense*) and field sowthistle (*Sonchus arvensis*), is the primary threat to wet and mesic meadows. Pond margins support tall emergent marsh dominated by hardstem bulrush (*Schoenoplectus acutus*) and cattail (*Typha latifolia*). Annual dominated mudflats seasonally characterize the restored West Pond wetlands.

Sand Creek WMA plays a key role in the perpetuation of wildlife in the upper Snake River Plain and Greater Yellowstone ecosystem. Valuable wetland habitats such as those on the property are critical to the continued existence of waterfowl, shorebirds, and water birds, as well as numerous other wildlife species. Upland habitats on the property are valuable for restoration of sharp-tailed grouse and sage-grouse.

There are approximately 170 bird species, 30 species of mammals, and three species of fish that reside on or use SCWMA at various times. Several of these species are rare in Idaho and have special designations such as Species of Special Concern, Threatened, or Endangered (Appendix VII).

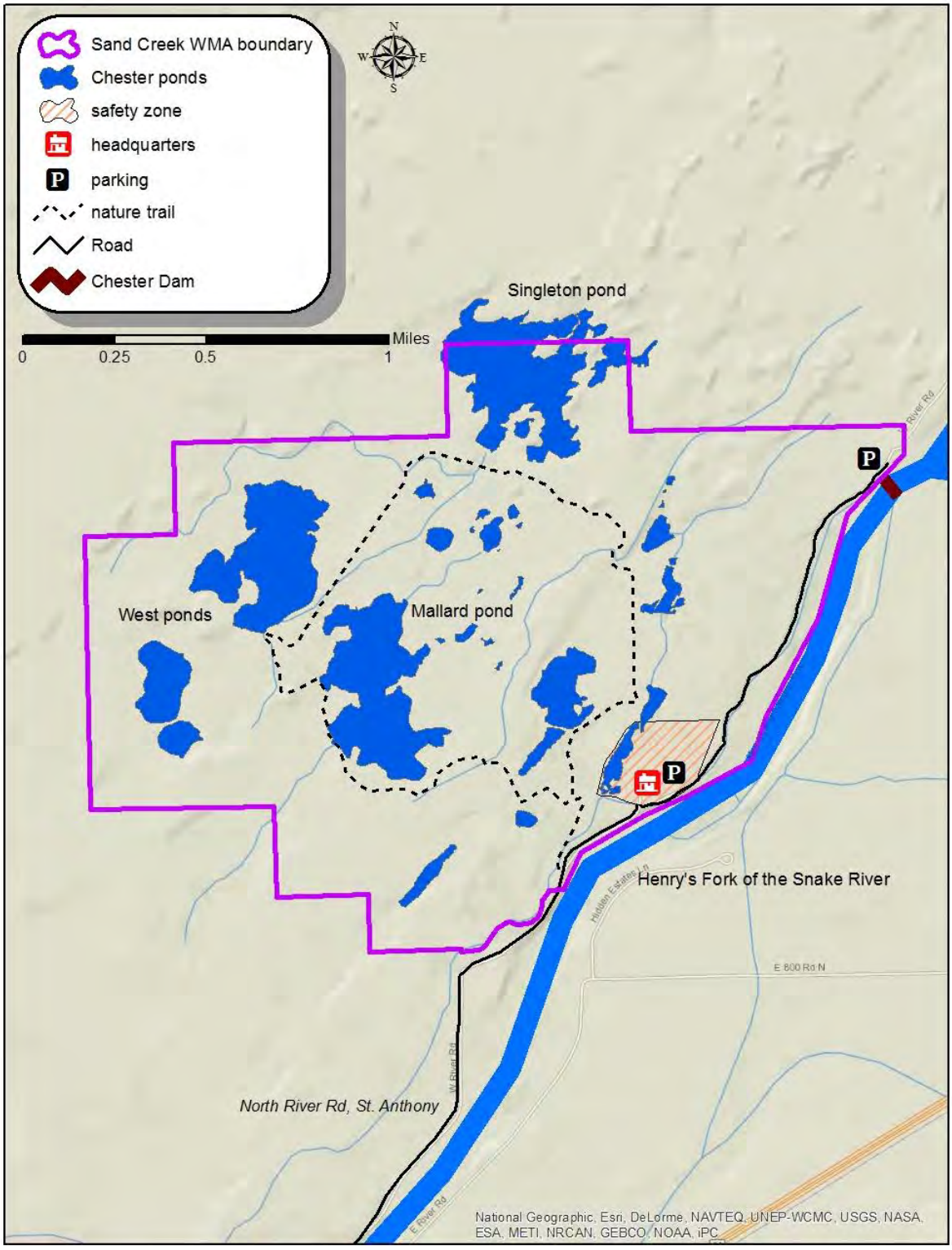

Figure 1. Map of the Chester Wetlands segment of the Sand Creek WMA. This shows the location of the WMA headquarters and office.

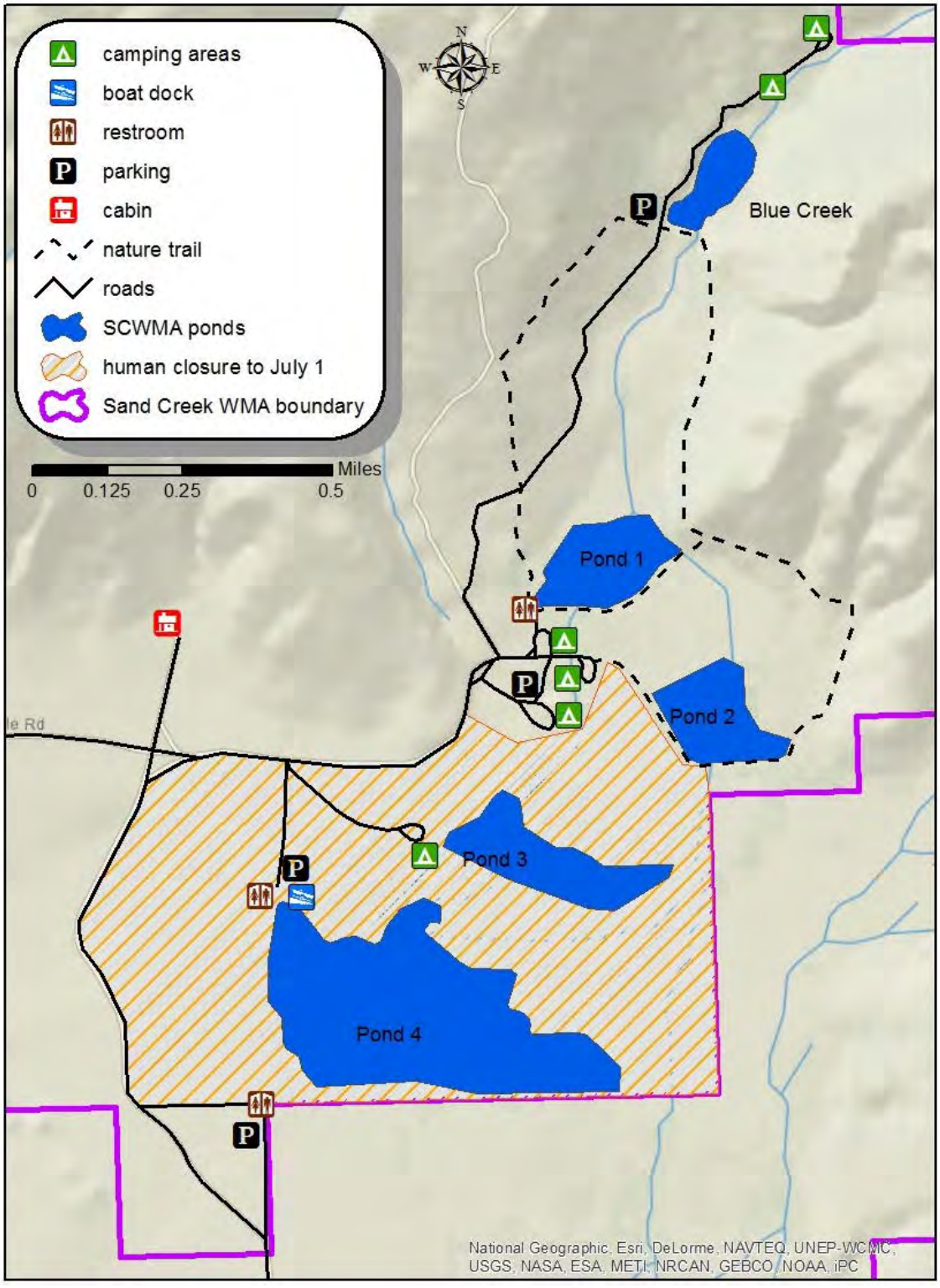

Figure 2. Map of Sand Creek ponds indicating camping sites, parking, restrooms and WMA boundary. Area of human closure is to protect nesting waterfowl from human disturbance.

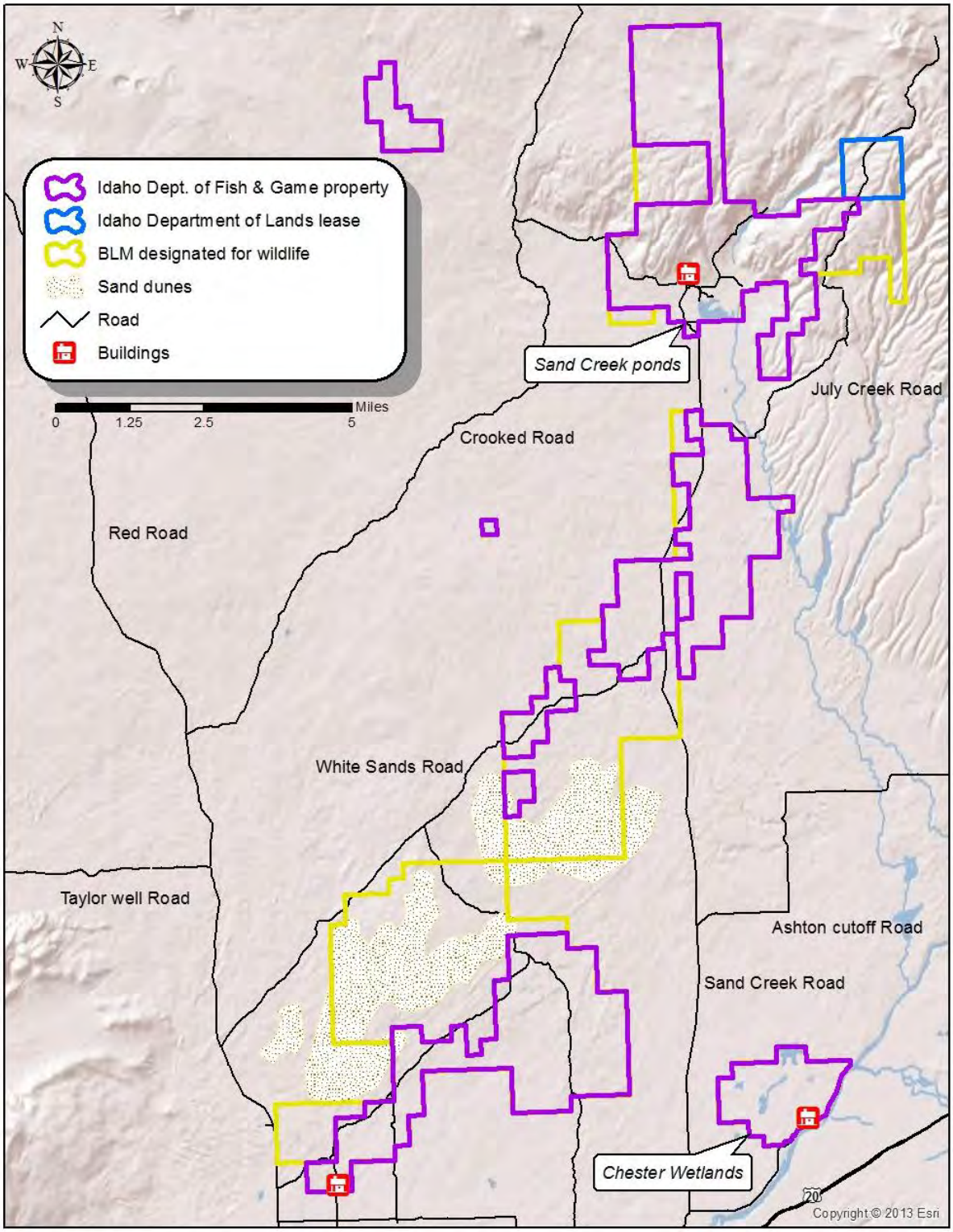

Figure 3. Map of Sand Creek Wildlife Management Area.

Management Issues

Upper Snake Region habitat staff presented information on the WMAs in the Upper Snake Region and the preparation of the 2014 WMA plans at two big game season setting public meetings in February and March of 2012. These meetings were held in Idaho Falls and Rexburg. We created displays highlighting the WMAs, the planning process, and management issues that we had identified prior to the meetings. We encouraged attendees to give us written comments regarding management of the WMAs and any issues they felt that we need to address in our future management. We directed attendees to the online survey available on the Department website (described below) and provided a form at the meetings for written comments.

Throughout 2012 (Feb-Dec), an online survey form was available on the Department website. The survey allowed participants to answer questions and provide feedback on WMA management statewide and the management of specific WMAs. Upper Snake Region habitat staff sent >600 emails to neighbors, cooperators, legislators, sportsmen's groups, land management agencies and concerned citizens inviting them to take the online survey. A news release was issued in the Idaho Falls newspaper inviting the public to take the online survey.

Additionally, SCWMA staff, with significant help from volunteers, conducted on-site surveys from June-October of 2012 at the Sand Creek ponds. These paper surveys included similar questions to the online survey and provided an opportunity for users to suggest ways to improve management of SCWMA. Surveys were delivered to users in person by volunteers and were handed out opportunistically by SCWMA staff during non-designated survey times.

Efforts to get public opinions from paper surveys were focused at the ponds for a number of reasons. The greatest and most consistent use of SCWMA is at the ponds. There is a history of high outdoor-based recreation with camping, wildlife viewing, fishing and access to other public lands available during spring, summer, and fall. Concurrently, this area is where most of our land management practices occur for wildlife. Outside of this area, the majority of the WMA is sage-steppe habitat that is linear in shape. Sand Creek WMA consists of eight isolated tracts of Department-owned land that is interspersed with other public land management agencies and boundary lines are not clearly defined. It is approximately 22 miles in length from the southernmost point to the northernmost point, with numerous access points. Outside of the hunting season, most of the users accessing the WMA are there for other forms of outdoor-based recreation. Observations and field contacts indicate people use the area for target shooting, solitude, drinking, partying, ATV riding, and exercise, etc.

We received 154 online surveys specific to SCWMA and 31 on-site paper surveys from SCWMA users during 2012. Of these completed surveys, 38 (25%) included suggestions for improved management of SCWMA. Additional information gathered from these surveys on visitor use trends is available in Appendix IV.

In addition to management issues identified by the public during these survey processes, Department staff also identified management issues specific to SCWMA. The following is a list of all SCWMA management issues identified by members of the public or Department staff. The issues identified by the public were grouped, based on similarity, into three general categories: Habitat Management, Wildlife Management, and Public Use Management. Similar comments were then combined to form management issue statements under each category. In the section below, we summarize each management issue and discuss some potential management options on SCWMA. Not all comments received are within the scope of these plans. For instance, WMAs have no influence on how wolves or other predators are managed. Those are decisions made by the Commission, Director, and Wildlife Populations staff. We also have little control over programs such as the pheasant release program. In instances where the comments are outside the jurisdiction of the plan, the comments have been forwarded to the appropriate entity for consideration. Our responses below are not intended as a rebuttal to the opinions expressed by the public. Instead we have endeavored to be transparent and explain why we can or cannot act upon each idea.

Issues Identified by the Public

Habitat Management (19% of public comments)

1. **Improve or restore more habitat on SCWMA (12 comments).**

   Discussion: All of the comments associated with this management issue described methods that we should use to improve habitat (i.e., development of more food plots, convert fields to native vegetation, allow grazing, forest management, protect big game winter range). Providing high quality wildlife habitat is the primary overarching goal of SCWMA. The Management Program we have outlined in the following section is designed to achieve this goal for the species identified in these comments, and others, using many of the methodologies identified by the public.

Wildlife and Fish Management (21% of public comments)

1. **Increase fish numbers and size (5 comments).**

   Discussion: Sand Creek WMA provides fishing opportunities at the Sand Creek ponds and is a popular destination for anglers. These ponds were created using Pittman-Robertson funds for waterfowl habitat. The operating budget for SCWMA does not provide any funds for management of fish. Fish management decisions on SCWMA are made by the Regional Fisheries Manager and these comments will be forwarded to him for his consideration.

2. **Increase ungulate big game populations (3 comments).**

   Discussion: There are multiple factors that affect population growth and decline in ungulate big game populations, but the availability of year-round, high quality habitat is typically the most important. Providing high quality ungulate habitat remains a foremost priority for

SCWMA. The majority of ungulates that winter on SCWMA spend their summers on public lands to the north and east of SCWMA. The Department recognizes that maintaining quality winter habitat on SCWMA is crucial, but that SCWMA is only part of the landscape that sustains healthy ungulate populations in the area. The Management Program in the following section describes a multi-scale approach we will take to address ungulate habitat issues on SCWMA and within the elk landscape identified in Figure 4.

3. **Reduce predation, particularly wolf predation, on big game (2 comments).**

   Discussion: Population management designed to influence regional predator-prey dynamics is outside the scope of this specific WMA management plan; however, each big game species, including the apex predatory species (i.e., wolf, black bear, and mountain lion), have species-specific management plans that address predation management. Additionally, the Department has the "Policy for Avian and Mammalian Predation Management" that describes the Department's policy on predation management and the process utilized to develop predation management plans for specific areas. With regard to wolf management specifically, SCWMA is in the Island Park wolf management zone which currently has a harvest season of 30 wolves (Aug 30 – Mar 31; 2 wolf tags per person). SCWMA staff will continue to coordinate with Department Wildlife staff in monitoring wolf activity in the SCWMA area.

4. **Continue to have the same hunting season opener for greater sage-grouse and Columbia sharp-tailed grouse (2 comments).**

   Discussion: Population management designed to manage hunting season time and length is the responsibility of the Wildlife Populations section and is outside the scope of this specific WMA management plan. Sand Creek WMA staff will continue to play a role in season setting by coordinating with Department Wildlife Populations staff in monitoring wild grouse populations in the SCWMA area.

5. **Release a variety of upland game birds on SCWMA (1 comment).**

   Discussion: Habitat on and surrounding SCWMA support healthy populations of Idaho's native upland species (greater sage-grouse, Columbian sharp-tailed grouse, and forest grouse). Wild populations of gray partridge and ring-necked pheasants can be found in the area; however, populations have self-regulated to current levels based on changing climate and available habitat. Currently, there are no plans by the Department to release more of these species on SCWMA or the surrounding area.

Public Use Management (60% of public comments)

1. **Allow more/less motorized access on SCWMA roads (9 comments).**

   Discussion: The majority of comments were directed towards access in general. One comment suggested better waterfowl hunting access on SCWMA, but was not specific to

where. Another stated they would like public access to the west side of the Chester wetlands. Three comments suggested no new motorized roads and improving enforcement of the cross country travel rule.

There are no current plans to increase motorized travel on SCWMA, and enforcement of current motorized travel rules is a priority for the Department. Access to the Sand Creek ponds is all within a half mile of an open motorized road. There is a public access point to the west of the Chester wetlands that goes through private ground. We will continue to work with neighboring landowners to encourage them to allow public access. Within 3-5 years, there will be a travel management plan developed for BLM-managed lands which includes areas within the WMA boundary.

2. **Sand Creek WMA camping opportunities (7 comments).**

Discussion: One comment asked for additional fire rings. One comment asked for tent camping only beyond Blue Creek Reservoir and one comment did not like large groups using the area. Sand Creek WMA currently provides camping areas at the Sand Creek ponds for most of the year. Camping areas are not necessarily designated; however, where people camp is highly correlated to where camp fires are allowed. Current WMA rules allow for campfires in established fire rings or in elevated fire control structures. In addition, SCWMA staff mows the grassy areas around fire rings and other areas to encourage campers to camp in these areas. Special use permits are required for groups larger than 15 people. Sand Creek WMA staff recognizes this is an area where visitors can enjoy wildlife-based recreation and plan to address the needs for additional camping areas, group sizes and restrictions without impacting wildlife habitat.

3. **Provide better maps, signage, and boundary marking of SCWMA (6 comments).**

Discussion: Sand Creek WMA staff agrees that improved maps, signage, and boundary marking would be beneficial to SCWMA users. The public should be aware that vandalism and theft of signs routinely thwart this management objective and signs are costly to replace. We have included strategies in the Management Program table of this Plan to improve these information resources.

4. **Improve maintenance of SCWMA roads (5 comments).**

Discussion: The majority of comments were directed toward rough conditions of the Sand Creek road which is maintained by Fremont County and not by the Department. The majority of the roads found on SCWMA are not maintained due to the sandy soil conditions of the area. The Department controls and maintains approximately one mile of road located at SCWMA headquarters and approximately three miles of road located at the Sand Creek ponds. The other Department-controlled roads are kept in a useable but low maintenance state (i.e., useable by high clearance four-wheel drive vehicles during most spring-fall weather conditions). Funds spent on additional road maintenance and/or improvement would come from funds that would otherwise be spent on WMA priorities such as habitat

improvements, facilities and equipment maintenance, and land acquisitions. At this time, SCWMA does not intend to divert additional funds away from these core priorities to increase road maintenance, but will continue to maintain SCWMA-controlled roads in a useable, low maintenance state.

5. **Increase enforcement/staff presence to enforce laws and curtail illegal activity (2 comments).**

   Discussion: One comment specifically identified a need for improved enforcement of littering laws while the other expressed an overall need for more enforcement presence. We agree that increased enforcement activity at SCWMA would be beneficial to the resource and the users of the WMA, but we also must operate within the funding and workload constraints of SCWMA staff and Department enforcement staff. Sand Creek WMA staff is currently working with enforcement personnel to utilize new technologies to improve our detection of illegal activities and will continue to work with enforcement staff to maintain a law enforcement presence, particularly during peak use periods (e.g., hunting season). We have also increased presence at the Sand Creek ponds during the summer with a volunteer camp host. A primary duty of the camp host is to provide a presence at the Sand Creek ponds on the weekends and holidays outside of normal Department work schedules. The camp host talks to visitors and helps to educate them on WMA rules. We will also be improving our signage throughout SCWMA and will highlight litter laws on this new signage.

6. **Allow ATVs at the Sand Creek ponds (2 comments).**

   Discussion: Current management at the Sand Creek ponds does not allow use of ATVs, motorcycles, or side by side vehicles. The purpose of this rule was to improve visitor experience. Motorized use at other campgrounds has increased erosion, noise, and dust pollution. Most visitors at the Sand Creek ponds agree with and appreciate the current motorized restriction rule. According to the paper survey taken at the Sand Creek ponds, 89% of visitors favored the current motorized restriction rule.

7. **Provide family picnic structures at the Sand Creek ponds (2 comments).**

   Discussion: The Sand Creek ponds currently provide opportunity for camping but few structures for those who want to picnic. Sand Creek WMA staff is working with the fishing access program to estimate cost and maintenance of tables to see if they are a possibility. Providing a pavilion for visitors can be very costly to build/buy and maintain. Currently these items are not in the budget for SCWMA, and other funds may need to be obtained to build such structures. Sand Creek WMA staff is willing to work with outside groups (i.e., eagle project or special interest group) to provide these structures and help in long term maintenance.

8. **Don't agree with watercraft restrictions and leash law (2 comments).**

   Discussion: Watercraft on bodies of water where waterfowl are nesting and foraging can impact animal behavior and displace them from important areas needed for survival and reproduction. The dog leash rule is to keep pets from wandering into nesting areas where they have the potential to disturb, destroy, or kill nesting birds. Currently, all WMAs within the Upper Snake Region, where waterfowl management is a priority, utilize similar restrictions (watercraft after July 15, dogs on leash unless actively hunting). These seem like reasonable restrictions to protect wildlife and promote the values for which SCWMA was created.

9. **Boat dock (1 comment).**

   Discussion: This comment was in association with the paper surveys from the Sand Creek ponds. All that was listed in the comment section was "boat dock", with no detail for where they would like to see another boat dock placed. The Sand Creek ponds have five bodies of water with two providing boat docks. Pond 1 has three boat docks and Pond 4 has two boat docks. Boat docks/fishing piers at the ponds are under the jurisdiction of the Regional Access Coordinator. This comment will be forwarded on to him.

10. **Provide a blind for photography purposes (1 comment).**

    Discussion: Current *Idaho Department of Fish and Game Lands and Access Areas Public Use Rules* state that it is prohibited to, "construct blinds, pits, platforms, or tree stands where the soil is disturbed, trees are cut or altered and artificial fasteners, such as wire, rope or nails are used. All blinds shall be available to the public on a "first-come - first-served" basis. Portable manufactured blinds and tree stands are allowed but may not be left overnight." Patrons, who wish, may request an exception to this rule through the Regional Habitat Biologist for SCWMA by filling out a special use permit. Permits are submitted to the Regional Supervisor for approval or rejection. There are no current permanent blinds found on SCWMA. Sand Creek WMA staff will work with interested parties to estimate feasibility, cost, and placement of permanent blinds to enhance the wildlife experience on SCWMA.

11. **Provide bike trails (1 comment).**

    Discussion: Currently there are no bicycle restrictions on SCWMA. There are approximately five miles of roads and trails at the Sand Creek ponds and approximately three miles of roads and trails at the Chester wetlands closed to motorized travel, but open to bicycling, hiking, and horseback riding.

Public Comments on Draft Plans

In April 2014, the draft WMA plans were made available to the public for comment. The comment period closed on June 10, 2014. Sand Creek WMA received input on the draft plan

from a total of seven individuals. Three strongly agreed with the way the plan was written and four agreed. None of the commenters had additional comments.

The Department received one comment from Idaho Conservation League. They were concerned with ensuring that each WMA plan considered the landscape in which it resides and non-consumptive wildlife uses. They had no comments specific to SCWMA. Significant portions of all WMA plans are dedicated to landscape scale planning. In fact, each focal species/habitat selected has an associated landscape. The SCWMA plan also incorporates wildlife viewing as a priority recreational pursuit. We believe that we have addressed these two issues very clearly.

Issues Identified by the Department

1. **Maintain open space, reduce loss of habitat, and identify constraints for wintering wildlife within the Sand Creek desert.**

   Discussion: Several flagship species and special status species occupy areas on and around SCWMA during critical winter months. The Egin-Hamer winter closure encompasses nearly 500 square miles of core winter and transitional habitat for a variety of species restricting human entry into the closure. Since the closure was approved in 1987, several key wintering areas for wildlife on private property are no longer available. Approximately 20,000 acres within the closure has been lost due to agriculture development, private fencing of a domestic elk farm, and human disturbance. It is important to identify the remaining key corridors within the winter range and work with private, federal, and state agencies to maintain habitat and reduce disturbance for wintering wildlife.

2. **There is a need to better understand the role SCWMA plays in greater sage-grouse ecology in the landscape.**

   Discussion: Greater sage-grouse have been deemed warranted for listing under the Endangered Species Act, but their listing has been precluded at this time due to higher priority species. Sand Creek WMA and the surrounding landscape have been identified as key greater sage-grouse habitat. Gathering new information on sage-grouse use in this key habitat area—seasonal movements and habitat selection, migratory behavior, and reproductive success—could help the Department identify site-specific actions to improve sage-grouse habitat on public and private property and ultimately the sage-grouse population in the SCWMA landscape.

3. **Balancing management of wildlife habitat with public recreation at the Sand Creek ponds.**

   Discussion: The Sand Creek ponds were created by the Department starting in the late 1950s and were not completed until the early 1970s. Federal funds from the Pittman-Robertson Act (intended for wildlife habitat) were used to construct Ponds 1-4 on the Blue Creek drainage to create open water and wetland habitat for a diverse group of wildlife species. The first recorded fish stocking of these water bodies was in 1968, when Ponds 1-3 were stocked. The

Sand Creek ponds are a popular area for people to go camping and recreate in the outdoors. One of the goals of SCWMA is to provide high quality wildlife-based recreational opportunities without impeding upon the primary goal of protecting high quality wildlife habitat. The challenge is to understand when wildlife-based recreation starts to impact wildlife populations that depend upon a secure high quality habitat that is present. Specific actions are addressed in the Management Program Table.

4. Human-bear conflicts at the Sand Creek ponds.

Discussion: The Sand Creek ponds are located at the mouth of the Blue Creek drainage at the base of the Big Bend Ridge of the Island Park caldera. Current studies indicate that this area is at the outer limits of the Yellowstone grizzly bear population. Grizzly bears marked with radio-collars have used this area seasonally, and grizzly bear tracks were confirmed below Blue Creek reservoir on the WMA in 2012. On July 29, 2013, an employee of the Wildlife Conservation Society was conducting vegetation surveys in conjunction with grizzly bear habitat near and on SCWMA. He was attacked by a collared grizzly bear on the boundary fence line of SCWMA and the U.S. Forest Service (USFS). The attack site was less than three miles from campers at Blue Creek reservoir. With a high concentration of human recreation in the area, it is important to educate users how to reduce the risk of an encounter with a grizzly bear. The Department will provide several food storage containers at selected campsites at the Sand Creek ponds and will instate the rule that campers are required to store food properly. In 2014, education will be implemented by the Department to educate the public on proper food storage and camping in grizzly country.

5. Ute ladies' tresses orchid management on Chester wetlands.

Discussion: In 2002, Ute ladies' tresses orchid (*Spiranthes diluvialis*) was identified in several locations at Chester Wetlands by the Idaho Conservation Data Center. The Ute ladies' tresses orchid is listed as a Threatened species throughout its range. The orchid is located throughout suitable habitat at Chester Wetlands and influences wetland vegetation management. A conservation and management plan for Chester Wetlands for Ute ladies' tresses was cooperatively developed with the U.S. Fish and Wildlife Service (USFWS) and includes periodic population and habitat monitoring; however, specific budget constraints within the current SCWMA operating budget limit the ability to monitor populations.

Sand Creek WMA Management Program

The Department is responsible for the conservation, protection, perpetuation, and management of all wildlife, fish, and plants in Idaho. Wildlife Management Areas enable the Department to directly affect habitat to maximize suitability for species in key areas and are an integral component in the Department's approach to fulfill its mandate in Idaho Code. Management to restore and maintain important natural habitats and create hyper-productive habitats that enhance carrying capacity for selected wildlife species remain key strategies on SCWMA. However, the most pervasive threats to WMA ecological integrity, such as noxious weeds, rural residential/commercial development, increased water diversion, and conflicting land uses on public lands, typically come from outside the WMA's boundary. Therefore, WMA managers must recognize and create opportunities to collaborate with adjacent landowners, expanding our collective conservation efforts for WMA-dependent wildlife.

We propose that an effective way to enable a broader influence over the future of SCWMA is through the use of Conservation Targets to guide management. Conservation Targets could be either a focal species or a habitat-type that benefits numerous species. According to Noss et al. (1999), focal species are those used by resource managers to determine the appropriate size and configuration of conservation areas. Conservation of species within landscapes used for other enterprises such as forestry, recreation, agriculture, grazing, and commercial development requires managers to determine the composition, quantity, and configuration of landscape elements required to meet the needs of the species present (Lambeck 1997). Since it is impractical to identify key landscape elements for all species dependent on SCWMA, a carefully selected suite of Conservation Targets can help provide for the conservation needs of many species. Additionally, identifying landscape-scale Conservation Targets across ownership boundaries helps address wildlife-related issues on SCWMA and creates a platform for conservation partnerships on the surrounding landscape.

The following six-step process was used to create the SCWMA management program described in this plan. Each of these steps is described in detail on the ensuing pages.

1) Summary of Management Priorities
2) Focal Species Assessment
3) Selection of Conservation Targets
4) Coverage Assessment of Selected Conservation Targets
5) Spatial Delineation of Conservation Target Landscapes
6) Creation of Management Program Table

Summary of Management Priorities

Sand Creek WMA was originally created to provide relief from depredation claims, specifically from the area's wintering elk herd. Since that time, The Department has acquired additional properties (Appendix IX) to protect summer, winter, and transitional range for a variety of wildlife species within the Sand Creek desert ecosystem. The SCWMA has no special funding

mechanisms associated with its operation and thus no external constraints are directing management priorities. However, legal mandates associated with the 2001 appropriation of federal funding for the State Wildlife Grants program guide the Department's management priorities. The U.S. Congress appropriated federal funds through the State Wildlife Grants program to help meet the need for conservation of all fish and wildlife. Along with this new funding came the responsibility of each state to develop a State Wildlife Action Plan (SWAP). The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (IDFG 2005*a*). The SWAP does not distinguish between game and nongame species in its assessment of conservation need and is Idaho's seminal document identifying species at-risk. Therefore, at-risk species identified in the SWAP, both game and nongame, are a management priority for the Department.

In addition to the biological goals of preserving, protecting, and perpetuating all fish and wildlife in Idaho, the Department also has a statewide goal of protecting and improving wildlife-based recreation and education. The Department's strategic plan, *The Compass*, outlines multiple strategies designed to maintain or improve both consumptive (e.g., hunting, trapping, fishing) and non-consumptive (e.g., wildlife watching) wildlife-based recreation opportunities across the state.

Taking the biological and funding resources of SCWMA into consideration, in concert with the foundational priorities of SCWMA and statewide Department priorities, the Department developed the following list of broad-scale SCWMA Management Priorities.

Management Priorities for Sand Creek WMA (in no particular order):

1. Big Game Habitat
2. Upland Game Bird Habitat
3. Waterfowl Habitat
4. Habitat for Nongame & Species with Special Designation
5. Wildlife-based recreation and education

Focal Species Assessment

This section of the SCWMA Plan is an assessment of various fish and wildlife species on SCWMA, referred to as focal species, in order to identify Conservation Targets to guide management. Focal species are comprised of two subsets: flagship or special status species. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or at-risk species identified by the Department in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005*a*) and key federal agencies. Only flagship and special status species that: 1) have been documented utilizing SCWMA lands, or 2) are likely to occur on SCWMA because they are found in the Henrys Fork of the Snake River watershed and utilize habitats found on SCWMA for a significant part of their life history were included in the focal species assessment.

Flagship species are popular, charismatic species that serve as symbols and catalysts to motivate conservation awareness, support, and action (Heywood 1995). Flagship species often represent a

landscape or ecosystem (e.g., Willow Creek watershed or foothills ecotone), a threat (e.g., habitat loss or climate change), organization (e.g., state government or non-government organization) or geographic region (e.g., protected area, Department Region or state; Veríssimo et al. 2009). Ungulate big game are an example of a group that fit the criteria as both focal and flagship species. In addition, they are a culturally and economically important species in Idaho and represent a founding priority for establishment of the SCWMA. Therefore, ungulate big game is an important flagship species group considered in the SCWMA assessment.

A principal limitation of the flagship species concept is that by focusing limited management resources on culturally and economically important species, more vulnerable species may receive less or no attention (Simberloff 1998). To overcome this limitation, we are explicitly considering a wide variety of at-risk species (Groves 2003); yielding a more comprehensive assessment that includes culturally and economically important species (e.g., mule deer and elk) along with formally designated conservation priorities (e.g., bald eagle and sage-grouse). Categories of at-risk vertebrate species considered in this assessment are: 1) species designated as Idaho Species of Greatest Conservation Need (SGCN); 2) species designated as Sensitive by Region 4 (Intermountain Region) of the USFS; and 3) species designated as Sensitive by the Idaho State Office of the BLM.

The Idaho SGCN list was developed as part of the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005*a*). The Comprehensive Wildlife Conservation Strategy document is now referred to as the SWAP. Idaho's plan serves to coordinate the efforts of all partners working toward conservation of wildlife and wildlife habitats across the state.

Although the Idaho SWAP SGCN list includes most of the special status species identified by land management agencies in Idaho, some species not listed as SGCN are considered priorities by other agencies. The Sand Creek ecosystem is a mosaic of land ownerships including private lands, lands managed by the IDL, USFS, BLM, and the Department. The BLM and USFS are key partners in this landscape as their management actions directly influence ecological function on SCWMA. To maximize coordination, communication, and partnership opportunity we include both USFS and BLM Sensitive Species in our biodiversity assessment.

United States Forest Service Sensitive Species are animal species identified by the Intermountain Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service Manual (FSM 2670.22) directs the development of sensitive species lists. This designation applies only on USFS–administered lands.

Bureau of Land Management Sensitive Species are designated by State Directors in cooperation with the State fish and wildlife agency (BLM manual 6840). The Idaho State BLM Office updated these designations in 2003. The sensitive species designation is normally used for species that occur on BLM public lands and for which BLM has the capability to significantly affect the conservation status of the species through management.

The Intermountain West Joint Venture (IWJV) also maintains a list of priority species. The IWJV has identified 40 priority species from which to base conservation planning.

Information on species status, occurrence, beneficial management/conservation actions and threats were derived through consultation with Department staff, occurrence records in the Department's Idaho Fish and Wildlife Information System database, consultation with various BLM and USFS species lists, and species summaries provided in the Idaho SWAP.

Suitability of assessed species as a focal species were estimated by Upper Snake Regional Habitat and Diversity staff based on descriptions in Groves (2003) and USFWS (2005). Potentially suitable focal species may include species with one or more of the following five characteristics:

- *Species with high conservation need*
- *Species or habitats that are representative of a broader group of species sharing the same or similar conservation needs*
- *Species with a high level of current program effort*
- *Species with potential to stimulate partnerships*
- *Species with a high likelihood that factors affecting status can realistically be addressed* (USFWS 2005)

Table 1. Status of flagship and special status species on Sand Creek WMA, including their potential suitability as a focal species for management.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
Mammals					
Mule deer (*Odocoileus hemionus*)	Flagship	Sand Creek WMA provides crucial winter and transitional range for mule deer from game management units 60,60A, 61 and portions of 62A. In recent years, SCWMA and the immediate vicinity has provided winter habitat for mule deer.	Transitional habitats through unprotected private lands and crossing Highway 20 are potential threats to mule deer migration onto SCWMA. Scattered private inholdings within the big game winter closure area are a potential threat to future habitat integrity. Wild or prescribed fire has the potential to undermine winter thermal cover. Livestock fencing may reduce mule deer access to important winter range areas.	Protect existing winter range; support management that increases aspen on the landscape; work collaboratively with IDL, BLM and USFS to maintain thriving mule deer herds on the landscape. Provide technical assistance to private landowners to expand tolerance and available habitat on private lands; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat. Identify key private parcels to protect to maintain landscape scale habitat integrity. Identify key crossing areas on Highway 20.	***Potentially suitable as a focal species.*** Mule deer are a foundational priority for the creation of SCWMA and the Department has data on their use of the WMA and the surrounding landscape. Mule deer are a culturally and economically important wildlife species in eastern Idaho and are a species with a good potential for developing conservation partnerships.
Elk (*Cervus elaphus*)	Flagship	Sand Creek WMA provides crucial winter and transitional range for elk from game management units 60,60A, 61 and portions of 62A. In recent years SCWMA and the immediate vicinity has provided winter habitat for elk.	Transitional habitats through private lands and crossing Highway 20 are potential threats to elk migration onto SCWMA. Conflicts with agricultural producers including impermeable fencing, the potential for brucellosis transmission and depredations. Domestic elk farms have altered and reduced available winter range and provide an opportunity for disease transmission. Rural residential/commercial development; habitat fragmentation from conflicting land uses on adjacent public and private lands.	Protect and improve existing winter range; work collaboratively with IDL, BLM and USFS to maintain adequate elk security cover; provide technical assistance to private landowners to reduce the likelihood of brucellosis transmission, expand tolerance and available habitat on private lands; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat. Identify key private parcels to protect to maintain landscape scale habitat integrity. . Identify key crossing areas on Highway 20.	***Potentially suitable as a focal species.*** Elk are a foundational priority for the creation of SCWMA and the Department has data on their use of the WMA and the surrounding landscape. Elk are a culturally and economically important wildlife species in eastern Idaho and are a species with a good potential for developing conservation partnerships.
Moose (*Alces alces*)	Flagship	In general, moose are common within this landscape. The Sand Creek Desert, including SCWMA, provides unique and important winter habitat for moose, typically sheltering hundreds of moose. In 1998 the Department counted 584 moose wintering in the greater Sand Creek area	Transitional habitats through private lands and crossing Highway 20 are potential threats to moose migration onto SCWMA. Loss and degradation of riparian habitat; rural residential/commercial development; regional disease concerns; depredation conflicts with private landowners, impermeable fencing are all threats to long-term moose viability on the landscape.	Support management that increases high quality shrub-steppe/bitterbrush and riparian habitat on the landscape; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of transitional and winter habitat; provide technical assistance to private landowners to expand tolerance and available habitat on private lands; contribute to Department regional disease monitoring efforts in the greater Sand Creek landscape. Identify key private parcels to protect to maintain landscape scale habitat integrity. Identify key crossing areas on Highway 20.	***Potentially suitable as a focal species.*** Moose are a relatively abundant animal in the Sand Creek landscape and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs.
Myotis Guild	SGCN; BLM Sensitive	Long-eared myotis (*Myotis evotis*), Long-legged myotis (*Myotis volans*), western small-footed myotis (*Myotis ciliolabrum*), Yuma myotis (*Myotis yumanensis*).	Low reproductive potential. Roost sites tend to be colonial, and may be limiting in some areas; habitat use rates and, at the population level, survival and recruitment	Minimize broad-spectrum insect control activities that reduce prey base. Where possible, document natural roosting habitat such as cliffs. Create day and night roosting	***Unsuitable as a focal species.*** Unknown scope of occurrence and composition of guild on SCWMA. Most prevalent threats are not likely to be addressed by SCWMA management.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
		Western small-footed myotis known to hibernate in lava tube caves on the adjacent Sand Creek Desert. Also, potential roosts for other Myotis spp. within the Sand Creek desert and adjacent forest lands outside SCWMA boundary. Sand Creek WMA likely provides good migration-staging habitat and summer foraging habitat for a variety of bat species.	rates likely track aerial insect prey availability. Accessible surface water also likely affects local distribution and abundance.	habitat through installation of bat boxes. Deploy escapement devices on troughs and water tanks, and develop natural and artificial pooled water sources. Track with ongoing efforts of the East Idaho Bat Working Group to identify opportunities to mitigate bat mortalities from wind energy development.	
Townsend's Big-eared bat (*Corynorhinus townsendii*)	BLM Sensitive, SGCN	Regionally important hibernacula and roosts within the Sand Creek desert outside the SCWMA boundary. Sand Creek WMA likely provides good migration-staging habitat and summer foraging habitat for Townsend's big-eared bat.	The primary issue facing this species is disturbance and destruction of roost sites through mine closures, renewed mining, recreational caving, and other roost-disturbing activities.	Document state population trends. Protect/restore year-round roosting options by working with land managers. These activities are currently being undertaken by the East Idaho Bat Monitoring Initiative of the Idaho Bat Working Group.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback. Townsend's big-eared bat primary use of SCWMA is likely foraging over wetland areas, therefore, most prevalent threats are not likely to be addressed by SCWMA management.
Canada lynx (*Lynx canadensis*)	Threatened, ESA	Population trends within Idaho are unknown; however, Canada lynx inhabits montane and subalpine coniferous forests which exist on SCWMA and surrounding area. Eastern Idaho is not known to support a lynx breeding population.	Habitat degradation, fragmentation, and loss are the primary threats.	Information is needed regarding the current status of Idaho populations. Timber management practices designed to maintain or enhance habitat for the snowshoe hare and other prey may help sustain lynx populations. Management practices, such as prescribed burns, that increase habitat complexity at landscape scales by creating a variety of seral stages, may also improve habitat. Management road densities and human disturbance is needed in occupied habitat. Trapper education that addresses incidental take is currently addressed by many state and federal wildlife agencies.	***Unsuitable as a focal species.*** Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Grizzly bear (*Ursus arctos*)	Threatened, ESA	Occurrences of grizzly bears are documented on SCWMA. Best habitat is limited to a small area of SCWMA within the transitional habitat of montane forests to sagebrush steppe and is part of the Greater Yellowstone ecosystem.	Conflicts with humans including recreation, and direct human encounters pose the greatest threat to grizzly bears within this area. Habitat loss (security cover) and genetic isolation are also threats.	Education to the public focusing on recreating safely in grizzly bear habitat, understanding current grizzly bear range and ecology. Implement food storage strategies at campsites at the ponds	***Unsuitable as a focal species***. Current information on distribution in the project area is continuing with cooperation with the USFS; however, occurrences on SCWMA are uncommon limiting potential of beneficial management practices on SCWMA.
North American wolverine (*Gulo gulo*)	Proposed threatened, listing ESA	No documented occurrence on SCWMA. However, there are numerous records to the north in the Centennial Range and Shotgun Valley; and to the east on National Forest Lands and Yellowstone National Park. It is likely that SCWMA is utilized to some degree by wolverines travelling between high elevation habitats in region.	Wolverine denning is tied to late spring snowpack. Loss of suitable habitat due to climate change is a principal threat in the ESA listing proposal. Other threats are disturbance and fragmentation within existing high elevation habitats (particularly breeding) and maintaining some level of connectivity to these areas across expansive low elevation habitats.	Minimize fragmentation at the landscape scale within SCWMA and vicinity to enable wolverine movements between high elevation habitats.	***Unsuitable as a focal species***. Potential use and distribution within the project area is poorly understood. However, occurrences on SCWMA are uncommon limiting potential of beneficial management practices on SCWMA.
Wyoming Ground squirrel (*Urocitellus elegans*)	SGCN, BLM Sensitive	Documented occurrence in the vicinity of SCWMA. Suitable habitat exists on the SCWMA in shrub and grassland habitats.	Habitat loss and degradation	Conservation actions should focus on preserving areas of intact, un-fragmented shrub steppe habitat, particularly in more mesic situations. Surveys are needed to	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
				determine the current distribution and status of this. A statewide effort is particularly needed to monitor population trends for native ground squirrels. Habitat protection and restoration efforts may be needed where populations are small or declining. Monitor recreational shooting of ground squirrels within the range of the subspecies *S. mollis artemisiae*. Public education and enforcement of these regulations is needed.	
Piute Ground squirrel (*Urocitellus mollis*)	SGCN,	Documented occurrence in the vicinity of SCWMA. Suitable habitat exists on the SCWMA in shrub and grassland habitats.	Habitat has been altered through livestock grazing, agricultural development, invasive plants, and alteration of the fire regime to more frequent and severe range fires	Surveys are needed to determine the current distribution and status. A statewide effort is particularly needed to monitor population trends for native ground squirrels. Habitat protection and restoration efforts may be needed where populations are small or declining. Monitor recreational shooting of ground squirrels within the range of the subspecies *S. mollis artemisiae*. Public education and enforcement of these regulations is needed.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Idaho Pocket gopher (*Thomomys idahoensis*)	SGCN	Undocumented on SCWMA. Presence is possible based on available habitat.	Population distribution in Idaho is mostly undocumented. However, loss of shrub steppe and grassland habitats in the range of this species is likely a factor affecting conservation.	The primary recommended actions in Idaho's SWAP are documenting population distribution and initiating efforts to better document habitat associations.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Birds					
Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus*)	Flagship; BLM Sensitive, USFS Sensitive, SGCN	Significant regional concentrations of sharp-tailed grouse depend on SCWMA and surrounding lands.	Loss, fragmentation or degradation of breeding habitat. Sharp–tailed grouse often rely on riparian areas or deciduous hardwood shrub stands during winter, although agricultural fields may be used in milder conditions. Much of this winter habitat occurs on private lands surrounding SCWMA.	Identify, protect and maintain key breeding and wintering habitats, avoid disturbance to breeding complexes (lands within 9.2 km radius of occupied leks), monitor breeding populations. Work with adjacent private landowners to encourage deferred haying operations, and maintenance or enhancement of riparian and mountain brush habitats. Identify key private parcels to protect to maintain landscape scale habitat integrity.	***Potentially suitable as a focal species*.** Meets all criteria for focal species designation. Sharp-tailed grouse have large home ranges, are capable of extensive movements, and use a mosaic of habitats within SCWMA and vicinity.
Greater Sage-grouse (*Centrocercus urophasianusa*)	Flagship; Candidate for listing under ESA, BLM Sensitive, USFS Sensitive, SGCN, IWJV	Sand Creek WMA and the Sand Creek Desert are historic yearlong habitat for greater sage-grouse and support over 100 leks. The BLM and the Department ranked this area as *Key Habitat* (areas of generally intact sagebrush {2010 Idaho Sage-grouse Habitat Planning Map}).	Loss, degradation, and fragmentation of sagebrush habitat are the major threats to the greater sage–grouse in Idaho. Scattered private inholdings within the Sand Creek Desert area are a potential threat to future habitat integrity. Other habitat degradation factors relevant in this area include: alteration of historical fire regimes, conversion of sagebrush habitat, water developments, use of herbicides and pesticides, invasive species, and recreation.	Identify, protect, and maintain existing sagebrush seasonal habitats, particularly breeding and winter habitats. Identify new lek/breeding habitats in the SCWMA vicinity. Identify key private parcels to protect to maintain landscape scale habitat integrity. Where possible, restore damaged and lost sage-steppe habitat. Manage projects to significantly reduce fragmentation of existing sagebrush habitats and to reduce human disturbance.	***Potentially suitable as a focal species.* The SCWMA is a key landscape for greater sage-grouse conservation.** Sage-grouse have a high conservation need and are representative of a group of species sharing similar conservation needs. They have a high level of current Department program effort and are a species with potential to stimulate partnerships.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
Trumpeter Swan (*Cygnus buccinator*)	Flagship, SGCN, BLM Sensitive, USFS Sensitive, IWJV	Trumpeter swans nesting at SCWMA are part of the struggling tri-state flock of the Rocky Mountain Population (RMP). Sand Creek WMA is one of approximately 20 consistently active nest sites in Idaho. Trumpeter swans were first documented nesting on SCWMA in 1973 and swans have successfully nested on Ponds 2, 3 and 4. Nesting also occurs on Swan Pond, located at the Rick's pasture segment of SCWMA. There is no documentation of nesting trumpeter swans at the Chester wetlands; however, trumpeter swans are documented using the area each year. The Henrys Fork River is one of the most important wintering areas for RMP population.	Managing disturbance at nest sites or potential nest sites is likely an important factor to nest establishment and success. Most successful nest sites in Idaho occur on managed, protected wetlands. Loss and degradation of wetland and riparian habitat is also a prevalent threat to breeding swans. In winter, key mortality factors are power line strikes, starvation during cold weather, and illegal shooting.	Reduce human disturbance at known and potential nest sites and brood-rearing habitat. Protect and restore wetland/riparian habitat for breeding and brood-rearing trumpeter swans. Document/monitor brood locations & nest success on SCWMA, including nesting/ brooding locations. Manage pond drawdowns to maximize preferred aquatic vegetation abundance. Mark power lines near rivers, known foraging areas and travel routes. Continue to document new winter field feeding areas.	***Potentially suitable as a focal species.*** The Henrys Fork of the Snake River and its tributaries are important winter habitat for migrating swans and important breeding/brooding habitat for local populations. Trumpeter swans are a common yearlong animal in the Sand Creek landscape and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs. They are designated a focal species for wetland conservation by the IWJV.
Breeding Waterfowl	Flagship; SGCN	Trumpeter swan, Canada goose, mallard, American widgeon, gadwall, northern shoveler, northern pintail, blue-winged teal, cinnamon teal, canvasback, redhead, ring-necked duck, lesser scaup, bufflehead, barrow's goldeneye, hooded merganser, ruddy duck	Human disturbance during the nesting and brood-rearing period is a concern. Also, given the semi-arid landscape surrounding Chester Wetlands and Sand Creek Ponds, maintaining optimal habitat at Department-managed wetlands is crucial to maximizing waterfowl production. Cattail establishment or expansion is a threat to optimal brood-rearing habitat.	Utilize seasonal closures to protect nesting waterfowl. Manage for hemi-marsh with diverse vegetation types. Maintain stable spring early summer water levels (in managed wetlands) to minimize nest loss and maintain stable brood-rearing habitat. Implement a disturbance regime to manage for a beneficial wetland plant mosaic that includes sedges, spikerushes and bulrush; and avoids development or perpetuation of cattail stands. Where possible, utilize late-season partial drawdowns to maximize macrophyte production. Utilize shallow marsh-management (late spring-summer drawdown, fall flooding) to promote food plants with high nutrition value to migratory waterfowl.	***Potentially suitable as a focal species.*** Breeding waterfowl meet all focal species criteria. Habitat conditions that maximize benefits to duck broods will benefit most species breeding in managed wetlands. Some wetlands at SCWMA can also be managed to enhance conditions for migratory waterfowl.
Wilson's Phalarope (*Phalaropus tricolor*)	SGCN	Breeds and utilizes SCWMA wetlands as transitional habitat.	Loss of freshwater habitats. Human disturbance during the nesting and brood-rearing period is a concern.	Utilize seasonal closures to protect nesting waterfowl. Manage for hemi-marsh with diverse vegetation types. Maintain stable spring early summer water levels (in managed wetlands) to minimize nest loss and maintain stable brood-rearing habitat. Implement a disturbance regime to manage for a beneficial wetland plant mosaic that includes sedges, spikerushes and bulrush; and avoids development or perpetuation of cattail stands. Where possible, utilize late-season partial drawdowns to maximize macrophyte production. Also, given the arid landscape surrounding Chester Wetlands and Sand Creek Ponds, maintaining optimal brood-rearing habitat at Department-managed wetlands is crucial to maximizing	***Potentially Suitable as a Focal Species.*** Wilson's Phalarope require well-managed uplands adjacent to wetland/marsh habitats to breed successfully. Their habitat needs represent many other species dependent on SCWMA wetlands. However, the extent of breeding on SCWMA is not well-documented and would require substantial initial effort to better understand their occurrence context on SCWMA lands.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
				benefits to phalaropes.	
Sandhill Crane (*Grus canadensis*)	SGCN; IWJV	Sandhill cranes in SCWMA and vicinity are part of the Rocky Mountain Population (RMP). Sand Creek WMA provides breeding habitat for sandhill crane. Sand Creek ponds and Chester wetlands provide important breeding, foraging and roosting habitat for cranes.	Greatest threat to RMP cranes is loss of migration-staging habitat. However, loss and degradation of wetland/riparian breeding habitat is also an issue.	Protect and restore wetland/riparian habitat for breeding sandhill cranes. Support maintenance of hunting closure on Chester Wetlands during the September sandhill crane season to protect secure roosting habitat.	***Potentially suitable as a focal species.*** Meets all criteria for focal species designation. Sandhill cranes are an umbrella species for wetlands and associated uplands and were chosen as a focal species for intermountain wetland bird conservation by the IWJV.
Long-billed Curlew (*Numenius americanus*)	SGCN; IWJV	The Sand Creek Ponds area and adjacent private lands support a small concentration of breeding Long-billed Curlew. Also, the greater Sand Creek Desert (including SCWMA) is identified by Department staff as a breeding area of moderate regional significance (approximately 25 pairs nesting). This includes scattered nesting in sage-dominated uplands and semi-colonial pockets on irrigated agricultural lands.	The greatest threat to long-billed curlew in Idaho is loss of habitat. Conversions of grasslands to croplands, residential development and increasing recreational use have all resulted in losses of suitable habitat in Idaho. Some agricultural practices are beneficial to curlew (i.e., moderate grazing, flood irrigation). However, if scattered private inholdings within the greater Sand Creek area, currently managed for agriculture, were converted to residential or other development, then curlew breeding habitat would be impacted.	Continue to Identify curlew nesting and brood-rearing areas on SCWMA and vicinity. Protect nesting areas from fragmentation and human disturbance from approximately mid-April to mid-June Identify key private parcels to protect to maintain landscape scale habitat integrity.	***Potentially suitable as a focal species.*** The Sand Creek Desert and SCWMA is identified by the Department as a regional priority for long-billed curlew conservation. This species requires large undeveloped areas with scattered mesic habitats for brood-rearing. Other priority species have similar habitat requirements in this landscape.
Brewer's Sparrow (*Spizella breweri*)	BLM Sensitive; SGCN; IWJV	Brewer's sparrow is a common breeder in sagebrush habitat within SCWMA and vicinity.	Shrub steppe obligate species, closely associated with big sagebrush. Habitat destruction and degradation in sage steppe are the primary threats to Brewer's sparrow populations.	Conservation actions should focus on preserving areas of intact, un-fragmented shrub steppe habitat.	***Potentially suitable as a focal species.*** Brewer's sparrow is a sagebrush obligate and representative of sagebrush-dependent species sharing similar conservation needs. Unqualified scope of occurrence on SCWMA would require preliminary work to determine the extent of breeding.
Bald Eagle (*Haliaeetus leucocephalus*)	SGCN; USFS Sensitive	Sand Creek WMA is adjacent to the North Fork Snake River, one of the most important bald eagle breeding areas in the GYE. Sand Creek WMA likely provides important wintering habitat for both resident and nonresident eagles.	Perhaps the greatest threat to bald eagles in Idaho is disturbance during the nesting period from activities such as forestry, human recreation, and construction projects. Shooting, poisoning, and electrocution are also significant threats in the Upper Snake Region, Idaho.	Population is recovered in the Upper Snake Region, Idaho. Nest monitoring should continue. Disturbance around nest sites should be minimized or avoided altogether, especially during late–winter/early–spring when eagles are initiating territory establishment and breeding activities.	***Potentially suitable as a focal species.*** Bald eagle requirements for security during the nesting season might serve as a broad indicator of overall WMA habitat security. However, beyond nesting requirements, they are a generalist that may not be the best indicator of habitat function.
Northern Goshawk (*Accipiter gentilis*)	SGCN, USFS Sensitive, BLM Sensitive	Goshawk nesting is documented on SCWMA, although the current nesting status is unknown. Suitable breeding and foraging habitat occurs in forested habitat north of the Sand Creek Ponds. Current CTNF management recommendations for northern goshawk include identifying a foraging area around documented nests (approximately 6,000 acres). Therefore, SCWMA likely provides foraging habitat for goshawks nesting on adjacent National Forest lands.	Goshawks are considered sensitive to large-scale changes to forested habitats associated with timber harvesting, livestock grazing, fire suppression, and drought (Reynolds et al. 1992).	Work with CTNF biologists to update local status of nesting goshawks in the SCWMA landscape. Maintain forested habitat on the margins of SCWMA in a variety of vegetation structure stages. This will provide quality habitat for goshawk prey species and enhance foraging opportunities for goshawks (See Reynolds et al. 1992 for specific recommendations).	***Potentially suitable as a focal species.*** Management recommendations for northern goshawk are considered a good surrogate for managing forest species diversity (Reynolds et al. 1992). However, there is limited information on current utilization of SCWMA habitats by goshawks potentially nesting on SCWMA or on adjacent USFS lands.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
Foraging Waterbird Guild	SGCN; BLM Sensitive; USFS Sensitive; IWJV	Many waterbird species utilize SCWMA and adjacent aquatic habitats as they forage during migration or during the breeding season from nearby colonies or other breeding areas. Sand Creek WMA provides foraging habitat to; common loon, hooded merganser, Clark's grebe, red-necked grebe, American white pelican, great egret, snowy egret, cattle egret, black–crowned night heron, Wilson's phalarope, franklin's gull, Caspian tern, Forster's tern, black tern	Threats to most Idaho waterbirds are not related to the use of transitional habitat but are related to maintenance of nesting breeding habitat (e.g., Caspian tern, trumpeter swan) and wintering habitat (northern pintail).	Better characterize the importance of SCWMA to the transitional waterbird guild by quantifying occurrence/use during ice free periods on Chester wetlands and Sand Creek ponds. Evaluate the impacts of early spring recreation on the transitional waterbird guild. Manage for hemi-marsh with diverse vegetation types to accommodate varied species. Implement a disturbance regime to manage for a beneficial wetland plant mosaic that includes sedges, spike-rushes and bulrush; and avoids development or perpetuation of cattail stands. Where possible, utilize late-season partial drawdowns to maximize macrophyte production.	***Unsuitable as a focal species***. Presence of waterbird guild species is primarily limited to transitional use of ice free conditions on SCWMA and ephemeral wetlands on surrounding private property. Due to available habitat and current land use limitations near SCWMA this is unlikely to change in the foreseeable future.
Prairie Falcon (*Falco mexicanus*)	BLM Type 3	There are no known documented active prairie falcon nests on or near the immediate vicinity of SCWMA. Prairie falcons are periodically seen foraging on the SCWMA.	Habitat loss from rural-residential development and large-scale agricultural development adversely impacts prairie falcons particularly in areas where ground squirrels are important forage species.	Enhancement/maintenance of steppe and grassland habitats (and activities that benefit ground squirrels, rodents and small upland birds) will benefit foraging prairie falcons.	***Unsuitable as a focal species.*** Prairie falcons use SCWMA for occasional foraging. Whereas they will benefit from viable shrub-steppe and grassland habitat, their utilization of the WMA is not such that it will provide valuable management feedback.
Swainson's Hawk (*Buteo swainsoni*)	SGCN	In general, Swainson's hawk utilization of SCWMA is poorly documented. However, they are a likely breeder and may also utilize SCWMA habitats during migration.	Main threats are vulnerability of this species as it congregates in large numbers during migration and on the wintering grounds (e.g., Argentina). On breeding grounds, conversion of native grasslands to crops can degrade or eliminate nesting habitat. Development of wind farms may cause direct mortality if migrating hawks collide with turbines during spring and fall migration.	Maintain and/or restore native grasslands in order to retain adequate foraging and nesting habitats. Avoid disturbance to nest trees during breeding. Migration corridors should be identified and important stopover habitat protected.	***Unsuitable as a focal species***. Occurrence context on SCWMA does not reflect the main threats to Swainson's hawk (e.g., vulnerability on migration and wintering grounds). Limited and un-quantified seasonal occurrence on SCWMA limits potential management feedback at the focal species scale.
Great Gray Owl (*Strix nebulosa*)	USFS Sensitive	Great gray owl nesting is documented on SCWMA, although the current nesting status is unknown. Suitable breeding and foraging habitat occurs in forested habitat north of the Sand Creek Ponds.	Habitat loss and fragmentation through timber harvest and development are the primary threats facing Great Gray Owl populations. Other threats include fire suppression (leading to forested-stand density increases and conifer encroachment into meadows) (Williams 2012).	Retain beneficial habitat features at the landscape-level; particularly open areas for foraging adjacent to stands of mature or old-growth trees for nesting and roosting. When implementing forest management, limit timber harvest unit sizes; utilize variable harvest patch sizes or timber harvests with irregular borders to increase forest edge area; retain forested corridors between cutting units; retain forested stands around nest sites or potential nest sites; and retain hunting perches (large trees, large snags, or artificial platforms) in harvest patches. Protect and maintain existing nest sites; minimize disturbance around nest sites during the breeding season (Williams 2012).	***Unsuitable as a focal species.*** Limited information on distribution in the project area. Unknown distribution limits potential management feedback.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
Short-eared Owl (*Asio flammeus*)	SGCN	Suitable breeding and foraging habitat is present on SCWMA and immediate vicinity and short-eared owls are likely breeders in this landscape. Species is known to be nomadic; therefore suitable habitat may be unoccupied in some years.	As ground-nesters (often in loose colonies), the short-eared owl is particularly vulnerable to habitat loss and degradation, and human disturbance. Residential, commercial, transportation, utility, and agricultural development of suitable nesting habitats are key factors in local short-eared owl population declines. Timing of agricultural activities such as tilling, mowing, burning, etc. can adversely affect short-eared owls breeding in agricultural areas. Because of their low-flying hunting technique and colonial tendencies, populations of short-eared owls in proximity to roads are potentially subject to high mortality due to vehicle collisions.	This species benefits from any actions or projects that protect, enhance, or restore potentially suitable foraging and breeding habitats. Projects designed to benefit other grassland and shrub-steppe species (e.g., sage-grouse sharp-tailed grouse, mule deer) also will benefit short-eared owls. Monitoring for use of agricultural lands prior to ground disturbing actions also would benefit the short-eared owl.	***Unsuitable as a focal species***. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area.
Flammulated Owl (*Psiloscops flammeolus*)	SGCN; USFS Sensitive; IWJV	Flammulated owls have been documented on Big Bend Ridge near SCWMA. Flammulated owl habitat exists on the margins of SCWMA within montane forests and on adjacent USFS lands.	Forest practices that remove large-diameter Douglas-fir, create extensive even-age stands, and removes snags reduce multiscale habitat parameters required by this species. Fire suppression favors an undesirable high-density vegetation condition that reduces foraging and nesting habitat.	Supporting forest management that strives to maintain fire as a (prescribed or natural) mechanism for forest succession is beneficial.	***Unsuitable as a focal species***. Unknown distribution limits potential management feedback. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Burrowing Owl (*Athene cunicularia*)	SGCN	Known to occur in the vicinity of SCWMA during the breeding season	Burrowing owls breed in open, well-drained grasslands, prairies, farmlands, steppes, and may have some association with irrigated agriculture. In Idaho, burrowing owls typically use burrows excavated by badgers. Loss of nesting habitat through urbanization and agricultural conversion is a serious threat throughout Idaho. Pesticides are a potentially significant threat to this species as it often nests close to agricultural fields.	Many of the recommended conservation actions In Idaho's SWAP relate to statewide population assessments or monitoring to better understand threats. However, management that identifies nesting areas, limits human disturbance in known nesting areas and reduces exposure to pesticides will benefit nesting burrowing owls.	***Unsuitable as a focal species***. Occurrence context on SCWMA does not reflect main threats to the population. Also, limited occurrence on SCWMA limits potential management feedback.
Lewis's Woodpecker (*Melenerpes lewis*)	SGCN; IWJV	Lewis's woodpecker habitat exists on SCWMA within open forests and riparian groves. However, nesting is not documented. This species is nomadic; therefore, suitable breeding habitat may be unoccupied in some years.	Fire suppression has promoted forests that support high densities of small diameter trees, which are unsuitable for this species since the birds rely on large snags in relatively open habitats. In general, a reduction of large snags in breeding habitats may limit reproduction.	Actions that result in open forests with large snags and a well-developed understory will likely benefit this species. Supporting forest management that strives to maintain fire as a (prescribed or natural) mechanism for forest succession is beneficial.	***Unsuitable as a focal species***. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Calliope Hummingbird (*Selasphorus calliope*)	BLM Sensitive	Calliope hummingbird nesting habitat exists on SCWMA within aspen, montane shrub, montane riparian and spring habitats. However, nesting is not documented.	Any activities that threaten the quality and extent of aspen, montane shrublands and montane riparian habitats and their associated blooming forb communities are likely detrimental to calliope hummingbird.	Manage montane areas to maintain a multi-age mosaic of deciduous woodlands (willows and aspen), coniferous forest, montane shrubs, and forest openings and meadows that support flowering forbs. Manage for productive forb-rich, flowering meadows (Great Basin Bird Observatory 2010).	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Loggerhead Shrike (*Lanius ludovicianus*)	BLM Sensitive	Loggerhead shrike nesting habitat exists on SCWMA within grassland and grassland shrub habitats and nesting is	Loss of grassland habitat, degradation and loss of nesting trees/shrubs within grasslands, degradation of foraging habitat	Protect or restore grassland habitat with scattered trees or shrubs. Avoid overgrazing by livestock and minimize use of pesticides	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
		likely.	due to overgrazing, low reproductive success due to reductions in prey base (grasshoppers and beetles) due to pesticides.	to control grasshoppers (Wiggins 2005)	management feedback.
Williamson's Sapsucker (*sphyrapicus thyroideus*)	BLM Sensitive	Inhabits open coniferous and mixed coniferous-deciduous forests (likely Douglas-fir and Douglas-fir/aspen on SCWMA). May also utilize juniper habitats in winter. Species is documented in lower montane forest on SCWMA, north of the Sand Creek Ponds.	Loss of mature Douglas-fir forest on SCWMA and associated landscape. Also, loss of mature individual trees or small groves within conifer forest and loss of aspen stands within the larger forest landscape.	Forest management should maintain groups of large aspen snags, rather than variably sized snags. Patches of older aspen with large aspen snags and areas of high snag density should be preserved. Where nesting occurs in conifers, management should strive to maintain adequate snags as well as sap trees (small to mid-sized conifers). (Conway and Thomas 1993).	***Unsuitable as a focal species.*** Dependence on mature forest snags and aspen does represent other forest species requirements; however, it does not fit well with other focal species criteria. Limited information on distribution in the project area and unknown current distribution limits potential management feedback.
Amphibians/Reptiles					
Columbia Spotted frog (*Rana luteiventris*)	USFS Sensitive	Recent documentation shows a population at the Sand Creek Ponds. Current distribution and status is poorly documented.	A focus of Columbia spotted frog conservation populations should be the stabilization and rehabilitation of habitat for extant breeding populations. Emphasis is needed in stream and riparian restoration to increase available wetland habitat and restore connective corridors among occupied habitats (IDFG 2010).	The loss of wetland and riparian habitats is a pervasive threat. Considered as independent units, small populations are susceptible to breeding failure and other catastrophic events. Possible susceptibility to. the chytrid fungus, *Batrachochytrium dendrobatidis*.	***Potentially suitable as a focal species.*** Species is an important indicator of riparian and wetland systems in southeast Idaho, the stronghold for this species in Idaho. Continued persistence in the drainage would help guide priorities for riparian and wetland conservation. If this species is found to have been extirpated from the drainage, it would be an appropriate lynchpin for increased riparian restoration efforts and an indicator of successful restoration
Northern Leopard frog (*Rana pipiens*)	BLM Sensitive; SGCN	Numerous documented occurrences on SCWMA and vicinity. Current population status is unknown.	Wetland protection and/or restoration of degraded sites are beneficial; a comprehensive understanding of population status is needed; amphibian survey (including disease monitoring) is scheduled in the Upper Snake Region for 2013. This investigation may identify future regional conservation recommendations.	Loss and degradation of wetland and riparian habitat is the most prevalent threat to populations. Introduced competitors and predators can cause amphibian population declines and losses. Disease is also a concern, particularly the chytrid fungus, *Batrachochytrium dendrobatidis*.	***Potentially suitable as a focal species.*** Species is an important indicator of riparian and wetland systems in southeast Idaho, the stronghold for this species in Idaho. Continued persistence in the drainage would help guide priorities for riparian and wetland conservation. If this species is found to have been extirpated from the drainage, it would be an appropriate lynchpin for increased riparian restoration efforts and an indicator of successful restoration in longer term.
Western toad (*Anaxyrus boreas*)	USFS Sensitive, BLM Sensitive	Current distribution and status on SCWMA is poorly documented. The Caribou-Targhee National Forest has a long-term monitoring program in place that has identified important breeding sites on National Forest lands.	Chytrid fungus, *Batrachochytrium dendrobatidis*, is the primary threat to western toad populations throughout the Rocky Mountains. This is compounded by habitat alteration around wetlands and human-facilitated expansion of natural and introduced predators. Habitat fragmentation isolates breeding populations, which increases the effects of these widespread threats and the risk associated with other threats, such as local changes in water quality, timber harvest, livestock grazing, fire, and toxic chemicals (Keinath and McGee 2005).	Managing disease, cataloging and monitoring population status, delineating important habitat, and protecting delineated habitat and identifying and protecting current breeding sites from habitat degradation (Keinath and McGee 2005).	***Unsuitable as a focal species.*** Limited information on distribution in the project area.

Species	Status Designation(s)	Occurrence Context in Sand Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sand Creek WMA
Common garter snake (*Thamnophis sirtalis*)	BLM Sensitive	Occurs on SCWMA, but context of occurrence is poorly documented.	Threats to common garter snakes are most likely related to loss and degradation of riparian and wetland habitats and hibernacula.	Management that protects, restores, or improves riparian and other wet habitats and enhances prey species availability (i.e., earthworms, insects, amphibians, and small mammals) will benefit common garter snake. Identifying and protecting hibernacula will also benefit common garter snake.	***Unsuitable as a focal species.*** Limited information on utilization of SCWMA habitats limits the potential value of management feedback.
Plants					
Ute-ladies'-tresses orchid (*Spiranthes diluvialis*)	Threatened ESA	Ute-ladies-tresses orchid exists on the Chester wetlands of SCWMA. This is only one of three meta-populations found in Idaho. The orchid occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and sodden areas associated with old landscape features within historical floodplains of major rivers. It also is found in wet and mesic meadows near freshwater lakes or springs.	In 1992, the USFWS identified habitat loss and modification, over collection, competition from exotic weeds, and herbicides as the main current and potential threats to the long term survival of Ute ladies'-tresses. Since 1992, other threats have been identified including impacts from recreation; mowing for hay production, grazing hydrology change; herbivory by native wildlife; drought. In the Chester Wetlands population, invasive weeds are a major threat to the persistence of *Spiranthes diluvialis*.	Mowing, especially in conjunction with winter grazing, can have positive effects on Ute ladies'-tresses by reducing competing vegetative cover and protective cover for voles. Continued monitoring of populations and avoidance of known areas on SCWMA. Convene a management discussion with the USFWS, and state and regional plant ecologists to develop an updated plan for managing *Spiranthes diluvialis* on Chester Wetlands.	***Potentially suitable as a focal species.*** Ute-ladies'-tresses orchid occurrence has been documented on SCWMA and overall local population is not well documented. May fit well into a wetland habitat conservation target. May be a good indicator of early successional wet meadow habitat. However, the only known population is on the Chester Segment only.

Selection of Conservation Targets

The biodiversity of SCWMA is represented by numerous vertebrates, invertebrates, plants, and ecological communities. It is impractical to evaluate and plan for the conservation of all these elements. Therefore, Conservation Targets, a sub-set of species and communities, were selected to represent the biodiversity of SCWMA for management and conservation while still reflecting the management priorities of SCWMA.

Conservation Targets for the SCWMA Management Plan were selected from species ranked as potentially suitable focal species in Table 1. In general, invertebrates and plants are not included in this assessment due to practical considerations including lack of data and funding. Conservation Targets could also include habitats that effectively represent suites of the flagship and special status species evaluated in Table 1, regardless of their potential suitability as a focal species. A final consideration in the selection of Conservation Targets was the best professional judgment of the Upper Snake Regional Habitat Manager and SCWMA staff. Effective Conservation Targets cannot be selected based solely on species assessments. They must reflect regional threats, priorities, existing conservation partnerships, and the limitations of WMA personnel and funding.

The Conservation Targets selected to guide management on SCWMA are:

1. Elk
2. Greater Sage-grouse
3. Trumpeter Swan
4. Breeding Waterfowl

Elk

Elk were selected as a Conservation Target to represent Big Game Habitat on SCWMA because:

- Elk are flagship species and are a priority for the creation of SCWMA.
- This population of elk is socially and economically important to Idaho. Past research has studied migration patterns, elk calf survival, and most recently, Highway 20 crossings. Data from this research, though not complete, can help to delineate the extent of seasonal ranges of big game that winter on or near SCWMA. Using this data in conjunction with GIS software, we can develop useful maps that serve to identify crucial habitat and guide offsite activities that will help sustain the integrity of SCWMA into the future.
- Elk rely on a broad array of habitat components including aspen forest, riparian habitat, live streams, mountain shrub, grasslands, and sagebrush to thrive within the SCWMA landscape. Therefore, efforts to sustain elk herds by conserving these varied habitat components will benefit a wide range of other species.

Greater Sage-grouse

Greater sage-grouse was selected as a Conservation Target to represent Upland Game Bird Habitat and Species with Special Designation because:

- Greater sage-grouse are a priority for the creation of SCWMA.
- Greater sage-grouse fulfill all criteria for suitability as a focal species.
- Greater sage-grouse are designated as a Candidate species for listing under the Endangered Species Act, are a national conservation priority, and a key planning species for federal land managers that have significant land ownership in the SCWMA landscape.
- Greater sage-grouse depend on specific qualitative attributes of sage-steppe habitat that are not addressed simply by expanding the extent of sagebrush on SCWMA. By identifying greater sage-grouse as a Conservation Target, we are seeking to maintain and restore highly functional sage-steppe that will benefit many other more generalist species that rely to some degree on sagebrush.

Trumpeter Swan

Trumpeter swan was selected as a Conservation Target to represent Habitat for Nongame on SCWMA because:

- Trumpeter swans fulfill all criteria for suitability as a focal species.
- Sand Creek WMA is one of approximately 20 consistent active nest sites in Idaho. Trumpeter swans were first documented nesting on SCWMA in 1973 at the Sand Creek ponds. This site is one of approximately 20 consistent nest sites for the struggling tri-state flock of the Rocky Mountain Population (RMP).
- By identifying trumpeter swans as a Conservation Target, we are seeking to maintain and restore highly functional wetlands that will benefit many other more generalist species that rely to some degree on wetland habitat that swans use.
- Trumpeter swans are a common year-long animal in the Sand Creek landscape and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs.
- They are designated a focal species for wetland conservation by the IWJV.

Breeding Waterfowl

Breeding waterfowl was selected as a Conservation Target to represent Waterfowl Habitat on SCWMA because:

- Breeding waterfowl fulfill all criteria for suitability as a focal species.
- Habitat conditions that maximize benefits to nesting duck broods will benefit most species breeding in managed wetlands and uplands.

- Improvement of waterfowl nesting habitat (e.g., removal of noxious weeds in mesic meadows) will also benefit other species, including but not limited to Ute ladies' tresses orchid and amphibians.
- Most wetlands in the SCWMA can be managed to enhance conditions in some fashion.

Coverage Assessment of Selected Conservation Targets

We define an effective Conservation Target as one providing meaningful conservation benefits for multiple species that share similar habitat requirements or life history traits. They are useful for directing limited management resources and maximizing conservation effort. One measure of effectiveness is to assess the number of species that a Conservation Target benefits (or covers) within the management landscape.

Regional Habitat and Diversity staff worked together to complete the coverage assessment table (Table 2). We evaluated each of the Conservation Targets to determine which species from Table 1 would benefit from management activities focused on that target. Evaluations are based on knowledge of species habitat requirements, occurrence within the management landscape, and the scope of current and planned management actions. The assessment considered only those habitat features or needs relevant to the species as it occurs on the management landscape. Our results indicate that the selected Conservation Targets on SCWMA provide substantial, but variable habitat benefits for an array of assessed species.

We also evaluated which species or guilds would receive little or no tangible benefit from management actions for specific Conservation Targets; these are designated "conservation needs." We identified conservation needs for several species or guilds and determined that further data will be useful to inform the next WMA planning process. A prudent management strategy is to consider a landscape where these species may be prioritized for management in the future. Broad strategies for addressing these management needs are identified in the following Management Program Table (pages 50-56), but typically include collection of additional baseline data.

Table 2. Analysis of Conservation Target coverage and identification of conservation needs.

	Conservation Targets[a]				
Species Assessed in Table 1	**Elk**	**Greater Sage-grouse**	**Trumpeter Swan**	**Breeding Waterfowl**	**Conservation Need**
Mule deer	X	X	X	X	
Elk	X	X	X	X	
Moose	X	X	X	X	
Myotis guild	P	P	P	P	
Townsend's Big-eared bat	P	P	P	P	
Canada lynx	P				Yes
Grizzly bear	P		P	P	Yes
North American Wolverine	P				Yes
Wyoming ground squirrel	P	X			
Piute ground squirrel	P	X			
Idaho Pocket gopher	P	P			
Columbian sharp-tailed grouse	X	P			
Greater sage-grouse	X	X	P	P	
Trumpeter swan	P		X	X	
Breeding waterfowl		X	X	X	
Wilson's phalarope			X	X	
Sandhill crane	P	P	X	X	
Long-billed curlew	P	P	P	X	
Brewer's sparrow	X	X			
Bald eagle	P			P	
Northern goshawk	P				Yes
Foraging waterbird			X	X	
Prairie falcon	P	P			Yes
Swainson's hawk	P				Yes
Great gray owl	P				Yes
Short-eared owl	P	X			Yes
Flammulated owl	P				Yes
Burrowing owl	P				Yes
Lewis's woodpecker	P				Yes
Calliope hummingbird	P	P			Yes
Loggerhead shrike	P	P			Yes
Williamson's sapsucker	P				Yes
Common garter snake			X	X	
Columbia spotted frog			X	X	
Northern leopard frog			X	X	
Western toad				X	
Ute-ladies'-tresses orchid			P	X	

[a] Entries marked with "X" indicate that the majority or all habitat needs for an assessed species within the management landscape are being met by management actions benefitting the Conservation Target. Entries marked with "P" indicate only a portion of the species habitat needs are being met by management actions for the Conservation Target. Conservation needs exist where target-specific management actions provide little or no tangible habitat benefit for an assessed species. Blank cells under conservation targets may indicate a conservation need or where dissimilar habitat needs preclude conservation benefits.

Species identified in the Conservation Need column are primarily species that rely on vast expanses of forest cover and types. The most northern end of SCWMA is located at the transition zone of sage-steppe to forest with very little expanse of forest. With minimal management opportunities on SCWMA for these species, it was determined to not list them as a conservation target.

Spatial Delineation of Conservation Target Landscapes

Each of the focal species selected as Conservation Targets for SCWMA also utilize habitats off of SCWMA to meet their annual needs. Therefore, it is crucial that we actively participate in habitat conservation efforts within the landscape, beyond the borders of the WMA, if we are to maintain the integrity of the WMA itself. As a hypothetical example, if calf production for the elk that winter on SCWMA was negatively impacted by a loss of quality calving habitat on public lands to the northeast, we could do little within the boundaries of the WMA to sustain wintering elk numbers in the long term.

This section describes the methods used to define spatial landscapes for each of our SCWMA Conservation Targets. We used the best data available (i.e., collar data from wildlife utilizing SCWMA, seasonal movement data from SCWMA, species ecology data from scientific literature, and local knowledge) to construct these Conservation Target-specific landscapes. These landscapes are then utilized in the Management Program Table (pages 50-56) to identify Conservation Target-specific Management Directions, Performance Targets, and Strategies for both SCWMA and the landscape.

Elk

We utilized data collected from elk fitted with radio transmitters from research conducted by Brown (1985). He obtained locations from 54 different collared elk that were captured on the Sand Creek winter range from 1981 -1983. Elk locations on the landscape were collected using a fixed wing aircraft at various times of the year. As a result of this study, they were able to obtain over 3,500 locations identifying summer, winter, and migratory ranges.

We used the following steps to estimate the SCWMA Elk Landscape from these collar data (all GIS analyses performed with ArcGIS 10.1 [ESRI, Redlands, Calif.], unless otherwise noted):

- Utilized Geospatial Modeling Environment (GME; www.spatialecology.com) and an ArcGIS shapefile of elk collar locations to create a 100% minimum convex polygon (MCP) boundary around all collar locations
- Utilized the outer boundary of the resulting buffer to define the SCWMA Elk Landscape (Figure 4)

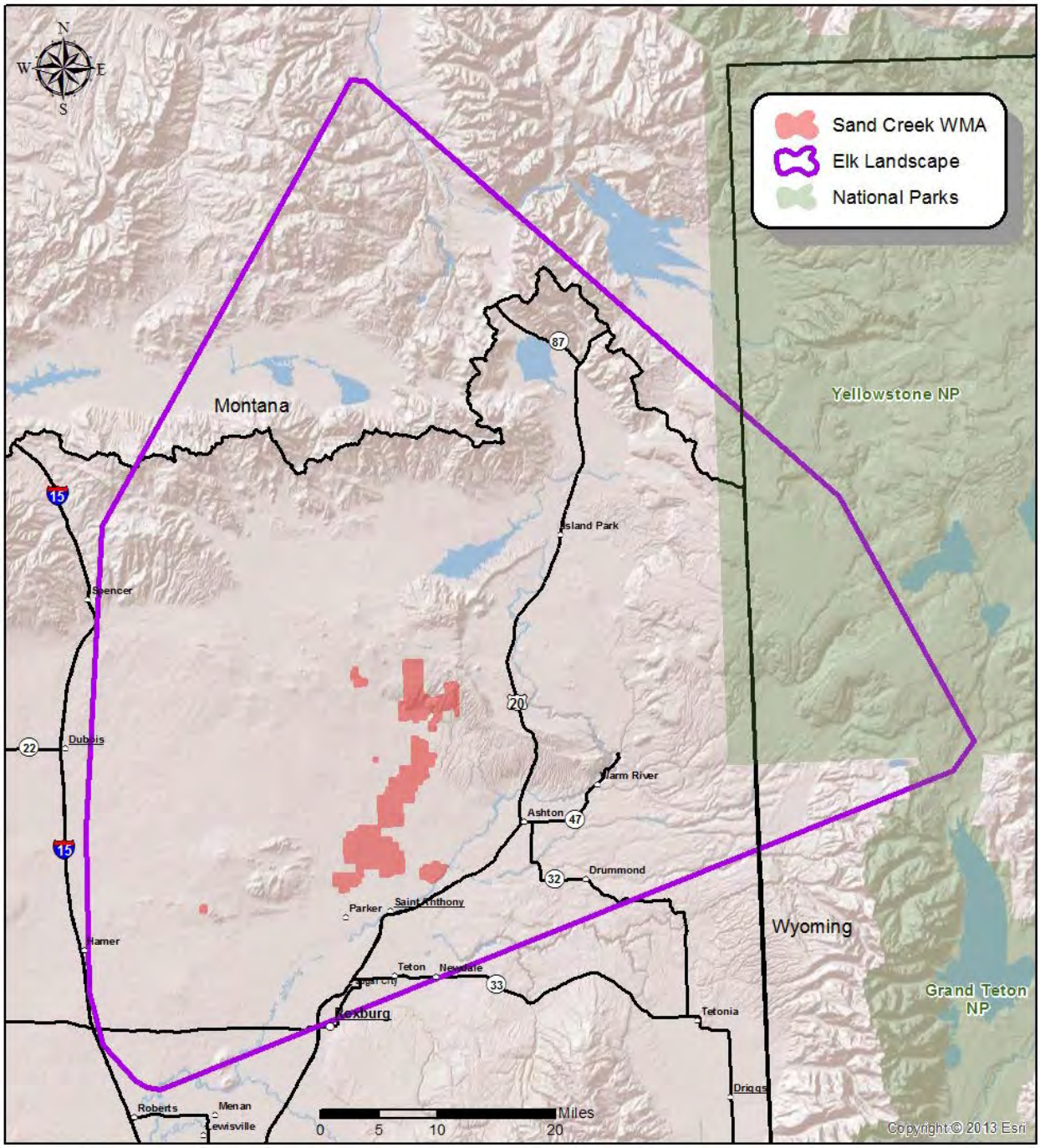

Figure 4. Elk Landscape depicting the typical year-round landscape used by elk wintering on Sand Creek WMA.

Greater Sage-grouse Landscape

The Department maintains a database of all known greater sage-grouse leks across Idaho. In 2010, the Department cooperated with BLM to create a statewide map of greater sage-grouse habitat in Idaho (2011 Idaho Sage-grouse Habitat Planning Map, BLM, Idaho). In addition, an Idaho alternative to the BLM draft EIS was developed through a focus group that identifies priority habitats (Alternative of Governor C.L. "Butch" Otter for Greater Sage-Grouse Management in Idaho, 2012). Connelly et al. (2000) outlines the seasonal movements and habitat requirements of sage-grouse and states that migratory sage-grouse may move over 18km from leks to nest sites. Habitat protection and improvements designed to benefit migratory sage-grouse should be focused within 18km of leks.

We used the following steps to estimate the SCWMA greater sage-grouse Landscape from these data:

- Utilized an ArcGIS shapefile of the Idaho greater sage-grouse lek database to select all occupied leks within 18 km of SCWMA
- Created an 18 km buffer around each lek within 18 km of SCWMA to encompass the likely nesting movements of hens attending those leks
- Clipped the lek buffers to the suitable sage-grouse habitat identified in the 2011 sage-grouse Habitat Planning Map
- Utilized the portion of the lek buffers that occurred in suitable habitat to define the SCWMA Greater sage-grouse Landscape (Figure 5)

The steps used above to estimate the extent of habitat on the landscape for sage-grouse that use SCWMA excluded an area from the 2011 Sage-grouse Habitat Planning Map. This area known as Shotgun Valley will be included on the map (Figure 5) and will be included in the greater sage-grouse landscape for SCWMA.

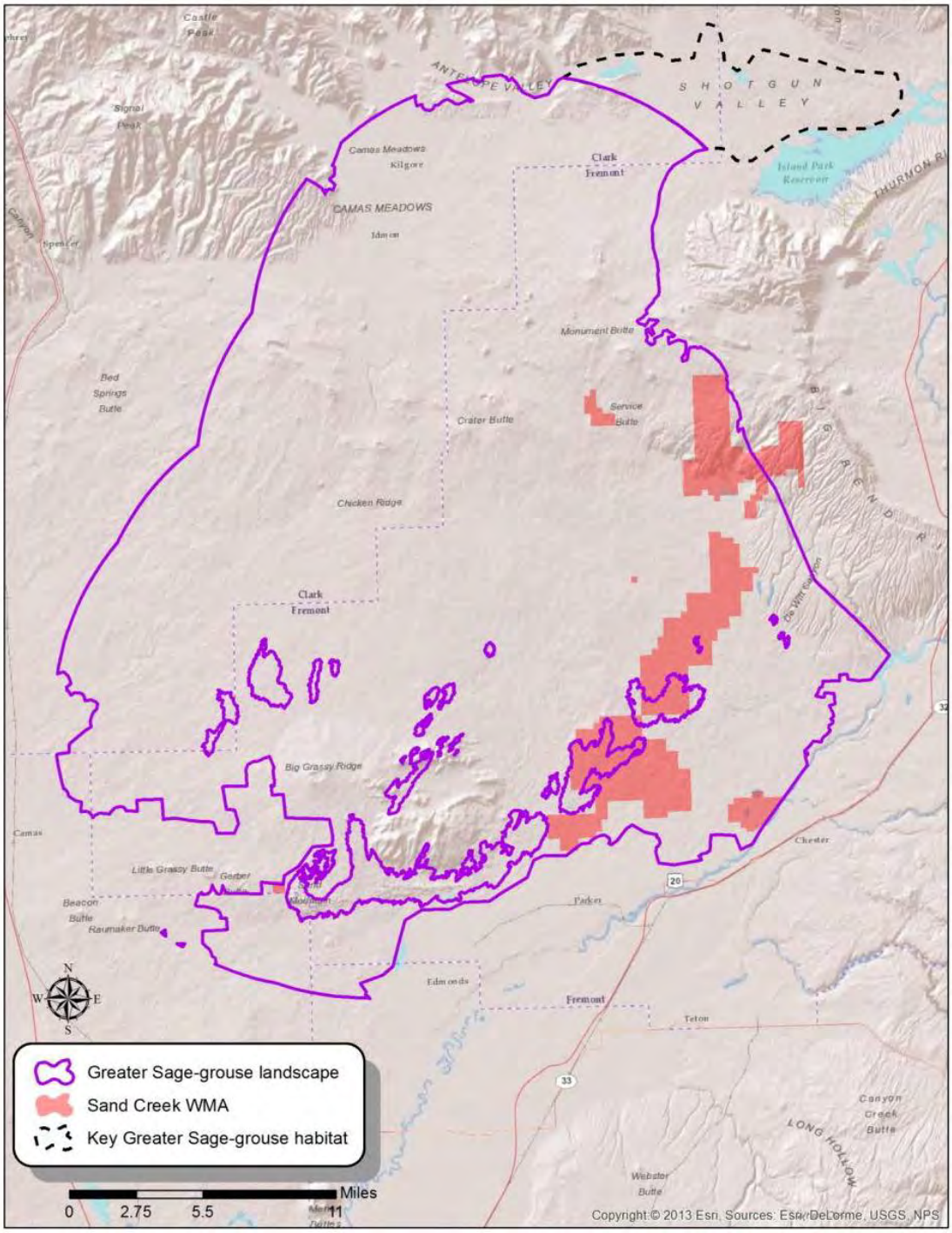

Figure 5. Greater Sage-grouse Landscape depicting suitable sage-grouse habitat that is likely used by sage-grouse that utilize Sand Creek WMA. Interior polygons represent active sand dunes (unsuitable habitat). The area within the dotted polygon is key habitat for greater sage-grouse that was excluded from the analysis. It will be included in management actions for greater sage-grouse within the landscape for Sand Creek WMA.

Trumpeter Swan

Trumpeter swans are designated a focal species by the IWJV in part because of their security requirements. Maintaining seasonal closures or restrictions is an important component of maintaining optimal conditions for trumpeter swans. Sand Creek WMA not only provides nesting habitat, but also crucial transitional and winter range. This crucial component to SCWMA is ecologically connected to other similar areas within Island Park and Fremont County. As these areas are individually impacted, it creates a greater impact as a whole to the local trumpeter swan population and other protected areas will increase in importance.

Therefore, when mapping important areas for trumpeter swan conservation and management in the SCWMA landscape, we designated areas where private water rights affect water levels on the WMA impacting important nesting, brood-rearing, and foraging habitat. We also identified crucial areas of spring, fall, and winter range where maintaining seasonal security areas for Trumpeter Swans are important.

We used the following steps to create the SCWMA trumpeter swan Landscape:

- Used ArcGIS shapefile, Hydrography (Idaho only), from the Department's GIS section and highlighted important bodies of water
- Used ArcGIS software to create a shapefiles to indicate areas of importance
- The areas and bodies of water identified on the map define the trumpeter swan landscape for SCWMA (Figure 6)

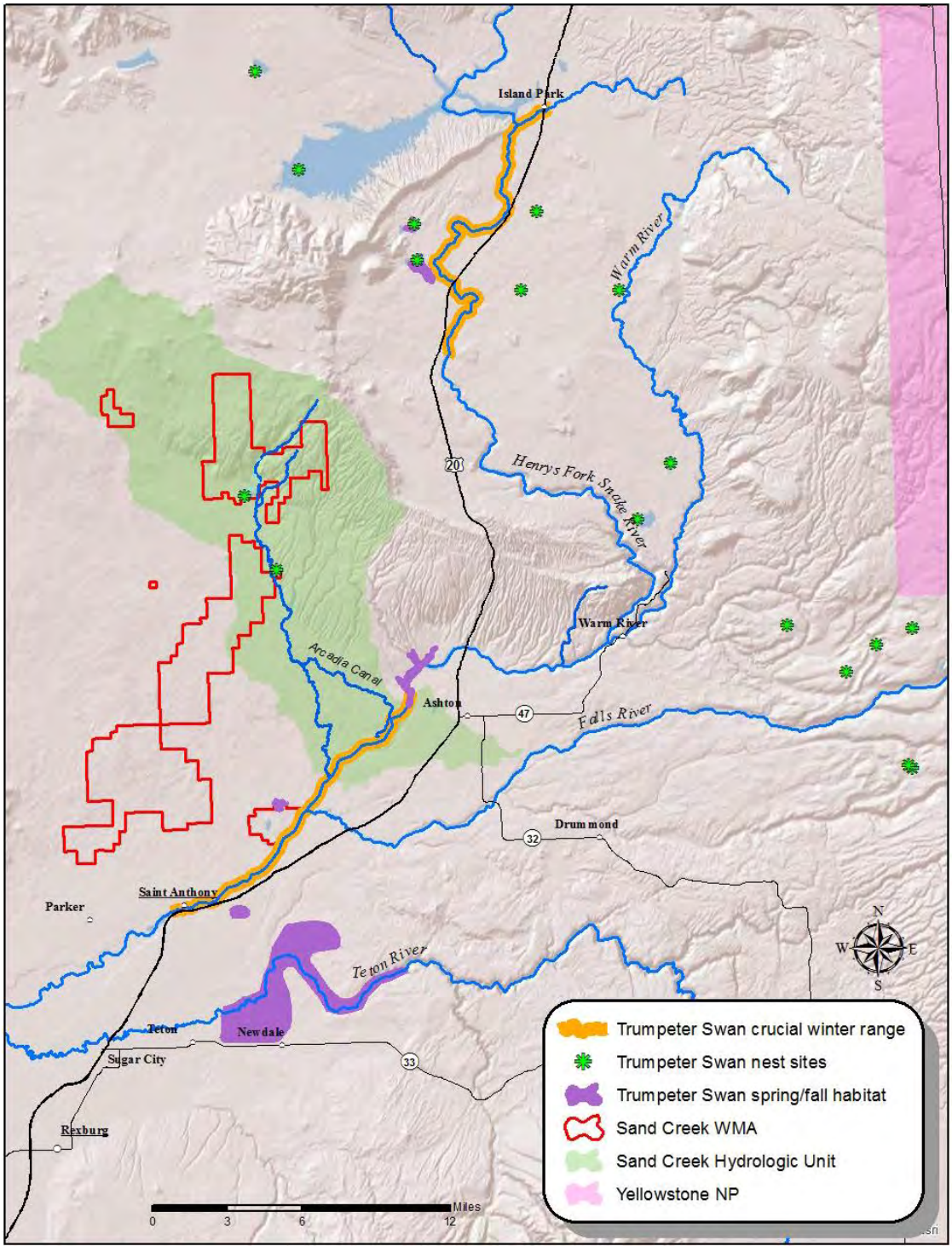

Figure 6. Sand Creek WMA Trumpeter Swan Landscape depicting crucial winter range, areas of important spring/fall habitat, documented nest sites and the Sand Creek hydrologic unit. Water users of the Arcadia Canal Company have water rights that affect water levels at the Sand Creek ponds. Nest sites shown indicate at least one year of an active nest since 2004.

Breeding Waterfowl

Literature that discusses breeding waterfowl nesting states that different species nest at different distances from open water with high variability in nesting cover type (Kaminski and Weller 1992). Several species of waterfowl were documented to nest up to one mile from open water. We used this distance as our outermost distance to define breeding waterfowl habitat at the landscape level. Sand Creek WMA has two distinct wetlands for waterfowl; Sand Creek ponds and Chester Wetlands. We buffered these two specific areas of SCWMA as the Breeding Waterfowl landscape.

We used the following steps to create the SCWMA Breeding Waterfowl Landscape:

- Used ArcGIS shapefile of the Sand Creek ponds and the bodies of water at Chester Wetlands and buffered them with a one mile radius
- The outer boundary of the resulting buffer defined the SCWMA Breeding Waterfowl Landscape (Figure7)

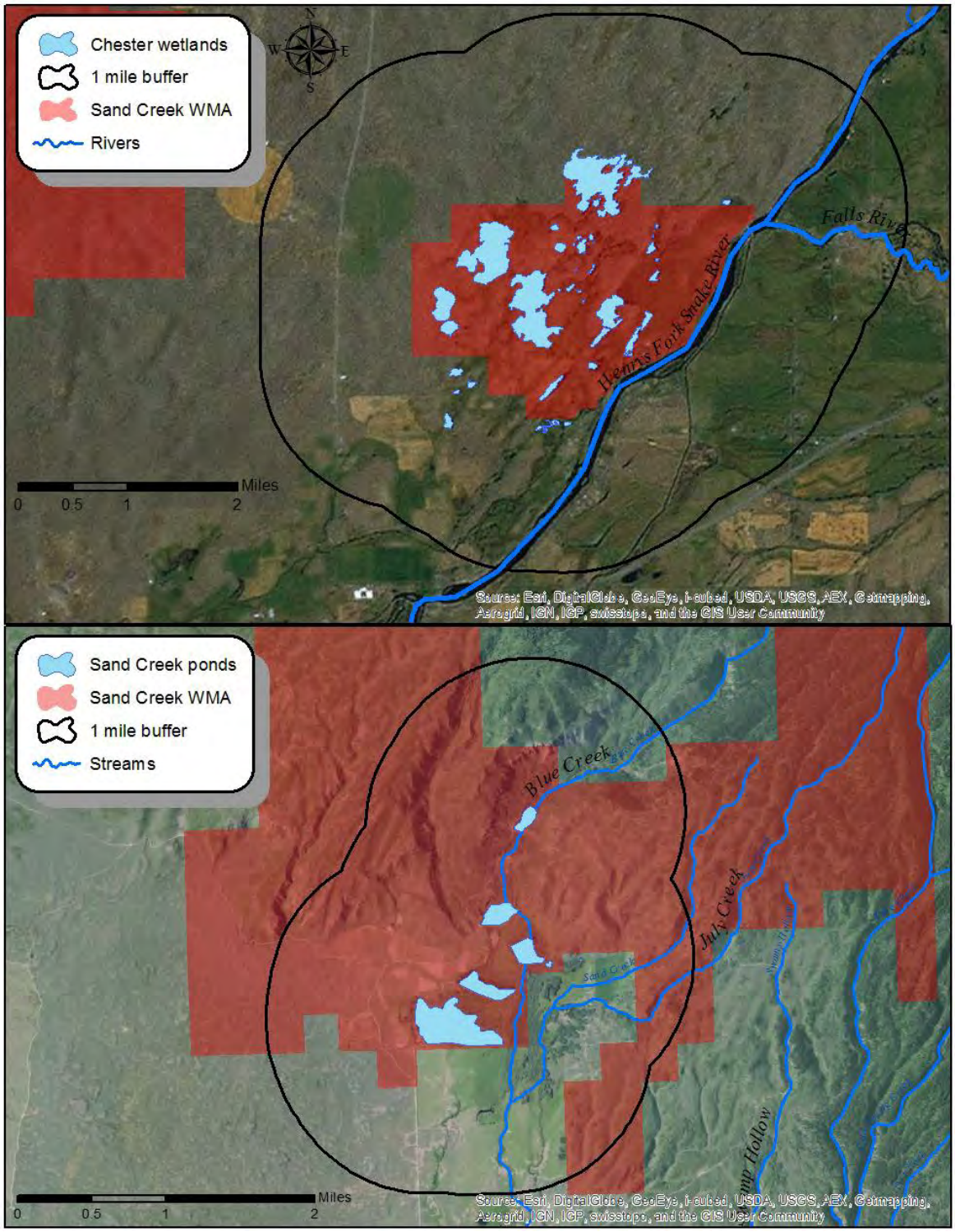

Figure 7. Sand Creek WMA Breeding Waterfowl Landscape depicting a one mile buffer surrounding Chester Wetlands (above) and the Sand Creek Ponds (below).

Sand Creek WMA Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics SCWMA staff will use to manage for the Conservation Targets selected (page 38) to represent each SCWMA Priority (page 26) at both the SCWMA and Conservation Target-specific landscape scale. The last section of the table outlines strategies that will be used to increase our knowledge of the voids identified in the Conservation Target coverage assessment (Table 2). The Compass Objective column links the Management Directions in this table to the objectives of the Department's strategic plan, *The Compass* (Appendix I).

WMA Priority: Big Game Habitat					
Conservation Target: Elk					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, secure year-round habitat for elk	Manage human disturbance annually to minimize big game energy expenditure on winter and transitional range	Develop and install educational signs to inform public of why there is a need for human closure during winter	Final Report of Procedures	A, B, C, G, K
			Close all access points that have gates and have appropriate signs		
			Perform GIS analysis of motorized road density to estimate security cover and identify illegal roads and trails		
			Work with local CO, BLM LEO and County sheriff on areas of illegal activity		
			Designate open roads and close unnecessary motorized routes		
		Improve and/or actively manage at least 60 acres of big game forage annually	Create GIS layer of the current vegetation and historic agriculture fields	Acres Improved	
			Evaluate the feasibility of a domestic grazing program to improve vegetation condition		
			Convert rhizomatous grass-dominated lands to desirable vegetation types		
			Maintain and develop food plots where feasible		
			Prioritize noxious weed and undesirable plant species control efforts as appropriate		
Elk (Figure 4)	Provide high quality, secure year-round habitat for elk	Manage human disturbance annually to minimize big game energy expenditure on winter & transitional range	Work with state, federal and county agencies in a cooperative effort to maintain current winter closure and boundary	N/A	A, B, C, D, F, G, K, L
			Develop an interagency working group, including ITD, USNF, BLM and state counties to develop strategies for maintaining connectivity between high elevation summer range and winter range on the Sand Creek desert		
			Provide technical assistance and make appropriate recommendations on any proposed projects or plans by other agencies, organizations, or private landowners that may affect big game winter & transitional range		
			Help educate the public on the need for the winter closure and human impacts to wildlife		
			Develop a presentation that effectively communicates the values of the closure		
		Protect 1,000 acres of big game year-round range within 10 years	Prioritize lands for conservation with willing private landowners (fee acquisition or permanent easement) to protect elk habitat. Create a database and develop a list in two years with associated map of properties that may be important to conserving/enhancing big game winter range. Review priority sites list annually. Assess landowner willingness to participate in voluntary conservation actions	Acres Protected, database & map created	A, B, C, D, F, L
			Use data collected from GPS collars on migratory big game, create a GIS layer to identify migratory paths and animal habitat selection		

WMA Priority: Big Game Habitat					
Conservation Target: Elk					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
Elk (Figure 4)	Provide high quality, secure year-round habitat for elk	Protect 1,000 acres of big game year-round range within 10 years	Work with Fremont county to protect the integrity and wildlife values of identified high value areas	Project Completed	A, B, C, D, F, G, K, L
			Create a map from data identifying crucial habitat for big game and work closely with USFS, BLM, IDL and county planner to enhance protection and reduce impacts		
			Work with regional staff in monitoring big game through winter aerial counts	N/A	A, B, C, D, F, L
		Improve at least 1,000 acres of big game year-round range that occurs on private or public lands within 10 years	Work with USFS to re-introduce fire into the landscape to diversify and invigorate vegetation through succession and manage for a mosaic of age and species structure within the forest canopy	Acres Improved	
			Work to include projects that enhance aspen habitat on adjacent National Forest Lands through participation in forest management planning		
			Manage for a complex forest understory in collaboration with other government agencies		
			Identify and prioritize grazing allotments that are critical to elk and work with BLM, USFS and IDL on domestic grazing practices		
WMA Priority: Upland Game Bird Habitat					
Conservation Target: Greater Sage-grouse					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, year-round habitat for greater sage-grouse	Reduce impacts to populations annually	Remove unnecessary fence	Projects Completed	A, B, C
			Perform a fence collision analysis using GIS to identify potential areas to install fence markers to reduce collisions		
		Monitor sagebrush steppe for changes in density, quality and arrangement every 3-5 yrs.	Establish nine random line intercepts with photo points by 2015		
			Annually revisit three of the nine transects to perform monitoring		
Greater Sage-grouse Landscape (Figure 5)	Increase knowledge of greater sage-grouse movements, habitat use and distribution	Conduct at least one management-oriented research project and two monitoring projects within 10 years	Conduct annual spring lek searches to document the status of known leks and document new leks by searching designated areas every 3-5 years	Projects Completed	A, B, C, F, J, N
			Work with BLM & IDL to develop, install new or re-build existing vegetation enclosures on the Sand Creek desert to monitor vegetation condition and health		
	Provide high quality, year-round habitat for greater sage-grouse	Manage human disturbance annually to reduce impacts on sage-grouse habitat	Work with Department researchers to develop a study to identify key habitat, understand seasonal movements and habitat use on the Sand Creek desert	N/A	A, B, C, F, K, L
			Work in cooperation with partners of the Egin-Hamer closure on placing and maintaining signs on the boundary of the human entry closure		
			Work with local CO, BLM LEO and County sheriff enforcing closure and cross country travel during the closure and the opening of human entry into the desert as weather permits		
		Protect 1,000 acres of greater sage-grouse habitat within 10 years	Work with government agencies, conservation partners, and other parties, to develop a prioritized list and GIS map of important greater sage-grouse habitat within the landscape and then pursue ways of protecting these areas in perpetuity	Projects Completed	
			Create a map from data identifying crucial habitat for sage-grouse and work closely with USFS, BLM, IDL and county planner for protection and to reduce impacts		
			Prioritize lands for conservation with willing landowners (e.g., fee acquisition or permanent easement) to protect greater sage-grouse habitat. Develop a list with appropriate maps in two years with annual review of priority sites		

WMA Priority: Upland Game Bird Habitat					
Conservation Target: Greater Sage-grouse					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
Greater Sage-grouse Landscape (Figure 5)	Provide high quality, year-round habitat for greater sage-grouse	Coordinate annually with Federal, state and private partners in managing Sage-grouse habitat	Implement the Governor's Alternative to BLM DEIS or selected alternative when determined, and recommendations in Upper Snake Sage-grouse Local Working Group's Plan for Sage-grouse Conservation as appropriate	N/A	A, B, C, F, K, L
			Meet with BLM to discuss impacts to Sage-grouse habitat from fire, grazing, motorized travel, etc..		
			Meet with Fremont county Road & Bridge, County commissioners, planner, etc. to reduce impacts to Sage-grouse habitat from county activities		
		Improve at least 1,000 acres of greater sage-grouse habitat that occurs on private or public lands within 10 years	Identify aspen and riparian areas that have domestic grazing impacts and develop a plan to protect the area without impacting big game	Acres Improved	
			Work with BLM & IDL to identify priority grazing allotment where improved grazing practices would benefit greater sage-grouse habitat		
			Work with government agencies, conservation partners and private individuals in development of range manipulation projects on their land		
	Maintain greater sage-grouse populations	Reduce impacts to populations annually	Wok with BLM on maintaining and operating wildlife guzzlers in the Sand Creek desert	Projects Completed	
			Perform a fence collision analysis using GIS to identify potential areas to install fence markers to reduce collisions		
			Work with land management agencies and private landowners to install fence markers that are shown to be high risk for greater sage-grouse collisions		
			Participate in the development of a raven predator management plan in coordination with the LWG		
			Install signs warning motorists of birds leking on the Red Road		
		Provide technical assistance on 100% of public land planning projects and government assisted programs on private ground	When available, provide succinct and quantifiable greater sage-grouse use data to government agencies for planning projects	Technical Assistance Provided	
			Assist public land managers in developing habitat manipulations that improve habitat for greater sage-grouse		

WMA Priority: Habitat for Nongame & Species with Special Designation					
Conservation Target: Trumpeter Swan					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, secure habitat for nesting, breeding and brood-rearing Trumpeter Swan	Identify and secure funding sources for operations and management for Trumpeter Swans as needed	Locate and secure funding outside of federal PR dollars through grants, Trumpeter Swan Society, and other non-profit groups to aid in habitat management enhancements to benefit Trumpeter Swans	N/A	B, C, H, K, N
		Conduct one or more project(s) every 3-5 years to improve wetland condition, function and methodology for Trumpeter Swan habitat	Use controlled burns and/or chemicals to manage wetland vegetation for proper ratio of open water to tall emergent vegetation	Projects Completed	
			Manage water levels to mimic natural wetland hydrology to improve wetland health and increase appropriate vegetative forage with consideration for established fisheries values		
		Provide secure habitat during nesting & brood-rearing seasons	Identify and map key habitat for nesting & brood-rearing Trumpeter Swans (current and historical), document human activity and implement measures to decrease disturbance where needed until July 1	Programs or projects developed/ implemented	

WMA Priority: Habitat for Nongame & Species with Special Designation					
Conservation Target: Trumpeter Swan					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, secure habitat for nesting, breeding and brood-rearing Trumpeter Swan	Provide secure habitat during nesting & brood-rearing seasons	Areas where brood-rearing Trumpeter Swans and boating coincide, maintain and/or implement watercraft restrictions to July 15	Programs or projects developed/ implemented	B, C, H, K, N
			Maintain areas of human closure on WMA and place signs informing and educating public of crucial area		
			Identify and map potential/ likely new nesting sites and brood-rearing sites at Chester and manage new sites to maximize security.		
			Develop educational signs to provide public with management practices that focus on the importance of maintaining security habitat for all waterfowl		
			Monitor areas where brood-rearing habitat is important and document potential impacts	Annual Report	B, K
			Document nesting Trumpeter Swans, nesting success and production of cygnets to flight		
Trumpeter Swan Landscape (Figure 6)	Maintain Trumpeter Swan population	Increase knowledge of seasonal habitat requirements, movements, population dynamics, and effects of land management practices on Trumpeter Swans annually	Work with Regional Wildlife Diversity Biologist, government agencies and conservation partners to track nesting occupancy and success of the Fremont County nest sites as an index to overall population performance	N/A	B, C, H, J, K, N
		Prioritize lands for acquisition, conservation, or easement to protect Trumpeter Swan habitat developing a list within two years with annual review of priority sites	Work with Regional Wildlife Diversity Biologist, government agencies and conservation partners to stay abreast of issues and opportunities related to swan conservation in the Greater Yellowstone Area.	Projects Completed	
			Develop a GIS based map and database identifying consumers who have water rights affecting Trumpeter Swan habitat on the Sand Creek drainage		
		Provide technical assistance on 100% of public land planning projects	Provide the best wildlife data available to government agencies for planning projects	Technical Assistance Provided	
			When applicable, assist public land managers in developing human entry and habitat manipulations to promote security for Trumpeter Swans		

WMA Priority: Waterfowl Habitat					
Conservation Target: Breeding Waterfowl					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, secure habitat for breeding waterfowl	Provide areas to reduce human disturbance during critical breeding, nesting and brood-rearing times	Delay opening of fishing on Sand Creek Ponds 3 & 4 to July 1 and allow recreation at Blue Creek reservoir and ponds 1 & 2 at opening of fishing season.	Projects Completed	A, B, C, D, E, F
			Maintain human access restrictions around Sand Creek Ponds 3 & 4 to July 1		
			Maintain leashed pets rule until July 15 on Chester and Sand Creek Ponds		
			Maintain watercraft restrictions on bodies of water until July 15		
			Identify and map key habitat for nesting and brood-rearing and implement measures to enhance/expand nesting habitat		
			Identify and document potential human disturbance to nesting and brood-rearing waterfowl and implement measures to decrease or mitigate impacts		
		Conduct one or more project(s) every 3-5 years to improve breeding waterfowl habitat, function and methodology	Use controlled burns and/or chemicals to manage wetland vegetation for proper ratio of open water to tall emergent vegetation	Acres Improved	
			Develop and implement a water level management plan to fluctuate pond levels based on specific wetland needs with consideration for established fisheries values		

WMA Priority: Waterfowl Habitat					
Conservation Target: Breeding Waterfowl					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide high quality, secure habitat for breeding waterfowl	Conduct one or more project(s) every 3-5 years to improve breeding waterfowl habitat, function and methodology	Implement a domestic grazing program to manage upland vegetation if warranted	Acres Improved	A, B, C, D, E, F
			Use controlled burns and/or chemicals to manage upland vegetation for nesting waterfowl		
			Inventory upland nesting waterfowl habitat and determine needs for improvement		
			If necessary, develop a survey to monitor predators and implement a predator management program		
			Survey all water control structures, dams and dikes annually for function. Repair and maintain as needed	Annual Report	
		Protect current water use and rights at the Sand Creek Ponds by using a cooperative approach with private and government agencies by spring of 2015	Understand current water rights associated with the upper Sand Creek drainage documenting the influence of water rights on wetland hydrology at the Sand Creek ponds	Projects Completed	
			Involve IDWR in development of water regulation and laws in association with the upper Sand Creek drainage		
			Work with local landowners to understand water rights and water movement on and through the WMA including signed agreements of motorized access on the WMA		
			Work with landowners in replacement of aging water control structures to understand water use		
	Increase knowledge of waterfowl movements, habitat use and distribution	Conduct annual waterfowl use monitoring on WMA. Each strategy will be implemented on a 2-3 yr. rotation	Conduct brood counts to inventory waterfowl production		
			Nest box surveys to document use and hatch		
			Conduct waterfowl pair surveys to help determine and document breeding waterfowl		
			Create a volunteer program with the Master Naturalists or other volunteers to help with surveys		
		Increase knowledge of wetland condition, function and methodology of wetland habitat and apply knowledge when learned	Utilize Wildlife Bureau staff to assess condition and potential function of wetland management units on the WMA	N/A	
			Attend wetland trainings when provided to stay abreast of current management practices and techniques		
Breeding Waterfowl Landscape (Figure 7)	Breeding waterfowl populations	Annually provide technical assistance on 100% of public land planning projects	Provide technical assistance and wildlife use data to private, state & federal land managers	Technical Assistance Provided	
			Use wildlife data to produce a GIS based map identifying wetland use during different seasons of use		
		Prioritize lands for acquisition, conservation, or easement to protect breeding waterfowl habitat developing a list within two years with annual review of priority sites	Work with conservation partners, government agencies, and private landowners to identify and implement programs or policies to protect waterfowl habitat in perpetuity	Projects Completed	
			Identify and prioritize lands that are critical to waterfowl within the landscape buffer and work with the landowner or land management agency to improve habitat for waterfowl including but not limited to delayed haying		
			Develop a GIS based map and database identifying consumers who have water rights affecting wetland habitat on SCWMA		

WMA Priority: Wildlife-based Recreation and Education					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Provide opportunity for consumptive and non-consumptive wildlife-based recreation and education	Annually provide 13,000 hunter days consistent with the SCWMA mission	Unless future data indicates a needed change to meet the SCWMA mission, maintain the current level of motorized access (outside of the winter road closure) to provide opportunity for motorized use and opportunity for non-motorized use away from open roads	Visitor days Violations detected	E, F, G, H, J, K, L, M, N
			Increase SCWMA staff and IDFG law enforcement presence to curtail illegal activities (e.g., illegal harvest, illegal motor vehicle use, littering) that diminish the recreation of law abiding users		
			Provide wildlife security areas where appropriate on SCWMA		
			Encourage sportsmen to trap areas where muskrats are causing damage to water control structures		
		Annually provide 13,000 fishing days consistent with the SCWMA mission	Work on balancing waterfowl and wetland needs with fishing needs		
			Work with the Regional Fisheries Manager to maintain fishing opportunity at the Sand Creek ponds		
		Annually provide 13,000 non-consumptive wildlife-based recreation and education opportunities consistent with the SCWMA mission	Replace educational signs with updated information along nature trail at the Sand Creek ponds	Visitor days Projects Completed	
			Update the SCWMA bird list		
			Work with Regional Access Coordinator to evaluate the development of picnic tables at the Sand Creek ponds		
			Provide bear proof food storage containers at campsites located at the Sand Creek ponds		
			Evaluate costs and benefits of public requests for non-consumptive wildlife-based recreation within the current WMA rules or special use permits		
			Evaluate the costs and benefits of new educational signage on Chester Wetlands		
			Evaluate current campsites and the feasibility of developing more fire pits and camp sites at the Sand Creek ponds		
		Annually maintain facilities, signage, and SCWMA managed roads/trails to facilitate recreation and education	Provide improved maps and informational signage at kiosks on the WMA		
			Maintain SCWMA managed roads in a useable but low maintenance state		
			Improve signage on designated trails and motorized roads		
			Develop designated parking area for vehicles at boat ramp on pond 4		
		Annually provide at least 2 education opportunities that are consistent with the SCWMA mission	Evaluate and work with Regional Conservation Educator in developing youth programs on SCWMA	Programs and Projects Implemented	
			Work with Regional Volunteer Coordinator in developing and maintaining facilities for Hunter, Bow hunter and Trapper education		
			Provide an archery 3D education course for all levels of bowhunters		
			Provide a shotgun shooting course prior to youth upland and waterfowl hunts with clay pigeons		
			Evaluate and promote youth mentored hunting programs		

Conservation Needs Identified in Conservation Target Coverage Assessment (Table 2)					
Scope	**Management Direction**	**Gap Identified**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SCWMA	Develop strategies to address needs identified in the viability assessment	Reptiles & Amphibians	With Regional Nongame Biologist lead, develop a monitoring protocol for reptiles and amphibians	Surveys developed and completed	E, F, G, H, J, K, M
			Recruit volunteers to monitor reptile and amphibian populations and to develop a species list		
		Ute Ladies' Tresses Orchid	Follow guidelines in the Record Of Decision for management	Grants obtained	
			Locate funding outside of federal PR dollars through grants, conservation partners and other non-profit groups		
		Forest species	With Regional Wildlife Diversity Biologist lead, develop and implement a monitoring protocol for forest carnivores	Surveys completed	
			Manage forest habitat to improve conditions for wildlife and to represent a model for others to follow		
National Forest lands within all landscapes	Develop strategies to address needs identified in the viability assessment	Forest species	Work with USFS to re-introduce prescribed fire into the landscape	Projects completed Surveys conducted	
			Work with USFS to maintain a canopy mosaic of age and species structure in forest management at a landscape level		
			Work with USFS to minimize fragmentation of forest lands particularly at or near the sage-steppe ecotone.		
			Work with USFS wildlife biologist & Regional Wildlife Diversity Biologist to develop a forest carnivore monitoring protocol including but not limited to winter track surveys		
			Work with USFS to manage forested areas for diversity of over story and understory		

Monitoring

Monitoring and reporting are critical for tracking accomplishment of performance targets identified in the SCWMA Management Program Table. Monitoring can be separated into three categories: compliance monitoring, biological monitoring, and public use monitoring.

Compliance Monitoring

Compliance monitoring documents the completion of regular management tasks that are essential to WMA operations. These include but are not limited to:

- Maintaining WMA facilities and access sites
- Maintaining infrastructure at ponds and wetlands
- Providing technical assistance to local agency staff and private landowners
- Maintaining public access sites

Compliance monitoring will be reported annually at work plan meetings between regional and headquarters staff.

Biological Monitoring

Wildlife Management Areas across the state have a range of established biological monitoring programs and needs. Additional monitoring needs may have been identified during development of the SCWMA Management Program Table. Biological monitoring includes wildlife, vegetation, and habitat monitoring. It may also include assessing the effectiveness of management and restoration activities. Monitoring may occur at multiple spatial and temporal scales, depending on objectives.

Future monitoring needs associated with performance targets and strategies identified in the SCWMA Management Program Table are summarized in Table 3. The goal is to measure success or effectiveness of strategies that are implemented to reach performance targets. A detailed monitoring plan including specific techniques will be completed for the WMA by December 31, 2014.

Currently, staff at SCWMA participates in statewide greater sage-grouse and Columbia sharp-tailed grouse lek surveys, regional big game winter surveys, big game and upland game check stations, and noxious weed surveys.

Table 3. Biological monitoring for Sand Creek WMA, 2014-2023.

Performance Target	Survey Type	Survey Frequency
Monitor sagebrush steppe for changes in density, quality and arrangement every 3-5 years	Vegetation transects as appropriate	Every 3-5 years
Conduct one or more project(s) every 3-5 years to improve wetland condition, function and methodology for Trumpeter Swan habitat	Population surveys	Annually
Conduct one or more project(s) every 3-5 years to improve breeding waterfowl habitat, function and methodology	Vegetation transects as appropriate	Before project initiation and twice within five years after project
Conduct annual waterfowl use monitoring on WMA. Each strategy will be implemented on a 2-3 yr. rotation	Population surveys	Each strategy will be implemented on a 2-3 yr. rotation

In 2010, IDFG initiated a statewide, long-term habitat monitoring program for all WMAs. The goal of the program is to collect quantitative and comparable baseline data to monitor habitat change on all WMAs due to management actions or other causes. The baseline data collected will be specific to each WMA, based on the habitat types present and its unique management issues. Baseline data typically includes:

- Distribution and extent of cover types, including mapping of vegetation cover types
- Vegetation structure, composition, and condition
- Presence or abundance of noxious weeds and other invasive plants
- Riparian and wetland condition and function assessment
- Photo points

To date, this program has collected baseline data on five WMAs, with surveys of all 32 WMAs expected to be completed by 2019. This is a long-term program and will be repeated starting in 2020.

Public Use Monitoring

Wildlife Management Areas use public surveys and monitoring tools (e.g., traffic counters) to evaluate public satisfaction and use patterns as well as identify issues of concern. In some areas, hunter check stations monitor hunter success and satisfaction. These survey data help managers determine whether they are meeting the goals for the WMA.

Sand Creek WMA personnel will perform a user survey every 5-8 years starting in 2014. In conjunction, traffic counters will be used on a 3-5 year timetable starting in spring 2014. Monthly readings will be taken during the spring-fall access period to establish traffic use patterns. A report will be written on data collected and added to SCWMA archives. All data collection will be performed by SCWMA staff and regional volunteers.

Reporting

Each WMA will produce a five-year report on implementation of this WMA plan in 2019, including a summary of accomplishments and progress towards meeting performance targets. During the five-year review, WMA staff will determine whether modifications to the plan are needed to meet performance targets, to accommodate changing conditions and priorities, or to incorporate advancements in management knowledge and techniques.

Monitoring is a crucial part of any natural resource management program and SCWMA staff monitors management effectiveness and efficiency in a number of ways.

Ute Ladies'-tresses Orchid

Sand Creek WMA will partner with botanists in the Department's Wildlife Diversity Program to count flowering Ute ladies'-tresses in each known subpopulation and survey potential habitat. Polygons delineating occupied and potential habitat will be digitally mapped. Surveys will most likely occur in mid-late August and/or early September. Permanent habitat monitoring transects, including measurement of woody vegetation and non-native species, vegetation composition, and photo points will be read every two years starting in 2014 or 2015 to assess Ute ladies'-tresses habitat change over time in response to management activities.

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Appendices

I. THE COMPASS – THE DEPARTMENT'S STRATEGIC PLAN

In 2006, the Department completed a strategic plan—*The Compass*—based on public input and legislative mandates. It continues to guide the Department in 2014 and is the primary guiding document for all other Department plans developed since 2006. The following table presents the goals, objectives, and strategies from *The Compass* that are most relevant to WMA management. *Compass* objectives are lettered on the left side for reference in the Management Program Table.

The Compass
GOAL—Fish, Wildlife, and Habitat
A. Objective – Maintain or improve game populations to meet the demand for hunting, fishing, and trapping.
B. Objective – Ensure the long-term survival of native fish, wildlife, and plants.
C. Objective – Increase the capacity of habitat to support fish and wildlife.
D. Objective – Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans.
GOAL—Fish and Wildlife Recreation
E. Objective – Maintain a diversity of fishing, hunting, and trapping opportunities.
F. Objective – Sustain fish and wildlife recreation on public lands.
G. Objective – Maintain broad public support for fish and wildlife recreation and management.
H. Objective – Increase opportunities for wildlife viewing and appreciation.
I. Objective – Increase the variety and distribution of access to private land for fish and wildlife recreation.
GOAL—Working With Others
J. Objective – Improve citizen involvement in the decision-making process.
K. Objective – Increase public knowledge and understanding of Idaho's fish and wildlife.
GOAL—Management Support
L. Objective – Attract and retain a diverse and professional workforce.
M. Objective – Provide equipment and facilities for excellent customer service and management effectiveness.
N. Objective – Improve funding to meet legal mandates and public expectations.

II. HISTORY

Over the years, the Sand Creek desert has not seen a lot of change in its land use from the original settlers in the area due to the rugged terrain and predominant sandy soils. Historically, the area was used by livestock producers for sheep and cattle grazing. This continues today. The area is predominantly owned by federal (BLM) and state (IDL) government with some parcels of private ground that are used for livestock grazing or that have been converted for agriculture production.

One of the most unique features of the area is the Saint Anthony Sand Dunes. These moving dunes are remnant of the prehistoric Mud Lake. The sand dune complex is approximately 11,000 acres providing recreation for over 250,000 visitors per year using the dunes for motorized recreation. With that many visitors, the habitat directly next to these dunes is fragmented by unauthorized trails through the sagebrush. Directly next to the sand dunes to the north are two mountains, North and South Juniper, which rise approximately 1,200 ft. and provide the heart of the winter range for migrating elk, mule deer, and moose. Recreation on the sand dunes is partially closed from January 1 – April 1 annually helping to reduce impacts to wintering wildlife in the area.

Another impact to the area was the installation of an eight-foot high fence for domestic elk and bison. This private hunting ranch encompasses approximately 11,600 acres of private ground predominantly on South Juniper Mountain right in the heart of critical winter range.

The Sand Creek Ponds is an area of diverse habitats at the base of Big Bend Ridge located at the northeast end of the WMA. The area has several pristine habitats that are home to several wildlife species throughout the year while providing several opportunities for those who are looking to recreate in the outdoors. Visitors have the option of using the area for the day or for multiple days camping at several of the designated camping sites. Fishing is a popular pastime at the ponds where three of the five bodies of water are stocked annually. The construction of the Sand Creek Ponds began in 1955 with the enlargement of Blue Creek Reservoir and initiation of Pond 4 and terminated in 1978 with the completion of Pond 1. All of the construction was supervised by Richard Wilson, the manager of SCWMA from 1950 to 1985.

In 1955, construction of Pond 4 was initiated and finished allowing storage of 150 acre/feet of water. In 1960, Pond 4 was enlarged by raising the dike three feet in height. This work was completed in 1961 for an additional 240 acre/feet of storage. Pond 3 was initiated in June 1964 and completed in November 1965. Construction on Pond 2 was started in 1967 and was completed in 1968. Pond 1 development was started in 1969 with the removal of top soil and trees from the site location; however, actual work started in 1974 and was completed in 1978.

The Chester Wetlands consists of 1,498 acres of deeded land, 1,481 acres of which is irrigated. Wetlands cover 762 acres, and 371 acres of the property have been farmed and grazed historically (Figure 1). The property has a 37.2 cfs decreed water right, 1,260 acre feet storage in Henry's Lake, and 589 acre feet in Island Park Reservoir all through the Dewey Canal.

In cooperation with other conservation partners, The Department was part of a North American Wetlands Conservation Act (NAWCA) where several projects on the Chester wetlands were proposed for wetland restoration for, but not limited to, waterfowl and waterbird species. Funding and projects were organized and work began late 2006. There were several bodies of water located on the property with old and dilapidated wooden water control structures. With funding through the NAWCA grant and cooperation with Ducks Unlimited, seven new water bodies were created, new water control structures were installed, and the canal that delivers the water was rebuilt. Water associated with the Chester wetlands is part of the Dewey Canal company.

III. MANAGEMENT REQUIREMENTS AND AUTHORITIES

Federal funds, including those derived from the Land and Water Conservation Fund and USFWS Federal Aid Program, have been used in part to acquire and manage SCWMA lands. Certain activities are prohibited from funding with Federal Aid funds, and all provisions of Federal Aid funding are followed.

Other federal and state laws also affect management of SCWMA. The Department has responsibility under provisions of the Endangered Species Act to ensure that management actions protect threatened and endangered species, and responsibility under the Clean Water Act to ensure that water quality standards and guidelines are in place on SCWMA lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on SCWMA.

The Idaho Noxious Weed Law under Idaho Code 22-2405 requires all landowners to eradicate noxious weeds on their lands, except in special management zones. The counties are required to enforce the law and the State of Idaho is required to ensure the counties do so.

Consistent with Idaho Codes 38-101 and 38-111, and through a cooperative agreement with the Idaho Department of Lands, the Department is required to pay a fee for fire protection on all forest and some rangeland acreage it owns, and for residences in forest areas. Fees are submitted annually based on the number of qualified acres and residences owned by the Department.

The Department is required by Idaho Code 63-602A to pay a fee-in-lieu of taxes (FILT) for lands that are owned by the Department and meet certain code requirements. These fees are submitted annually to affected counties based on the number of qualifying acres and agricultural tax rates.

IV. USER TRENDS FROM VISITOR USE SURVEYS

From February – November 2012, user data was collected by online surveys and in-person surveys by SCWMA staff and volunteers at the Sand Creek ponds. These surveys included a number of questions to assess user demographics, the purpose of the user's visit, and provided an opportunity for users to suggest ways to improve management of SCWMA. In-person surveys were handed out opportunistically by SCWMA staff and volunteers during non-designated survey times. We received 154 online surveys and 31 in-person surveys from SCWMA users during the survey period. The following information depicts some of the data gathered during this survey effort and SCWMA visitor use over time.

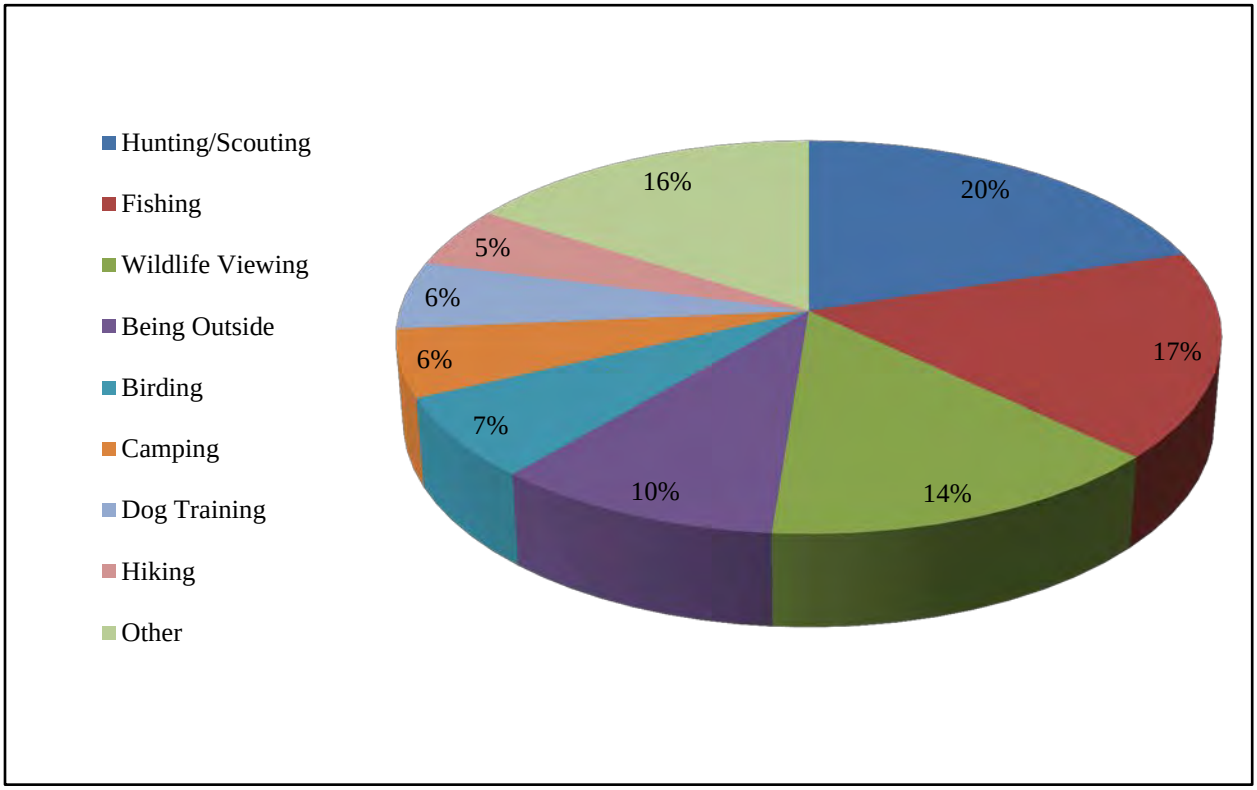
Some basic results from the surveys:

- Average number of days/year spent on the WMA: 3.9
- 74% previously visited SCWMA
- 84% Likely to visit SCWMA again
- 2% unlikely to revisit SCWMA again
- 14% were neutral or did not have an opinion about revisiting SCWMA

Visitor Residency:

- 96% Idaho residents
    - 37% form Bonneville County
    - 15% from Fremont County
    - 15% from Jefferson County
    - 10% from Madison County
    - 12% from Ada, Bingham, Bannock, Bonner, Canyon, Franklin, Kootenai, Lewis and Teton counties
    - 11% did not respond
- 4% Non-residents (UT, MT, TX, OR)

Activities on SCWMA are shown below according to survey answers. Patrons participating in the survey were given the opportunity to provide up to three answers defining their purpose for visiting SCWMA. For example, of the 185 patrons participating in the survey, 6% stated that they use SCWMA to go camping. Appendix Figure IV-1 represents all answers provided in both surveys (online and in-person) with a percentage of each activity that was given. The category listed as *Other* includes activities whose percentage was ≤4%. These activities included trapping, volunteers, biking, snowmobiling, shooting, ATV riding, horseback riding, picnicking, boating, photography, and antler collecting.



Appendix Figure IV-1. Sand Creek WMA activities selected by users as for purpose of visiting the WMA. Answers include online and in-person surveys with percentage given of patrons who selected that activity. Activities with four percent or less were combined into the category; *Other*. These activities include trapping, volunteers, biking, snowmobiling, shooting, ATV riding, horseback riding, picnicking, boating, photography, and antler collecting.

V. 1999-2013 ACCOMPLISHMENTS

Since the SCWMA plan was revised in 1999, these accomplishments have occurred relative to the Goals and Objectives of the 1999 plan.

Goal: Provide quality winter habitat for migratory big game on traditional winter ranges and secure year-round habitat for resident and migratory wildlife.

Objective: Provide winter habitat in sufficient quality and quantity to support the Sand Creek elk herd.

Accomplishments:

- Continued cooperative development of critical elk winter range with other agencies, organizations, and private landowners.
- Monitored and pursued all opportunities to protect critical portions of winter range, migration corridors, and transition range through use trades, easements, acquisitions, and other appropriate means.
- Provided technical assistance and made appropriate recommendations on any proposed projects or plans by other agencies, organizations, or private landowners that may affect big game winter range, migration corridors, or transition range.
- Improvements were made with forage quality and quantity on winter and transition ranges through habitat manipulations, crop plantings, livestock grazing modifications, and other appropriate means. All projects considered other wildlife uses and the potential effects on other species of wildlife.
- Provided assistance to the regional wildlife staff in monitoring migrations, winter elk numbers, herd composition, distribution, and movements through winter aerial and ground counts.
- Recommended, established, and maintained vehicle closures and restrictions to improve big game security.

Objective: Maintain quality winter habitat for the Sand Creek mule deer, white-tailed deer, and moose herds.

Accomplishments:

- Provided assistance to the wildlife staff in monitoring deer and moose numbers, herd composition, distribution, and movements on winter range.
- Identified opportunities to improve habitat quality through vegetation manipulation projects. Researched, designed, and implemented appropriate projects in cooperation with BLM, IDL, other organizations, and private landowners.
- Monitored hunting seasons and harvest strategies and made appropriate recommendations annually.

Objective: Provide quality and secure year-round habitat on the SCWMA for resident and migratory wildlife.

Accomplishments:

- Maintained approximately 55 miles of boundary and interior fences to control unauthorized livestock use of SCWMA.
- Managed vehicle access to provide big game security and habitat protection throughout the year.
- Provided appropriate food crops in the Sand Creek Pond area and the Chester Wetland Segment for year-round use by big game and other wildlife to delay fall migrations of big game to winter range.
- Provided a diversity of habitats throughout the SCWMA for a variety of wildlife and plant species.

Goal: Increase sage- and sharp-tailed grouse production.

Objective: Improve and protect sage- and sharp-tailed grouse nesting, brood-rearing, and winter habitat.

Accomplishments:

- Monitored and pursued all opportunities to protect critical production and winter habitat through land acquisitions, easements, use trades, allotment management plans, and other appropriate means.
- Provided technical assistance and made recommendations on proposed projects and plans submitted by other agencies, organizations, and private landowners that could affect grouse habitat.
- Identified and mapped wintering areas and coordinated with other landowners and agencies to protect winter habitat. Obtained, recorded, and reported Global Positioning System (GPS) locations on all grouse seen on winter big game counts in the area.

Objective: Monitor sage- and sharp-tailed grouse populations on and adjacent to the SCWMA.

Accomplishments:

- Conducted annual lek searches on the SCWMA and adjacent lands. Identified, mapped, and monitored major lek complexes annually.
- Conducted and monitored the Red Road and Sand Creek Road sage-grouse routes and the Grassy and Sand Creek sharp-tailed grouse routes annually and documented the results.
- Conducted hunter check stations, hunter field checks, and provided wing barrels during hunting seasons to collect grouse harvest information. The results were documented annually.

Goal: Acquire the 1501 acre Chester Wetlands property in Fremont County by 2001.

Objective: To ensure long-term protection and management of fish and wildlife resources on the 1,501-acre property within biological limits, economic, social, and manpower constraints.

Accomplishments:

- The Chester Wetland Segment was acquired by The Nature Conservancy on August 1, 2001 and was sold over two years to the Department. Some of the funds to acquire the property are the result of land exchanges by the Department.
- The Department assumed management responsibilities on August 2, 2001.
- Provided artificial nesting structures where appropriate and maintained, monitored, and documented use.
- Worked in cooperation with Ducks Unlimited and other partners to develop habitat criteria and a long-term vegetation management plan.
- Excluded livestock grazing except when and where grazing was beneficial to improve habitat.
- Improved the water canal delivery system by installing 31 water control structures to maximize the efficiency of water delivery.
- Established approximately 70 acres of cereal grain and legume crops for wildlife use.

Goal: Maintain or increase use of SCWMA by nongame and species with special designations.

Objective: Provide secure habitat for wildlife with special designations and protect plant species listed as Threatened, Endangered, or Species of Special Concern.

Accomplishments:

- Completed a Sensitive Plant survey on SCWMA by 2005. Provided adequate security for listed plant species and incorporated plant locations into weed control plans.
- Provided and protected nesting areas for trumpeter swans on the Sand Creek Ponds and the Chester Wetland Segment. Nesting results are monitored and documented annually.
- Provided educational opportunities for the public concerning special wildlife and plant species. Conducted tours, provided information, and gave presentations to appropriate groups, organizations, and individuals.
- Provided a diversity of habitats for other nongame species.
- Established a management plan for the threatened Ute ladies'-tresses orchid (*Spiranthes diluvialis*) on the Chester Wetland Segment.

Goal: Increase waterfowl production at the Sand Creek Ponds and the Chester Wetland Segment.

Objective: Provide quality nesting cover at the Sand Creek Ponds and the Chester Wetland Segment.

Accomplishments:

- Provided artificial nesting structures where appropriate and maintained, monitored, and documented annual use.
- Restricted public use of nesting areas during nesting periods. Signed and routinely patrolled nesting areas to minimize disturbance.
- Monitored goose production annually and monitored duck production periodically as required in the Department's Statewide Waterfowl Management Plan.
-

Goal: Maintain quality public recreational opportunities consistent with the SCWMA mission.

Objective: Provide hunter access and opportunity.

Accomplishments:

- Provided designated routes for motorized access on the WMA.
- Maintained major roads at a minimum level for vehicle use.
- Provided and maintained non-motorized facilities including horse corrals, trails, and primitive camping areas.
- Maintained contact with neighboring landowners to provide public access on private lands for hunting activities.

Objective: Provide access and opportunity for anglers at the Sand Creek Ponds.

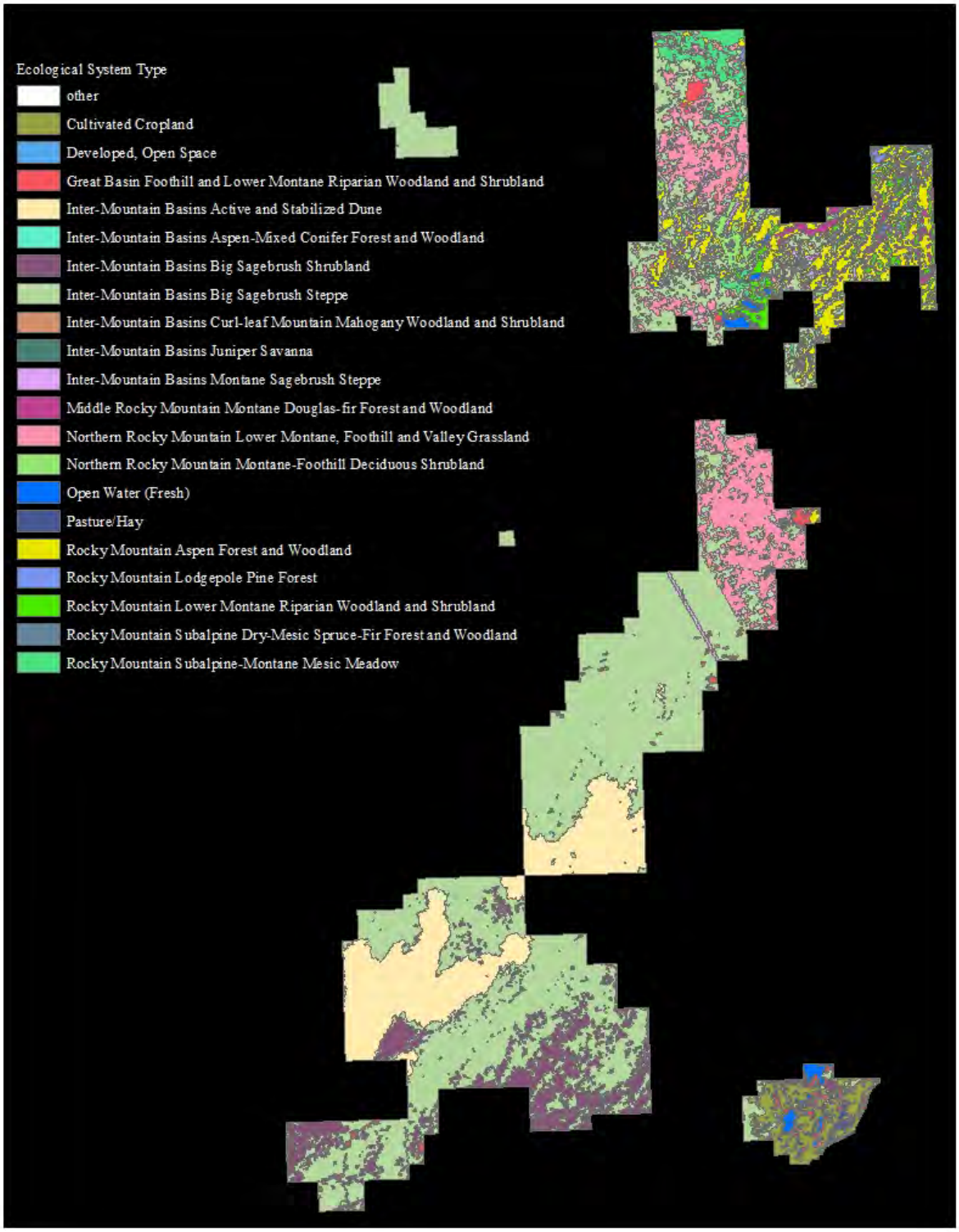
Accomplishments:

- Maintained the major roads in the pond area for vehicular use.
- Provided and maintained primitive camping and parking facilities in the pond area.
- Provided a variety of access developments to serve anglers with disabilities.

VI. VEGETATION

Northwest GAP Analysis Project Land Cover, version 2.0 spatial data (U.S. Geological Survey, Gap Analysis Program, Moscow, Idaho; http://gapanalysis.usgs.gov) was used to estimate the ecological system type composition of SCWMA.

Ecological System	Acres	Percentage
Intermountain basins big sagebrush steppe	15,619.16	49%
Intermountain basins active and stabilized dune	3,792.82	12%
Northern Rocky Mountain lower montane, foothill and valley grassland	3,174.28	10%
Intermountain basins big sagebrush shrubland	2,297.47	7%
Rocky Mountain aspen forest and woodland	2,036.90	6%
Rocky Mountain subalpine-montane mesic meadow	874.62	3%
Rocky Mountain lower montane riparian woodland and shrubland	841.79	3%
Cultivated cropland	750.43	2%
Northern Rocky Mountain montane-foothill deciduous shrubland	703.42	2%
Great Basin foothill and lower montane riparian woodland and shrubland	461.51	1%
Intermountain basins montane sagebrush steppe	363.97	1%
Middle Rocky Mountain montane Douglas-fir forest and woodland	306.60	1%
Open water (fresh)	224.97	1%
Intermountain basins juniper savanna	131.47	< 1%
Intermountain basins aspen-mixed conifer forest and woodland	118.64	< 1%
Pasture/hay	116.16	< 1%
Rocky Mountain lodgepole pine forest	114.40	< 1%
Developed, open space	101.96	< 1%
Other (seven total ecological types)	28.76	< 1%
Intermountain basins curl-leaf mountain mahogany woodland and shrubland	22.63	< 1%
rocky mountain subalpine dry-mesic spruce-fir forest and woodland	21.32	< 1%



Map of ecological system type composition of Sand Creek WMA (types of less than 20 acres were combined in the "other" category)

VII. WILDLIFE AND FISH SPECIES LIST

(*Selected Common Species; additional information available at www.idfg.idaho.gov*)

Mammals	***Mammals (cont.)***	***Amphibians***
Elk	Bushy-tailed wood rat	Tiger salamander
Moose	Kangaroo rat	Northern leopard frog
Mule deer	Muskrat	Western toad
White-tailed deer	Porcupine	Western painted turtle
Pronghorn antelope	Great basin pocket mouse	***Birds***
Grizzly bear	Western jumping mouse	Prairie falcon
Black bear	Shrew (various species)	Great horned owl
Mountain lion	Hoary bat	Great gray owl
Bobcat	Silver-haired bat	Short-eared owl
Canada Lynx	Big brown bat	Burrowing owl
Gray wolf	Yuma bat	Sharp-tailed grouse
Coyote	Long-eared myotis	Sage-grouse
Red fox	Western small-footed myotis	Mourning dove
Mink	Townsend's big-eared bat	Eurasian collared-dove
River otter	Little brown bat	Rock dove
American badger	***Reptiles***	Sandhill crane
Wolverine	Western rattlesnake	Dusky (blue) grouse
Short-tailed weasel	Racer	Ruffed grouse
Long-tailed weasel	Western terrestrial garter snake	Gray partridge
Striped skunk	Common garter snake	Northern flicker
Raccoon	Rubber boa	Yellow-bellied sapsucker
Mountain cottontail	Gopher snake	Hairy woodpecker
Black-tailed jackrabbit	Sagebrush lizard	Downy woodpecker
White-tailed jackrabbit	Western skink	Horned lark
Snowshoe hare	***Fish***	Steller's jay
Least chipmunk	Rainbow trout	Black-billed magpie
Yellow-bellied marmot	Yellowstone cutthroat trout	Common raven
Richardson's ground squirrel	Brown trout	American crow
Golden mantled ground squirrel	Brook trout	Song sparrow
Red squirrel	Mottled sculpin	White-crowned sparrow
Northern flying squirrel	Redside shiner	Chipping sparrow
Northern pocket gopher	Speckled dace	Slate-colored junco
Beaver	Longnose dace	Dark-eyed junco
Deer mouse	Mountain sucker	Vesper sparrow
Meadow vole	Utah sucker	American goldfinch

Birds (cont.)	***Birds (cont.)***	***Birds (cont.)***
Green-tailed towhee	Audubon's warbler	Bufflehead
Black-capped chickadee	Yellow-rumped warbler	Ruddy duck
Mountain chickadee	Bullock's oriole	Hooded merganser
Dipper	Red-winged blackbird	Common merganser
Brown creeper	Yellow-headed blackbird	Red-breasted merganser
Red-breasted nuthatch	Brewer's blackbird	Canada goose
House wren	House sparrow	Snow goose
Canyon wren	American tree sparrow	Ross's goose
Rock wren	Brewer's sparrow	White-fronted goose
Long-billed marsh wren	Brown-headed cowbird	Trumpeter swan
American robin	Pine siskin	White-faced ibis
Townsend's solitaire	Barn swallow	Killdeer
Mountain bluebird	Tree swallow	Common snipe
Golden-crowned kinglet	Cliff swallow	Herring gull
Ruby-crowned kinglet	Calliope hummingbird	Franklin's gull
Water pipit	American widgeon	Spotted sandpiper
Cedar waxwing	Mallard	Least sandpiper
Bohemian waxwing	Gadwall	Western sandpiper
Northern shrike	Northern pintail	Wilson's phalarope
Loggerhead shrike	Northern shoveler	Greater yellowlegs
European starling	Cinnamon teal	Lesser Yellowlegs
Western meadowlark	Blue-winged teal	Long-billed curlew
Western tanager	Green-winged teal	American avocet
Evening grosbeak	Wood duck	Willet
Pine grosbeak	Canvasback	Common loon
Black-headed grosbeak	Redhead	Horned grebe
Gray-crowned rosy finch	Ring-necked duck	Eared grebe
Purple finch	Greater scaup	Pied-billed grebe
Cassin's finch	Lesser scaup	Western grebe
Common redpoll	Harlequin duck	Clark's grebe
Yellow warbler	Common goldeneye	American white pelican
MacGillivray's warbler	Barrow's goldeneye	Belted kingfisher

VIII. NOXIOUS WEED CONTROL

Noxious weeds have been under active control on SCWMA since its acquisition in 1947. Control measures include proper land use practices, mechanical control, chemical control, and biological control. Some major weed species being controlled are musk thistle (*Carduus nutans*), Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), leafy spurge (*Euphorbia* esula), and knapweed species (*C. diffusa* and *C. maculosa*).

Chemical control is primarily used on infestations found along roadways, heavily used areas, and new infestations. Where herbicide for specific applications on corresponding land management agencies are warranted, their agency regulations are followed. Current SCWMA tools for chemical application include a trailered 300 gallon boomless sprayer, two 25-gallon ATV sprayers, and backpack sprayers. Rapid re-vegetation of disturbed soil prior to noxious weed infestation is the preferred management option at SCWMA. Establishment of desirable plants minimizes weed control naturally.

The most common methods of weed movement onto and within the WMA are vehicles, animal movements (e.g., wildlife and trespass cattle), and wind/water borne seed. Currently there are no permanent monitoring plots; however, there are plans to develop weed monitoring plots on SCWMA for permanent monitoring of infestations.

IX. LAND ACQUISITIONS AND AGREEMENTS

Land Acquisitions			
Year	**Funds used**	**Acres**	**Acquired From**
1947	Pittman-Robertson	4,763	Edgar Chapman
1957	Pittman-Robertson	440	Mary B. Parker
1958	Pittman-Robertson	200	Rex E. Cutler
1960	Pittman-Robertson	160	Fremont Co.
1961	Pittman-Robertson	10,207	Alan Ricks
1967	Pittman-Robertson	80	Alan Ricks
1989	Teton Mitigation	920	Reed Mortimer
1989	Teton Mitigation	600	John Pinnock
2003	Pittman-Robertson	1498	The Nature Conservancy (Chester Wetlands)
	Subtotal	18,788	

Active Cooperative Agreements			
Year	**Segment**	**Acres**	**Cooperator**
1951		1,000	BLM
1961		8,587	BLM
1979		1,914	BLM
1979		880	White Sands Cattle
1982		400	BLM
	Subtotal	12,781	

20 Year Lease			
Year	**Segment**	**Acres**	**Cooperator**
2013	July Creek	920	Idaho Dept. of Lands
	Subtotal	920	
	WMA Total	32,489	

X. INFRASTRUCTURE

Building/structures
38’ x 50’ technician house (CWS)
24’ x 45’ two story headquarters office/conference room (CWS)
17’ x 25’ garage (CWS)
29’ x 38’ wood framed house (cabin)
24’ x 50’ wood framed shop
10’ x 12’ generator house
2 – 7’ x 7’ concrete outhouses
5.5’ x 5.5’ outhouse
54’ x 70’ steel Quonset
8.5’ x 7’ pump house
40’ x 50’ barn
2 – 16’ x 12’ horse sheds
30’ x 68’ biologist house (Parker)
24’ x 33’ office/shop
24’ x 104’ steel covered storage bays attached to the office/shop
24’ x 60’ steel covered storage bays
12’ x 24’ open storage shed
18’ x 15’ granary – used as storage shed
6’ x 6’ walk-in cooler (unused)

Earth structures
16 man-made ponds
Approximately seven miles of maintained canals for water delivery

Water improvements
6 wildlife guzzlers with water catch tarp and 1,800 gallon storage tank
42 water control structures

Roads and trails
15 miles of roads maintained by the Department
8 miles of trails

Fences
25 miles of 3-strand lay-down
43 miles of 3- and 4-strand

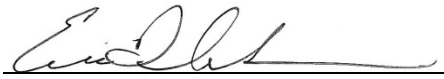
Campsites
15 approved and developed campsites - each has a fire ring

SAND CREEK

WILDLIFE MANAGEMENT AREA PLAN

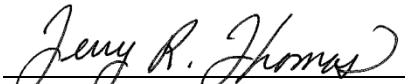
Approval

Submitted by:

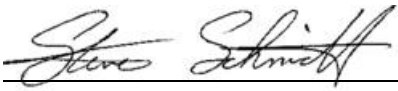


Eric D. Anderson, Habitat Biologist

Reviewed by:

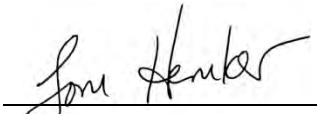


Terry Thomas, Regional Habitat Manager



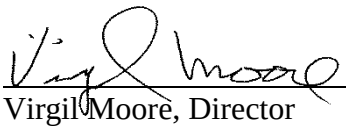
Steve Schmidt, Regional Supervisor

Sal Palazzolo, Bureau of Wildlife



Tom Hemker, State Habitat Manager

Approved by:



Virgil Moore, Director