Sterling
Wildlife Management Area

Management Plan
2014

Southeast Region

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

The objective of this updated management plan (Plan) is to report progress since the last revision and to provide direction for future management of Sterling Wildlife Management Area (SWMA). This revision was completed in 2014 with extensive public input. This plan is tiered off 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)

The Plan includes the vision and mission for SWMA as well as background information. It also reports on the progress of goals identified in the 1999 plan as well as additional accomplishments (Appendix V), and addresses new or continuing issues. It supplements the Department strategic plan (*The Compass*, Appendix I) and was developed with public involvement. An online survey was posted on the Department's website in 2012 to collect public input on the current management of the state wildlife management areas. Suggestions from the survey and other input were incorporated into the planning process wherever possible.

The Plan directs the Department to manage the vegetation and public use on SWMA for the benefit of wildlife habitat and fish and wildlife-based public recreation. Some examples of strategies to be employed include habitat improvements (food plots, woody cover plantings, managed open water), pest control (noxious weeds, Russian olives, mosquito/West Nile virus monitoring), providing quality access points for hunting and fishing, providing public outreach and educational opportunity, and monitoring the effectiveness of all efforts through wildlife and public use surveys.

An effort has been made to broaden the scope of the Plan so the management of SWMA takes into account the role and influence of the WMA on wildlife and habitat within the surrounding landscape, as well as the influence of the surrounding landscape on SWMA. The extent of the landscape consideration is largely driven by the known or expected occurrence of high priority and at-risk species, as well as land use patterns and topographical features in the area. There will be an attempt to recognize and consider all forms of wildlife with particular focus on listed

sensitive species known or expected to occur within the SWMA landscape. See Appendices VI and VII for more complete listings pertaining to SWMA.

Performance targets were identified through the public input process and from perspectives of Department staff. Given the priorities for SWMA, those performance targets or issues have been addressed within the Management Program section.

This plan will serve as a guide for managers, partners, and the public in making and justifying management decisions that will serve the stated priorities and goals most efficiently. Particular performance targets and strategies are dependent on adequate funding, personnel, and public support.

Introduction

Idaho Department of Fish and Game (Department) manages 32 Wildlife Management Areas (WMAs) distributed throughout seven administrative Regions. 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 confirms their value to big game, nongame, and many at-risk species identified in Idaho's State Wildlife Action Plan (SWAP). In many cases, WMAs provide the principal habitat for at-risk species.

Wildlife Management Areas often abut other protected lands such as National Forests, Bureau of Land Management lands, Bureau of Reclamation lands, state endowment lands (Idaho Department of Lands), state and local parks, or private lands protected by conservation easement. Due to the wildlife-focused management, WMAs 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 (such as mountain brush uplands and marsh wetlands), and creating enhanced habitat (such as food plots and managed wetlands) to increase the carrying capacity for selected 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* (Appendix I) . Priorities, performance targets, and strategies are then developed to be consistent with the above mentioned documents and to enhance conservation values inherent to the WMA.

This management plan is designed to provide broad guidance for the long-term management of SWMA. It replaces an earlier management plan written in 1999. The plan is tiered off other Department plans as mentioned in the Executive Summary above and includes the vision and mission for SWMA as well as background information. It also reports on the progress of goals identified in the 1999 plan as well as additional accomplishments (Appendix V), and addresses new or continuing issues.

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 WMA plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* goals and objectives relevant to WMA management 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.

Sterling WMA Vision

Sterling WMA will be managed to benefit wildlife by providing diverse wetland and upland habitat, and also to provide public access for wildlife-based recreation with emphasis on hunting opportunity.

Sterling WMA Mission

All wildlife resources of SWMA will be protected and managed as mitigation for habitat losses, and to ensure sufficient quantities of high quality habitat for waterfowl and ring-necked pheasant as well as a wide variety of other game and nongame species. High quality wildlife-based recreational opportunities will be provided compatible with provisions for wildlife and wildlife habitat.

An effort has been made to broaden the scope of the Plan so the management of SWMA takes into account the role and influence of the WMA on wildlife and habitat within the surrounding landscape, as well as the influence of the surrounding landscape on SWMA. The extent of the landscape consideration is largely driven by the known or expected occurrence of high priority and at-risk species, as well as land use patterns and topographical features in the area (see Management Program/SWMA Landscape Conservation section). There will be an attempt to recognize and consider all forms of wildlife with particular focus on listed sensitive species known or expected to occur within the SWMA landscape.

The Southeast Region

The Southeast Region, headquartered in Pocatello, manages five WMAs totaling 17,000 acres of land. This includes deeded properties, leases, and cooperative agreements. Management focus is to maintain highly functional wildlife habitat and provide wildlife-based recreation. These areas include:

- Blackfoot River WMA, located in Caribou County, is focused on the important Blackfoot River headwaters fishery, but also provides big game, upland game, and waterfowl habitat. It is also a popular fishing access point.
- Georgetown Summit WMA is an important winter range for deer and elk, but also provides year-round habitat for big game and several species of upland game. The Bear River flows through the property, and the stream and riparian corridor is important for fisheries, furbearers, and waterfowl.
- Montpelier WMA, also located in Bear Lake County, serves mainly as an elk and mule deer winter range.
- Portneuf WMA in Bannock County is key part of a mule deer winter range that wraps around the Portneuf Mountains from Inkom to Lava Hot Springs. It is also popular for a variety of outdoor public recreation including big game and upland game hunting.
- Sterling WMA in central Bingham County lies adjacent to American Falls Reservoir and is a mixture of sagebrush steppe and wetlands that provide habitat for a variety of waterfowl and water birds. Upland game, particularly ring-necked pheasant, is also an important habitat management consideration. The area is well used for both upland game and waterfowl hunting.

Nearly all WMAs benefit a variety of nongame and sensitive species of plants and animals. Some examples of sensitive species for the Southeast Region include red glasswort, Idaho sedge, desert valvata, Idaho dunes tiger beetle, Yellowstone cutthroat trout, northern leopard frog, short-eared owl, Columbian sharp-tailed grouse, sandhill crane, trumpeter swan, lesser scaup, northern pintail, white-faced ibis, long-billed curlew, and Brewer's sparrow.

Modification of Plan

This management plan is designed to provide broad guidance for the long-term management of SWMA. It replaces an earlier management plan written in 1999. This updated plan was completed in 2014 with extensive public input and review. The plan is tiered off other Department plans as mentioned in the Executive Summary above.

Other Considerations

All regional WMA programs are funded through a combination of hunting and fishing license revenue, appropriations from federal excise taxes (firearms, ammunition, archery equipment, and fishing tackle), and funding provided by other partners to mitigate habitat loss or simply to contribute to the conservation effort. Hunters and anglers pay a large portion of the management

costs. They and other users are rewarded with areas that are open to the public for hunting, trapping, fishing, and viewing. The habitat provided helps to attract and sustain wildlife populations for consumptive and non-consumptive use, including venues for outdoor education activities.

All strategies proposed in this plan are bounded by the contractual agreements between cooperating agencies, the mission of SWMA, and all applicable Department species management plans and policies. Issues and strategies that are inconsistent with the mission or are outside the scope or function of SWMA 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

Sterling WMA is located in Bingham County about four miles northeast of Aberdeen and 25 miles southwest of Blackfoot. The WMA is adjacent to the west side of American Falls Reservoir and is separated into three sections (Figure 1). SWMA originated with a land gift of 121 acres from the American Game Association in 1968 (Appendix II). Since that time, additional parcels have been purchased by the Department (Appendix IX). Additionally, cooperative agreements have been signed with Federal agencies and private landowners to manage their ground as part of SWMA. Currently, the 4,106-acre area consists of 1,951 acres of Department land interspersed with 1,700 acres Bureau of Reclamation (BOR) land, 115.42 acres of Bureau of Land Management (BLM) land, and 340 acres of private land that are managed by the Department.

The landscape is low-rolling, loess-covered lava reefs vegetated by both native and exotic trees, shrubs, forbs, and grasses. The area is a mixture of uplands (31%), marshes (20%), meadows (8%), open water (8%), agricultural lands (17%), and Russian olive (*Elaeagnus angustifolia*) woodlands (6%). Approximately 696 acres of the SWMA are currently being cooperatively farmed. Uplands support Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) with varying grass species in the understory, including cheatgrass (*Bromus tectorum*) in disturbed areas. Marshes are dominated by tall emergent species, primarily cattail (*Typha latifolia*) and hardstem bulrush (*Schoenoplectus acutus*). Meadows fringe the marshes and are characterized by Nebraska sedge (*Carex nebrascensis*) in wetter areas and Baltic rush (*Juncus balticus*) and clustered field sedge (*Carex praegracilis*) in briefly saturated, mesic areas. A large portion of the meadow habitat occurs on alkaline soils (dominated by saltgrass, *Distichlis spicata*) and includes seasonally saturated seeps supporting iodine bush (*Allenrolfea occidentalis*) and red glasswort (*Salicornia rubra*), both rare plant species in Idaho. Noxious weeds are patchy, with meadows being notably susceptible to invasion by Canada thistle (*Cirsium arvense*), field sowthistle (*Sonchus arvensis*), and perennial pepperweed (*Lepidium latifolium*). The elevation is 4,400 feet and the average growing season is 125 days. Annual precipitation is 8-12 inches, most of which falls outside of the growing season. Temperatures range from -30 to 104 degrees Fahrenheit with high winds being common, particularly in the spring.

The diversity of vegetation and water provides a unique situation in which to manage for wildlife habitat and hunting opportunity. Because of the close proximity to Pocatello, hunting pressure is high during the pheasant season. Hunters are attracted to SWMA because the land is public, the high quality of the habitat, and the pen-reared bird release program. A WMA pheasant permit is required. Waterfowl hunting is less popular because of the competition with pheasant hunters and because most of the ponds freeze over relatively quickly during most years. In 2014 pheasant hunting hours will start later to help reduce the disturbance to waterfowl hunters.

Public use of SWMA has been estimated using several different methods (Appendix IV). Most information has been focused on use during the pheasant season when heaviest use occurs. More recently an effort has been made to gather accurate information for the full year with particular

emphasis on capturing use that is non-consumptive or less related to wildlife-based recreation. A systematic year-round survey for all use will be conducted in 2014-15.

Numerous developments have been created to improve the area for wildlife. Wetland projects included pond excavations, pothole blasting, water control structure maintenance, and most recently, rerouting of streams to create additional wetlands. Upland projects include fence maintenance, re-seeding agricultural fields, planting shelterbelts, noxious weed control, Russian olive control, and occasional prescribed burning. In 2011, a plan for managing both wetland and upland vegetation was completed and implemented.

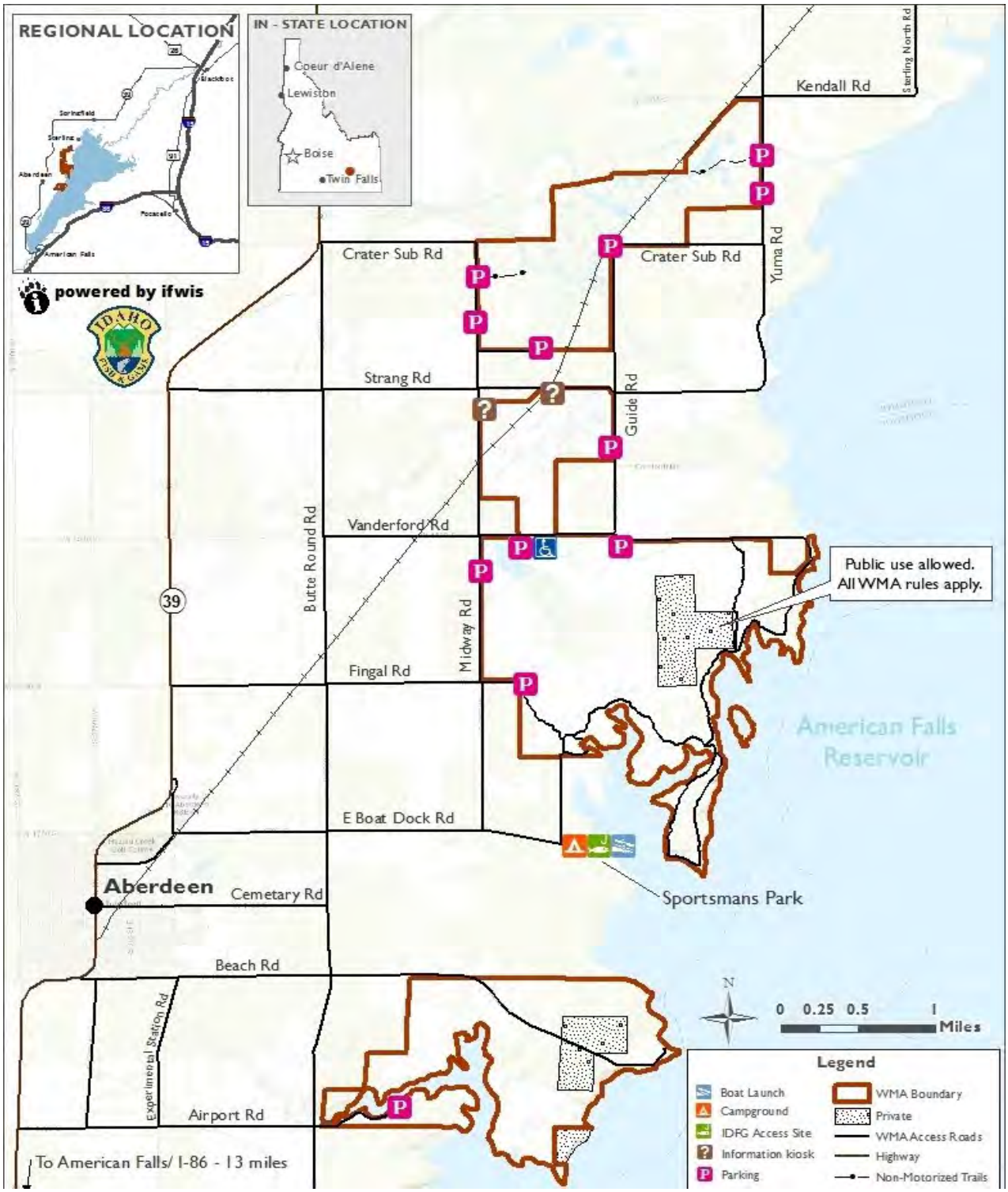

Figure 1. Sterling Wildlife Management Area.

Management Issues

The list of issues addressed in this plan was generated from public input and from within the Department as described below. Similar issues are grouped into one of three categories: Habitat Management, Wildlife Management, and Public Use Management. The identified issues in turn generated performance targets, which were grouped by management directions within one of the three SWMA priorities (wetlands, sage-steppe uplands, and public hunting opportunity). The performance targets/issues are all tied to a *Compass* (strategic plan) objective (Appendix I). Seventy-three performance targets/issues were identified. Again, an effort has been made to broaden the scope of the plan so the management of SWMA takes into account the role and influence of the WMA on wildlife and habitat within the surrounding landscape, as well as the influence of the surrounding landscape on SWMA. The landscape delineation is largely driven by the known or expected occurrence of high priority and at-risk species potentially impacted by SWMA, but also considers topographical features and land use patterns.

Throughout 2012 (Feb-Dec), an online survey form was available on the Department website, known interested parties were contacted via mailed postcards. Hard copies were also made available at the regional office or mailed out upon request. The survey allowed participants to answer questions and provide feedback on WMA management statewide and the management of specific WMAs.

In addition to sampling type of use and demographics, this tool was meant to collect input from the public on the current management of WMAs and suggestions for improvement. The survey (Appendix IV) included three leading questions meant to garner specific input: #6 – "What could IDFG do to improve your visit to this WMA?", #7 – "Do you have any specific suggestions or comments about the management of this WMA?", and #10 – "Do you have any specific suggestions or comments on how to improve these [statewide] goals or current management of IDFG WMAs?"

From 68 responses pertaining to SWMA, 92 comments or suggestions were received. Occasional unsolicited comments were also gathered from WMA "user sign-in stations" or through word of mouth. Most of the comments came from users who identified hunting/scouting as their primary use of the WMA. Other uses included dog training, bird watching, fishing, and other wildlife viewing.

In 2014 draft copies of all WMA plans were made available for public review and comments solicited. Thirty one responses were received concerning the SWMA Plan. No new issues were raised since the 2012 input gathering effort. Of the 30 individuals who answered specific questions pertaining to the SWMA Management Priorities and overall Plan as written, 90% agreed with the priorities and 97% were in agreement or neutral with the current draft.

Neighbors to the WMA and management partners also have provided input through written correspondence and word of mouth. All input/issues from the public were reviewed and any

suggesting changes or improvement are listed below (similar comments have been paraphrased and/or combined).

Issues Identified by the Public

Habitat Management

1. **Habitat improvements need to be made and maintained on the SWMA.**

   Discussion: The purpose of WMA management is to develop and/or protect wildlife habitat. Every reasonable opportunity to improve habitat is explored; however, financial and/or logistic problems often constrain projects. Because of SWMA's situation of being surrounded by farmed and grazed lands that provide little habitat for wildlife, enhancements are essential to sustain wildlife populations at levels requested by the public. Otherwise, the acreage could not provide the necessary habitat requirements. Additionally, since some wildlife species such as the ring-necked pheasant are closely linked to agriculture, a farming program is necessary to provide feeding, nesting, and wintering habitat. Finally, to provide a diverse landscape for a variety of wildlife species, woody cover plantings are needed to provide winter, loafing, and escape cover for nongame as well as game species. Currently, many of the habitat improvements on SWMA are possible because of the share-crop program.

   This issue is addressed through the *Compass* objective: "Increase the capacity of habitat to support fish and wildlife."

2. **Cooperative farming agreements should benefit wildlife.**

   Discussion: All agricultural land that is farmed on SWMA (approximately 366 acres) is share cropped by cooperating local farmers. The compensation to the Department is in the form of food plots, maintenance, planting of trees and nesting cover, and irrigation of trees and nesting cover on the WMA. No cash payments are made to the Department. This form of compensation is critical to the functioning of SWMA. Because SWMA is a relatively small acreage and surrounded by intensely farmed and grazed lands, the habitat on the WMA is even more important. This program provides the Department with additional habitat developments on the WMA that otherwise would not be feasible. Species such as ring-necked pheasants are closely tied to agriculture and would not maintain their current levels without the cooperative farming program. Many nongame species also directly benefit from this program through the additional food sources and the woody cover plantings that supply wintering, nesting, loafing, and escape cover. However, it is also important that the Department and the resource get a fair return on the leases that are made.

   This issue is addressed through the *Compass* objective: "Increase the capacity of habitat to support fish and wildlife."

3. Noxious weeds are a problem on SWMA.

Discussion: Traditionally, the wildlife profession and agri-business have disagreed on the effects of "weeds." This disagreement has been the root of the neighbor relations problem on SWMA for many years. Wildlife biologists considered the "forb" component (broad-leafed, herbaceous plants) as a critical part of the vegetation that makes up wildlife habitat. The forbs provide density and visual obstruction that increases the chances that a nest will be successful. The agri-business community, however, saw weeds as a threat to their livelihood in the form of reduced crop production. Eventually it became obvious to the wildlife supporters that "noxious weeds" are everyone's concern. By law, weeds that are listed as "noxious" must be controlled by landowners. Since "noxious" weeds are usually exotic plants that have not evolved with the natural controls that native plants have, the result of an infestation is a monotypic plant community that usually is not suited for most wildlife species. These infestations tend to reduce crop and range yields as well as reduce the quality and quantity of wildlife habitat.

Weed control on SWMA is one of the top priorities so that we meet our legal obligation. Crews of temporary employees and staff personnel use tractors, 4-wheelers, and backpack sprayers to work on problem areas. The Bingham County Weed Supervisor makes periodic checks on the area to help identify problem spots.

This issue is addressed through the *Compass* objective: "Increase the capacity of habitat to support fish and wildlife."

4. Open water areas on SWMA will be managed to reduce the mosquitoes that spread West Nile Virus.

Discussion: West Nile Virus (WNV) was detected in the U.S. in 1999. The virus reached Idaho in 2004. The disease is spread primarily by the *Culex* mosquito. When WNV was detected in Idaho, the Department put up signs on all WMAs to inform the public of ways to reduce the likelihood of being bitten by mosquitoes. In 2006, the prevalence of the disease increased. Bingham County took an active role and created a Mosquito Abatement District. At that time, the county hired a contractor to conduct the mosquito control. Sterling WMA solicited advice from the county on measures that would minimize mosquito production while still meeting the wildlife mission. The SWMA is tested regularly and follows all advice from the contractor. The Department has provided direct assistance, including larvicide treatment of ponds and funding aerial treatments for adult mosquito control. West Nile Virus has been detected in one pond.

This issue is addressed through the *Compass* objective: "Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans."

5. The Department will acquire additional property to help achieve the WMA mission.

Discussion: The Department has purchased land for many years to improve and protect wildlife habitat as well as to provide public access. The practice has been welcomed by some but has been a topic of controversy for others. Sportsmen have always encouraged the Department to purchase additional land in order to provide the benefits listed above. However, some sportsmen have been concerned about how land purchases are funded. County commissions have resisted the Department's purchase of lands because those lands were then removed from the county tax base. Private individuals resented the Department taking productive lands out of the hands of citizens who could farm or graze those lands for income. Both groups have felt that the Department has had enough problems managing the lands that they already owned without adding more land.

In order to reduce the resistance to Department ownership of land, several steps were taken. First, the Department introduced legislation that now allows "in lieu of taxes" payments to each county where the Department owns land. This satisfied county concerns. Secondly, the Department decided to focus its acquisition dollars towards: 1) Key habitats for game animals and fish, 2) Access for recreational use of fish and wildlife, 3) Mitigation for unavoidable impacts to fish and wildlife resources, 4) Habitats identified in state or regional fish or wildlife conservation plans, 5) Additions to existing wildlife management areas, easements or ownerships (Dept. Policy A-9.0).

Department policy A-9.0 states "Land can be acquired using a variety of methods and funding sources including exchanges, funds from the sale of hunting and fishing licenses, tags and permits, funds from mitigation agreements or programs, federal aid programs, specific use grants and contracts and donations of land or funds. The Department will focus acquisition efforts on acquiring fee title and other interests in land from willing sellers based on appraised value.

For the WMAs within the Southeast Region, additional land will be acquired if some or all of the following criteria are met: 1) the land is adjacent to the WMA, 2) there is a willing seller, and 3) the land provides a benefit to wildlife (winter range, wetlands, etc.).

Since the earlier plan, an additional 480 acres have been added to the WMA through an agreement with the BOR, 111 acres through an agreement with the BLM, and 330 acres through agreements with private landowners.

This issue is addressed through the *Compass* objective: "Increase the capacity of habitat to support fish and wildlife."

Specific Habitat Management Comments:

- Habitat improvements need to be made and maintained for more species, including pond management so open water is increased – focus management on habitat
- Increase habitat improvements that improve survival of pheasants

- Increase the number of food plots and thin some cover
- Better weed control
- Work with Bingham County and Idaho Department of Health and Welfare to monitor and control West Nile Virus and prevent die-off of avian species, including water management and pesticide application when appropriate
- Consider requiring lead-free ammunition on WMAs
- Acquire additional land
- Use reliable data for management decisions (possibly related to livestock grazing – same participant commented on "being responsive to neighbors" and "grazing in lieu of burning")
- Manage water in accordance with water rights (surface and ground water)

Wildlife Management

1. WMAs have an increased predator population that may be inconsistent with priorities.

Discussion: The management direction of the SWMA does not include removing all predators. Instead, the approach is to create a better balance between predators and their prey. A "step down" approach to predator management is outlined in the State Waterfowl Management plan. Wildlife Services conducted an Aversive Conditioning experiment with treated eggs in 2001 to address magpies. Department staff trapped mammalian predators from 1999-2003. In 2004, a private trapper was hired and he continued through 2007. Mammal trapping was discontinued in 2008 due to financial constraints, but nesting success is closely monitored to assess whether predation or other impacts may need to be addressed.

This issue is addressed through the *Compass* objective: "Maintain or increase game populations to meet the demand for hunting, fishing, and trapping."

2. Increase pheasant harvest limit and season.

Discussion: Pheasant harvest limits have varied over the years at SWMA between two and three birds per day. The latest limit of two birds was in response to hunter concerns that a higher limit allowed weekday hunters more opportunity to take birds and not leave as many birds for the weekend hunters. The two-bird limit seemed a reasonable way to better distribute the released pheasants amongst more hunters.

The current pheasant season has been in place for many years. The Department has looked into extending the season to match the rest of the state but the response from the public was strongly opposed to a change. Although there is no biological reason to not extend the season, the public's opposition was considered and the season was not changed.

This issue is addressed through the *Compass* objective: "Maintain or increase game populations to meet the demand for hunting, fishing, and trapping."

3. Increase number and species of birds released for hunting.

Discussion: Research has shown that stocking pheasants is not a viable solution to increasing a population and that introducing pen-reared pheasants can be detrimental to the wild population by attracting predators, spreading disease, and passing on genetic problems. The sole reasoning for stocking pheasants is to provide short-term hunting opportunity. The 2012 statewide stocking program cost the Department approximately $374,300 for the birds. Department employee time and operating expenses were additional. Sterling WMA received approximately 2,665 of the 16,727 birds that are available statewide. Currently, sportsmen that hunt game farm pheasants on a WMA purchase a WMA pheasant permit. The intent is that the people that use the program, pay for the program. The permit costs $23.75 (including the $1.75 vendor fee) and allows a hunter to harvest six pheasants (2 per day) from a WMA where game farm birds are released. Currently, the permit fees cover less than half of the program costs. The cost of any additional pheasants released on the WMAs would have to come out of other budgets and would therefore reduce the Department's ability to maintain other programs. Despite the popularity of this program, the current level of stocking will likely not increase without additional dedicated funding.

Pheasants were chosen for this program because of their suitability to the existing habitat and because there are wild populations found in the area surrounding the WMA. The habitat is not suited for either chukar partridge or quail species and no viable wild populations exist in the area.

This issue is addressed through the *Compass* objective: "Maintain a diversity of fishing, hunting and trapping opportunities."

Specific Wildlife Management Comments:

- Manage more for native species
- Eliminate use of lead shot
- Predator numbers are too high
- Control pocket gophers (likely also/more so, a public relations issue).
- Control predator numbers
- More hunting opportunity through increased stocking of pheasant and/or additional species (gray partridge, chukar partridge, quail spp.)
- Improve quality (tails) of stocked pheasant
- Release stocked pheasants into more huntable habitat
- Conduct stocking to avoid congestion/consider smaller more frequent releases
- Charge fee for non-license holders and consider other fund raising tools
- Limit access for pheasant hunting (e.g., every other day)
- Hunting restrictions specific to WMAs/expand deer hunting to all short range weapons
- More hunting opportunity (pheasant) through increased season length and bag limit

Public Use Management

1. **Maintain positive working relationships with neighbors and improve communication with concerned parties.**

   Discussion: Since the inception of SWMA, neighbors and sportsmen have voiced concerns with the management practices used on the area. Often, the criticisms or suggestions were contradictory, unrealistic, or contrary to the purpose and goals of the WMA. However, there have been suggestions that warranted action and have been incorporated. The Department has worked hard to ensure that neighbor relations receive equal consideration with sportsmen concerns. The Department understands that effective management of SWMA is significantly easier with the cooperation and support of the local landowners. An annual newsletter is sent out to WMA neighbors and interested sportsmen to summarize work on the WMA and solicit input. Additionally, personal contacts are made with neighbors and users on a regular basis. Despite these efforts, there are several chronic issues that may never be resolved to the complete satisfaction of all. In these instances, it is important that both parties understand the positions and that efforts are made to minimize undesirable impacts.

   This issue is addressed through the *Compass* objectives: "Increase public knowledge and understanding of Idaho's fish and wildlife." and "Improve citizen involvement in the decision making process."

2. **Public access needs to be available but consistent with WMA goals.**

   Discussion: Part of the mission of SWMA is to provide public access for consumptive and non-consumptive users without compromising the quality of the wildlife habitat. The question of how much access is appropriate has been debated for a long time. The Department has had to consider the effects of providing opportunity for a wide range of constituents and protecting the wildlife and wildlife habitat. Sportsmen dollars were used to purchase Department lands so sportsmen and women should be allowed to utilize the resource. The conflict comes with the questions of "How accessible should the land be?" and "What type of access is appropriate?"

   Foot access does not seem to cause many problems for wildlife during most times of the year. A possible exception would be nesting geese and their vulnerability to curious recreationists. Vehicle access, however, can be detrimental to the quality of wildlife habitat and to the condition of animals. Harassment during high stress winters and during nesting and brooding times can significantly impact populations. Higher vulnerability during the hunting season is also a direct result of increased access. Finally, many sportsmen define the quality of their experience by the amount of traffic and number of hunters that they encounter during an outdoor experience. The Department needs to provide access to WMAs but not compromise the quality of the habitat, the security for the wildlife, or the outdoor experience.

   This issue is addressed through the *Compass* objective: "Sustain fish and wildlife recreation on public lands."

3. Decrease hunter congestion.

Discussion: On some WMAs in western Idaho, hunting hours were adjusted in response to large numbers of hunters using the area and to increase Department staff safety when releasing pheasants. So far at SWMA, the number of hunters relative to the acreage available for hunting does not provide the same congestion issues. However, in an effort to standardize shooting hours throughout the state, increase staff safety and provide a better hunting experience for waterfowl hunters, the opening shooting hour for upland bird hunters on SWMA was moved in 2014 from ½ hour before sunrise to 10:00 a.m. Hunter use will continue to be monitored to determine if additional adjustments are needed.

This issue is addressed through the *Compass* objective: "Sustain fish and wildlife recreation on public lands."

4. Improve signage and information stations.

Discussion: As part of the annual WMA maintenance program, parking areas, signs, and information centers are visited and upgraded as needed. However, every year more opportunities arise where these kinds of facilities can be improved. As specific improvements are identified, they will be implemented as funding and time allow.

This issue is addressed through the *Compass* objective: "Sustain fish and wildlife recreation on public lands."

5. Increase youth involvement and opportunities.

Discussion: Currently, there are two special opportunities made available to youth hunters in an attempt to get them more involved in hunting. The statewide effort is to provide youth pheasant and youth waterfowl hunting seasons. These are early hunts open only to youth hunters. SWMA stocks pheasants for the youth pheasant season. Additionally, SWMA hosts a youth pheasant hunting clinic each year. This opportunity is available to 20-40 youth hunters who learn about pheasant ecology and get instruction on shotgun shooting. They are then mentored on a pheasant hunt on the WMA.

Besides providing opportunities to involve youth in hunting, SWMA also provides opportunities for youth to participate and learn about wildlife habitat management. Scouting groups are given tours of the WMA whenever they want. Numerous Eagle scouts have completed projects to help benefit the WMA. High school students interested in a wildlife career have volunteered to spend a day at the WMA and shadow the technician or biologist.

This issue is addressed through the *Compass* objective: "Increase public knowledge and understanding of Idaho's fish and wildlife."

Specific public use management comments:

- Better agreements and relations with neighbors (cooperative farming agreements should benefit wildlife)
- Better communication and relations with neighbors and other organizations/agencies to improve habitat and public access
- Improve hunting access (more food plots – especially for waterfowl, thin out cover, provide trails, better access to open water, add waterfowl blinds)
- Further limit motorized trails (possibly more in reference to McTucker)
- Expand youth/mentored hunting and educational activities
- Better agreements with neighbors (cooperative farming agreements should benefit wildlife)
- Prevent wildlife damage to neighbors and assist with resolution to problems
- Improve signage regarding available access (property boundaries/cooperatives) and to prevent trespass
- Improve information stations (general rules/habitat and wildlife identification/available facilities-ranked opportunities) so literature is always available and protected from weather
- Improve relations with other organizations/agencies to optimize public benefits including additional access
- Control dumping and other litter problems
- Designate/provide dog training areas
- Take measures to assure trapping activity does not conflict with other priorities
- Wildlife-based recreation should allow for low-level flying

Issues Identified by the Department

Habitat Management

- Work with Bingham County and Idaho Department of Health and Welfare to monitor and control West Nile Virus and prevent die-off of avian species including water management and pesticide application when appropriate
- Provide quality and dispersed brood-rearing habitat for pheasant and other upland game
- Extend WMA management considerations onto the surrounding landscape which influences or is influenced by the WMA
- Cooperative farming agreements should maximize wildlife benefits and public access

Wildlife Management

- Work with U.S. Fish and Wildlife Service (USFWS) and Shoshone Bannock Tribes to monitor and control avian botulism
- Consider monitoring potential impacts of lead shot poisoning on all avian species
- Consider artificial propagation techniques (pheasant) only if cost effective and neutral to other wildlife

- Monitor nesting success/predation impacts on waterfowl by periodically (at least every five years) following a sampling of ground nests

Public Use and Relations

- Accurately assess year-round public use with an approved systematic and randomized sampling scheme
- Anticipate equipment/infrastructure needs and budget accordingly
- Work with Bingham County and Idaho Department of Health and Welfare to monitor and control West Nile Virus and prevent impacts to users and neighbors including water management and pesticide application when appropriate
- Assure rules/regulations particular to the SWMA (e.g., camping, open fires) are consistent with statewide use policy, are well posted on site and are addressed in printed/electronic format

Sterling 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 SWMA. 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.

An effective way to enable a broader influence over the future of SWMA is through the use of Conservation Targets to guide management. Conservation Targets can 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 SWMA, 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 the WMA and creates a platform for conservation partnerships on the surrounding landscape.

The following six-step process was used to create the SWMA 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 SWMA Landscape
6) Creation of Management Program Table

Summary of Management Priorities

Sterling WMA, like many other WMAs, was created for a specific purpose and therefore has inherent management priorities incorporated in the cooperating agency agreements and land ownerships that formed the WMA. Sterling WMA was acquired to preserve and enhance waterfowl habitat.

Legal mandates associated with the 2001 appropriation of federal funding for the State Wildlife Grants program also 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 Comprehensive Wildlife Conservation Strategy (CWCS). The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (Idaho Department of Fish and Game 2005). The CWCS is currently under revision and is now referred to as the State Wildlife Action Plan (SWAP). 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. Idaho's plan serves to coordinate the efforts of all partners working toward conservation of wildlife and wildlife habitats across the state.

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 SWMA into consideration, in concert with these foundational priorities of the WMA and statewide Department priorities, the Department developed the following list of broad-scale SWMA Management Priorities.

Sterling WMA Management Priorities (listed in order of importance):

1. Manage Wetlands for Waterfowl and Other Wildlife* Production.
2. Manage Sagebrush-steppe and Other Upland Habitats for Ring-necked Pheasants and Other Wildlife Production.
3. Provide Public Hunting Opportunity.

* "Other Wildlife" to include all wild species – plant and animal

The priorities for SWMA were developed based on the potential of the habitat and typical or potential wildlife-based use.

Because a portion of SWMA is wetlands interspersed within uplands, the potential for the area to produce waterfowl, upland game birds, and other wildlife is high. Wetlands make up a relatively low percentage of the habitat acres in Idaho, and therefore protection of wetlands and production of wetland-dependent species is an appropriate priority for SWMA.

Upland habitat makes up the majority of the SWMA. Both game and nongame species utilize this habitat year-round. Maintaining healthy and productive upland habitat for wildlife is an appropriate second priority.

By far, the greatest use of the SWMA by the public is for pheasant and waterfowl hunting. Providing this public use opportunity is an appropriate third priority for SWMA.

Focal Species Assessment

This section of the Plan is an assessment of conservation priority species that will identify Conservation Targets to guide management within the SWMA Landscape. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or at-risk species identified by the Idaho SWAP, the Idaho Conservation Data Center, and key federal agencies.

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., big desert and American Falls reservoir or wetlands), 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). Waterfowl are an example of a group that fit the criteria as both focal and flagship species. Therefore, waterfowl are an important flagship species group/guild considered in the SWMA 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 also considering a variety of at-risk species (Groves 2003); yielding a more comprehensive assessment that includes culturally and economically important species (e.g., waterfowl and upland game birds) along with formally designated conservation priorities (e.g., bald eagle). Categories of at-risk species considered in this assessment are: 1) species designated as Idaho Species of Greatest Conservation Need (SGCN) from the SWAP, or for plants, special status ranking assigned by the Idaho Conservation Data Center; 2) species designated as Sensitive by Region 4 (Intermountain Region) of the U.S. Forest Service (USFS); and 3) species designated as Sensitive by the Idaho State Office of the BLM and 4) species listed or candidates for listing under the Endangered Species Act by USFWS.

Although the Idaho SWAP SGCN 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 SWMA and surrounding area is comprised of multiple land ownerships. BLM and BOR public lands and private lands are the dominate ownership, with Department-owned and managed lands constituting the remainder. The BLM and BOR are key partners in this landscape as their management actions can directly influence ecological function on SWMA.

United States Forest Service (USFS) 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.

BLM 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.

Information on species status, occurrence (within SWMA boundary and within Landscape boundary), beneficial management/conservation actions, and threats were derived through consultation with Department Regional Habitat, Fisheries, and Wildlife 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.

Southeast Regional Habitat staff, with assistance from other regional staff, estimated the suitability of assessed species as a focal species 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)

Game species considered for focal species designation include: Canada goose, lesser scaup, mallard, mule deer, northern pintail, ring-necked pheasant, and Yellowstone cutthroat trout.

Nongame species considered for focal species designation include: Myotis guild (little brown bat, big brown bat, Townsend's bat, hoary bat, silver-haired bat, western small-footed myotis, long-eared myotis), Transitional Waterbird Guild (American avocet, common loon, American white pelican, western grebe, Clark's grebe, white-faced ibis, Wilson's phalarope, black-crowned night heron, black-necked stilt, California gull, Franklin's gull, Caspian tern, Forster's tern, cattle egret, great egret, snowy egret, trumpeter swan), hooded merganser, Swainson's hawk, Merriam's shrew, northern leopard frog, sandhill crane, western burrowing owl, short-eared owl, bald eagle, merlin, Brewer's sparrow, yellow-billed cuckoo, desert valvata, and St. Anthony Dunes tiger beetle.

Plants species considered for focal species designation include: iodine bush, red glasswort, Ute ladies' tresses, and meadow milkvetch.

Species that were not selected as focal species will still be considered during management of SWMA. In many cases, documenting presence or absence on the WMA will be a management objective.

Table 1. Status of Conservation Priority Species on the Sterling WMA including their potential suitability as focal species for management.

Species	Status Designation(s)	Occurrence Context in Sterling WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sterling WMA
Birds					
Ring-necked Pheasant (*Phasianus colchicus*)	Flagship	Pheasants are a common species on SWMA.	Changes in agricultural practices have reduced available nesting, brood-rearing and winter habitat.	Provide suitable nesting and winter cover. Work with cooperative farming agreements to provide food plots. Manage predator populations to allow for acceptable nest success and chick survival. Enforce applicable hunting regulations.	***Potentially suitable as a focal species***. Populations on SWMA cannot sustain the hunting pressure so game farm birds are released. Pheasant hunting is an important cultural and economic outdoor activity.
Mallard (*Anas platyrhynchos*)	Flagship	SWMA provides important nesting and brooding habitat for mallards.	Loss or degradation of wetlands due to drainage, dredging, filling, changes in salinity, siltation, and introduction of exotic plants are all potential issues of concern that may impact both breeding and wintering habitats for this species	Provide open water for breeding pairs. Provide adequate nesting and brooding habitat. Manage predator populations to allow for acceptable nest success and duckling survival.	***Potentially suitable as a focal species.*** Waterfowl production is the primary goal for the SWMA. Waterfowl hunting is an important cultural and economic outdoor activity.
Canada Goose (*Branta canadensis*)	Flagship	SWMA provides nesting habitat (and structures) as well as brooding habitat	Loss or degradation of wetlands due to drainage, dredging, filling, changes in salinity, siltation, and introduction of exotic plants are all potential issues of concern that may impact both breeding and wintering habitats for this species.	Maintain a goose box program. Provide adequate brooding habitat and food plots.	***Potentially suitable as a focal species***. Waterfowl production is the primary goal for the SWMA. Waterfowl hunting is an important cultural and economic outdoor activity.
Lesser Scaup (*Aythya affinis*)	SGCN	Breeding pairs are regularly seen on SWMA. Occasional broods have been documented.	Loss or degradation of wetlands due to drainage and conversion to agriculture, dredging and filling, modification of water levels, levee construction, changes in salinity, siltation, and introduction of exotic plants are all potential issues of concern that may impact both breeding and wintering habitats for this species.	Restore wetlands. Monitoring scaup population numbers as part of Idaho's coordinated, statewide all–bird monitoring program (Idaho Bird Inventory and Survey) is recommended.	***Potentially suitable as a focal species***. Waterfowl production is the primary goal for the SWMA. Waterfowl hunting is an important cultural and economic outdoor activity.
Transitional Waterbird Guild	SGCN	American Falls reservoir. the Snake river and SWMA are important transitional habitats for many Idaho waterbirds. Several of the species also nest in the area.	Threats to most of Idaho's waterbirds are not related to the use of transitional habitat but are related to disturbance of nesting and breeding habitat (e.g., Caspian tern, trumpeter swan), pesticide contamination (egrets and White-faced ibis) and loss of wetlands (American avocet and black-necked stilts).	Provide undisturbed nesting habitat.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population.
Northern Pintail (*Anas acuta*)	SGCN	SWMA provides important nesting and brooding habitat for pintails.	Loss of nesting and brooding habitats on surrounding lands.	Provide open water for breeding pairs. Provide adequate nesting and brooding habitat. Manage predator populations to allow for acceptable nest success and duckling survival.	***Potentially suitable as a focal species.*** Waterfowl production is the primary goal for the SWMA. Waterfowl hunting is an important cultural and economic outdoor activity.
Hooded Merganser (*Lophodytes cucullatus*)	SGCN	Not documented on SWMA but in Idaho, the hooded merganser prefers wooded streams and flooded bottomlands during the summer, and open bodies of water in winter. American Falls reservoir and the Snake river may provide habitat.	Hooded merganser populations have suffered from habitat alteration, mostly associated with changing forestry practices and snag removal. For wintering birds river channelization, deforestation, and agricultural practices are issues. These effects could reduce available winter habitat	Primary actions should focus on setting forest management goals that include the establishment and conservation of cavity–producing trees (>100 years old, >30 cm [12 in] diameter at breast height) as well as the maintenance of riparian forested corridors and forests located within 1.6 km (1 mi) of	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population.

Species	Status Designation(s)	Occurrence Context in Sterling WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sterling WMA
			and possibly lower foraging efficiency by increasing water turbidity	suitable brood habitat. Monitoring of hooded merganser populations as part of Idaho's coordinated, statewide all–bird monitoring program (Idaho Bird Inventory and Survey) is recommended. Aquatic management goals could include the restoration and/or preservation of water quality and natural hydrology.	
Sandhill Crane (*Grus canadensis*)	SGCN	SWMA provides breeding habitat for sandhill cranes. Small groups of cranes stop at SWMA prior to migration.	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. Document breeding locations on the WMA, including nesting and brooding locations.	***Unsuitable as a focal species***. Limited occurrence on SWMA restricts potential management feedback.
Brewer's Sparrow (*Spizella breweri*)	SGCN; BLM Sensitive	Brewer's Sparrow is in sagebrush habitat within SWMA 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, unfragmented shrub steppe habitat.	***Unsuitable as a focal species***. Limited occurrence on SWMA restricts potential management feedback.
Western Burrowing Owl (*Athene cunicularia*)	SGCN	Observed on SWMA.	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. Indiscriminant killing of badgers may limit nesting burrows.	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 on SWMA.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, limited occurrence on SWMA limits potential management feedback.
Short-eared Owl (*Asio flammeus*)	SGCN	Suitable breeding and foraging habitat is present on SWMA and immediate vicinity and short-eared owls are documented breeders on the WMA and within this landscape. Species is known to be nomadic, therefore suitable habitat may be unoccupied in some years.	The short-eared owl is particularly vulnerable to habitat loss and degradation, and human disturbance. Development of suitable nesting habitats are key factors in local short-eared owl population declines. Timing of agricultural activities 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. Unknown distribution limits potential management feedback
Swainson's Hawk (*Buteo swainsoni*)	SGCN	In general, Swainson's hawk utilization of SWM is poorly documented. However, they are a possible breeder and may also utilize SWMA 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. Better data on mortality rates of migrating Swainson's hawks (and other raptors) as a result of wind farm development are needed.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect the main threats to Swainson's hawk (e.g., vulnerability on migration and wintering grounds).
Merlin (*Falco columbarius*)	SGCN	Merlin's are rarely seen on SWMA. Nesting habitat in Idaho has been shrub-steppe dominated by sagebrush and nests were placed in juniper trees. Typically,	An increase in agricultural lands has caused losses of both nest sites and prey species for merlins	Continued monitoring of environmental contaminants in merlins is recommended since this is still cause for concern in some parts of their range	***Unsuitable as a focal species.*** Occurrence context on SWMA does not reflect the main threats. Limited and unquantified seasonal occurrence on SWMA limits potential

Species	Status Designation(s)	Occurrence Context in Sterling WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sterling WMA
		merlins use abandoned stick nests built by raptors, corvids or other birds . In eastern Idaho, merlins used abandoned black-billed magpie nests.			management feedback at the focal species scale.
Bald Eagle (*Haliaeetus leucocephalus*)	SGCN; USFS Sensitive	Wintering bald eagles are often seen perching in large trees throughout the WMA. American Falls reservoir is a preferred hunting area. Two nests are occupied each year within the SWMA landscape.	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.	Nest monitoring will 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.	***Unsuitable as a focal species.*** Occurrence context on SWMA does not reflect the main threats. Limited and unquantified seasonal occurrence on SWMA limits potential management feedback at the focal species scale.
Greater Sage-grouse (*Centrocercus urophasianus*)	SGCN, S2, BLM Imperiled, USFS Sensitive	Presence within SWMA landscape	Habitat loss and fragmentation.	Protect large blocks of sagebrush habitat from fire and over-grazing.	***Unsuitable as a focal species.*** Occurrence context on SWMA does not reflect the main threats. Limited and unquantified seasonal occurrence on SWMA limits potential management feedback at the focal species scale.
Yellow-billed cuckoo (*Coccyzus americanus*)	SGCN, S2B, ESA candidate, BLM Threatened	Limited presence within SWMA landscape	Habitat loss and fragmentation	Protect cottonwood stands and their associated understory along the Snake River	***Unsuitable as a focal species***. Limited occurrence within SWMA landscape restricts potential management feedback.
Mammals					
Bat Guild	SGCN; BLM Sensitive and Watch List	These species occur in areas similar to SWMA and its surrounding landscape.	Individuals are long-lived and exhibit low reproductive potential. Roost sites may be colonial or individual, and may be limiting in some areas; aggregations are susceptible to disturbance and intentional persecution. High prey densities are often associated with wetlands and other highly productive habitat. Habitat use rates and, at the population level, survival and recruitment rates likely track aerial insect prey availability. Accessible surface water also likely affects local distribution and abundance. Local populations potentially affected by wind turbine installations situated in flyways or near high-use areas, such as wetlands or roosts.	Minimize broad-spectrum insect control activities that reduce prey base. Where possible, document natural roosting habitat such as cliffs, banks, trees, rocky outcroppings or buildings. Create day-and night-roosting 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.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect the main threats. Limited information on distribution in the project area limits potential management feedback.
Mule Deer (*Odocoileus hemionus*)	Flagship	Mule deer are regularly seen on the SWMA.	Habitat fragmentation from conflicting land uses on adjacent public and private lands; loss of aspen habitat. Conflicts with agricultural producers.	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.	***Unsuitable as a focal species.*** Occurrence context on SWMA does not reflect the main threats.
Merriam's Shrew (*Sorex merriami*)	SGCN	There are no documented occurrences on SWMA. But the species does occur primarily in areas dominated by xeric shrubs and grasses. Habitats include sagebrush steppe habitat.	The distribution and status of populations are poorly understood. Livestock grazing has been suggested as a threat to populations since livestock can cause soil compaction, litter layer reduction, and changes in vegetation structure and composition.	Surveys are needed to determine the distribution, current status, and habitat associations of populations.	***Unsuitable as a focal species***. Limited information on distribution in the project area limits potential management feedback.

Species	Status Designation(s)	Occurrence Context in Sterling WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sterling WMA
Pronghorn (*Antilocapra americana*)	Flagship	Present in Big Desert	Loss and fragmentation of habitat. Lack of information on population declines.	Research to determine movement pattern and reasons for decline in population	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.
Amphibians					
Northern Leopard Frog (*Rana pipiens*)	SGCN; BLM Sensitive	Several documented occurrences on SWMA.	Loss and degradation of wetland and riparian habitat. Introduced competitors and predators can cause population declines and losses. Disease is also a concern, particularly the chytrid fungus, *Batrachochytrium dendrobatidis*.	Wetland protection and/or restoration of degraded sites is beneficial; a comprehensive understanding of population status is needed	***Potentially suitable as a focal species.*** Species is important indicator of riparian and wetland systems in southeast Idaho. Continued persistence in the WMA would help guide priorities for riparian and wetland conservation. Loss of this species from the WMA would be an appropriate trigger for riparian restoration
Fish					
Yellowstone Cutthroat Trout (*Oncorhynchus clarkii bouvieri*)	SGCN; BLM Sensitive; USFS Sensitive	Does not occur within the SWMA but does occur within the Snake river drainage.	Reduction in historically occupied range, habitat loss or degradation, fragmentation of current habitat, and isolation of existing populations, and hybridization with rainbow trout (IDFG 2005)	Maintain YCT population distribution and trend monitoring program; conduct watershed habitat assessment; pursue reestablishment of metapopulation connectivity guided by the habitat assessment.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.
Gastropods					
Desert Valvata *(Valvata utahensis)*	SGCN; USFWS Type 1, listed endangered	The desert valvata occurs primarily in well-oxygenated pools adjacent to rapids or in perennial flowing reaches of the Snake River, but it also occurs in several reservoir habitats.	Habitat loss is a prevalent threat. Eutrophication of the Snake River has resulted from agricultural effluence, freshwater aquaculture inputs, and residential and industrial developments. Dams have altered the temperature and flow characteristics of the river.	Protection of the remaining free-flowing mainstream and cold-water spring habitats in occupied reaches of the Snake River, stabilization of water levels, improvement of water quality, augmentation of flows above Milner Dam, and control of exotic species.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.
Insects					
St. Anthony Dune Tiger Beetle *Cicindela arenicola*	SGCN; BLM Type 2	Documented occurrences within 3 mi of SWMA landscape	Habitat loss is considered to be a prevalent threat to populations and may arise from a variety of land-use practices. Intentional stabilization of dunes using grass seeding and conversion of dune habitats to agriculture. Motorized vehicle use on dunes can damage breeding habitat and cause increased mortality, particularly of beetle larvae.	Management of off-road vehicle usage, limitation of pesticide applications, public education, and inventory and monitoring activities. Habitat protection and monitoring efforts are needed to assure the persistence of this species.	***Unsuitable as a focal species.*** Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.
Plants					
Iodine Bush (*Allenrolfia occidentalis*)	IDFG/Idaho Native Plant Society – S1 State Critically	Documented presence on SWMA in alkaline seeps.	Changes to hydrologic regime are main threat. Erosion, compaction and invasive species can have a negative impact.	Maintain current hydrologic conditions. Avoid any traffic through area.	***Potentially suitable as a focal species***. Very limited distribution and highly specialized habitat requirements limit usefulness for entire WMA but

Species	Status Designation(s)	Occurrence Context in Sterling WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Sterling WMA
	Imperiled				good indicator of intact alkaline seeps.
Red Glasswort (*Salicornia rubra*)	IDFG/Idaho Native Plant Society – State Sensitive	Documented presence on SWMA in alkaline seeps	Changes to hydrologic regime are main threat. Erosion, compaction and invasive species can have a negative impact.	Maintain current hydrologic conditions. Avoid any traffic through area	***Potentially suitable as a focal species***. Very limited distribution and highly specialized habitat requirements limit usefulness for entire WMA but good indicator of intact alkaline seeps.
Ute Ladies' Tresses (*Spiranthes diluvialis*)	G2 –Globally imperiled	Known to occur in the Ft. Hall bottoms and in wet meadows similar to those on SWMA.	Changes to hydrologic regime are main threat. Erosion, compaction and invasive species can have a negative impact.	Maintain current hydrologic conditions. Avoid any traffic through area. Conduct a rare plant survey throughout SWMA.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.
Meadow Milkvetch (*Astragalus diversifolius*)	G2 –Globally imperiled	Known to occur in the Ft. Hall bottoms and alkaline meadows similar to SWMA	Changes to hydrologic regime and excessive livestock trampling are main threat. Erosion, compaction and invasive species can have a negative impact.	Maintain current hydrologic conditions. Avoid any traffic through area. Conduct a rare plant survey throughout SWMA.	***Unsuitable as a focal species***. Occurrence context on SWMA does not reflect main threats to the population. Also, no occurrence on SWMA limits potential management feedback.

Selection of Conservation Targets

The biodiversity of SWMA 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 SWMA for management and conservation, while still reflecting the management priorities of SWMA.

The Conservation Targets for the SWMA Management Plan were selected from species ranked as potentially suitable focal species in Table 1. The Conservation Targets can be 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 Southeast Regional Habitat Manager and SWMA 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 SWMA (corresponding SWMA Priority in parentheses) are:

1. Marshes, Wet and Mesic Meadows and Alkaline-saline Wetlands (Manage Wetlands for Waterfowl and Other Wildlife Production)
2. Sagebrush-steppe and Other Uplands (Manage Sagebrush-steppe and Other Upland Habitats for Ring-necked Pheasant and Other Wildlife Production)

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 other 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 SWMA 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 40-45), 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	**Marshes, Wet/Mesic Meadows, Alkaline Wetlands**	**Sagebrush-steppe Uplands**	**Conservation Need**
Ring-necked Pheasant	P	X	
Mallard	P	P	
Canada Goose	P		
Lesser Scaup	P		
Transitional Waterbird Guild	P		
Northern Pintail	P	P	
Hooded Merganser	P		
Sandhill Crane	P		
Brewer's Sparrow		X	
Western Burrowing Owl		X	
Short-eared Owl		X	
Swainson's Hawk		P	
Merlin		X	
Bald Eagle	P		
Greater Sage-grouse		X	
Northern Leopard Frog	X		
Myotis Guild	P		Yes
Mule Deer		P	
Pronghorn		X	
Merriam's Shrew		X	
Yellowstone Cutthroat Trout			Yes
Desert Valvata			Yes
St. Anthony Dunes Tiger Beetle			Yes
Iodine Bush	X		
Red Glasswort	X		
Ute Ladies' Tresses			Yes
Meadow Milkvetch			Yes

[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.

Spatial Delineation of SWMA Landscape

Each Conservation Target for SWMA is also found off of the WMA, although the wetlands are more limited than the uplands. All wildlife species that benefit from management of the Conservation Targets also range off of the WMA and benefit from the additional habitat. Therefore, it is important that we actively participate in habitat conservation efforts within the landscape beyond the borders of the WMA to better provide for wildlife needs.

This section describes the methods used to define the spatial landscape for SWMA Conservation Targets. In order to delineate and describe the landscape associated with SWMA, topography, land use patterns, and species occupancy have been considered. We used the best data available (i.e., species survey data utilizing the SWMA, scientific literature, species ecology data from the scientific literature, and local knowledge) to construct this Conservation Target-specific landscape. This landscape is then utilized in the Management Program Table (pages 40-45) to identify Conservation Target-specific Management Directions, Performance Targets, and Strategies for both SWMA and the landscape.

Sterling WMA lies on the Snake River plain between the Snake River and a large expanse of desert habitat, known as the Big Desert, unsuitable for agricultural activity even with irrigation. The SWMA is situated within a highly productive agricultural area between the unbroken basaltic flows and the Snake River. Immediately adjacent to SWMA, the Snake River is impounded by American Falls Dam, forming American Falls Reservoir. The reservoir is the largest reservoir by total surface area in Idaho (56,000 acres), and is managed for power generation, flood control, and irrigation storage.

The reservoir operations heavily influence both fish and wildlife populations in the surrounding area. Above the reservoir, at least as far upstream as Blackfoot, the Snake River corridor flood plain is still dominated by mature cottonwood (*Populus* spp.) galleries and relatively intact riparian communities. Downstream of the reservoir to the next major impoundment (Lake Walcott), the river corridor is rugged and associated with more native desert plant communities. River flows both above and below the reservoir are influenced by water management of the watershed from its source to points 100 miles downstream. Farming practices on the arable lands have also affected wildlife. As the area has developed, native plant communities have been replaced by expansive tracts intensively managed for crop production. Former irrigation practices based on gravity systems and smaller fields greatly influenced ring-necked pheasant and waterfowl numbers leading to peak numbers in the mid-twentieth century. Modern pressurized systems are more adaptable to topography and leave fewer areas of inadvertent cover, resulting in less dispersed wildlife habitat.

Wetlands within and surrounding the SWMA are likely affected by irrigation ground water pumping regimes in the vicinity as well as the surface water delivery system of the Aberdeen Springfield Canal Company. We used prior wetland assessments that identified high value conservation sites (e.g., Fort Hall Bottoms/Snake River) and other wetlands sites (Springfield) to determine the extent of wetlands in the landscape.

When considering species occupancy, we have focused on species that are of high importance given the priorities of SWMA, or those given special status due to depressed or unknown population status. Focal species have been identified within the species lists included in appendices VI and VII, and are also referenced frequently in Table 1.

Combining the factors of topography, land use, wetland extent, and known species occupancy, we have designated a landscape, or area of influence, logically associated with SWMA and management concerns and priorities (Figure 2). The designated landscape represents a 12-mile buffer including topography similar to or influencing the habitat within the WMA boundary. It also takes in the associated land use such as agricultural, native desert rangeland, reservoir inundation, and irrigation delivery systems. This includes the Snake River corridor, American Falls Reservoir, and the variety of land ownership associated with the WMA. Finally, the described landscape takes in the occurrence records of most sensitive plant and animal species in the vicinity of the SWMA.

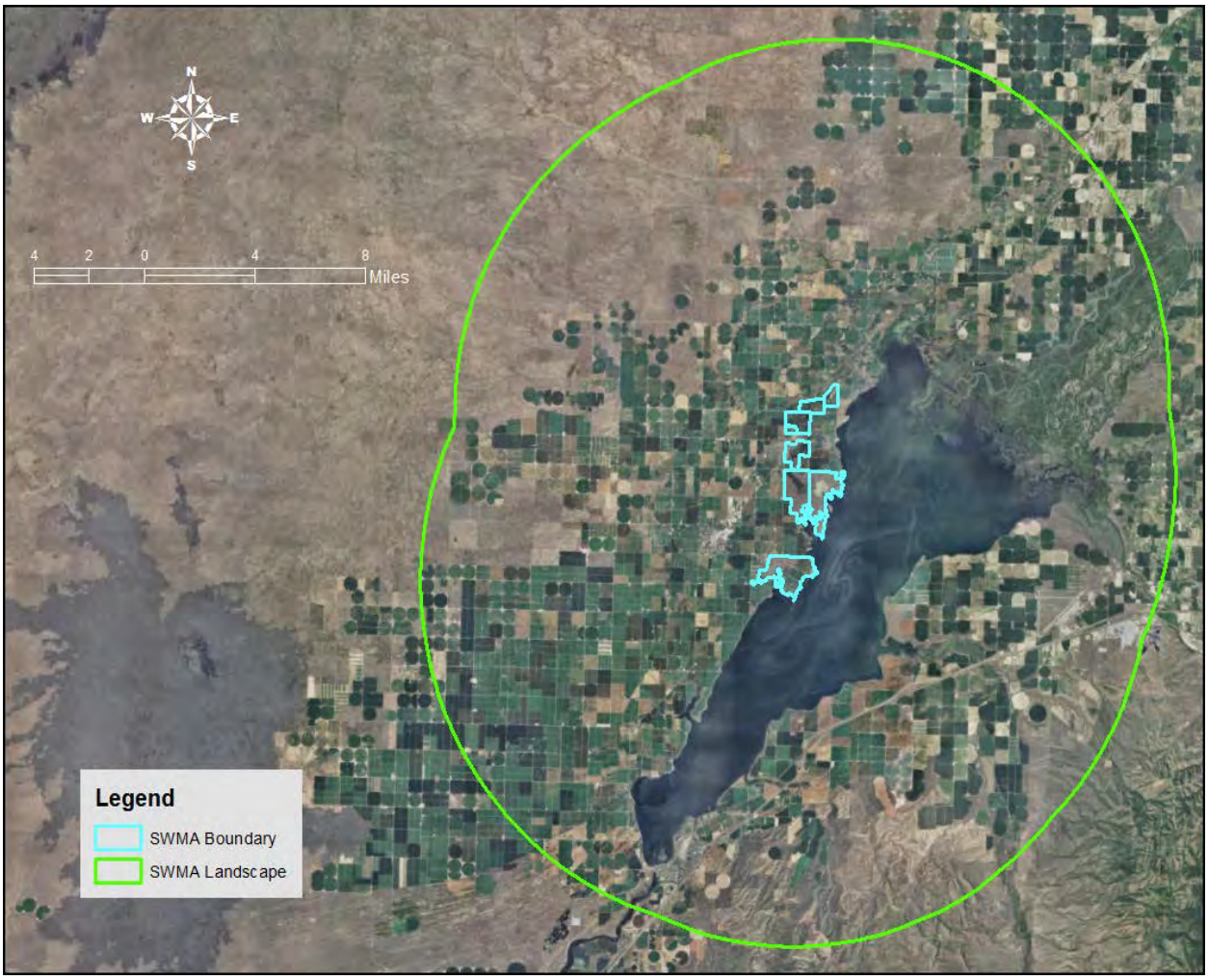

Figure 2. Sterling WMA landscape.

Sterling WMA Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics SWMA staff will use to manage for the Conservation Targets selected (page 34) to represent each SWMA Priority (page 26) at both the SWMA and Conservation Target-specific landscape scale. 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: Manage Wetland Habitat for Waterfowl and Other Wildlife Production					
Conservation Target: Marshes, Wet Meadows, Mesic Meadows and Alkaline-Saline Wetlands					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Increase knowledge of wetland condition and functions to improve management decisions for the benefit of waterfowl, northern leopard frogs and maximization of ecosystem services	By the end of 2017, assess condition, potential function, and map habitat and water management potential of all wetland management units on SWMA	Utilize Wildlife Bureau staff to assess condition and potential function of wetland management units using Wetland Ecosystem Services Protocol for the United States (WESPUS); include marsh successional stage, refined map of mesic and wet meadow habitat, and water management potential	Complete evaluation	B,C
		By 2018, monitor water quality of wetland management units most vulnerable to agricultural pollutants (determined by WESPUS assessment) and potential lead accumulation from hunting	Work with partners (e.g., Idaho Department of Environmental Quality, Master Naturalists) to collect baseline water quality and lead accumulation data in targeted wetland management units using established, standardized sampling protocols	Monitoring complete	
	Provide high quality breeding, nesting and brood-rearing habitat for waterfowl, waterbirds, shorebirds and other wildlife	Annually evaluate nesting and brooding habitat for condition and need for maintenance	Evaluate important nesting and brooding sites. Refer to, and update, Vegetation Management Plan	Evaluation completed	A, B, C, E, F, H
			Monitor waterfowl nesting success with a target of >30% success by comparing breeding pair count/brood counts annually and conduct nest searches/nesting success/nest loss evaluation every five years.		
			Monitor predator impacts and employ passive predator control by removing Russian olives and denning sites and active control when warranted.		
		Annually maintain 35 breeding pair ponds	Use excavation or blasting as needed	Breeding pair ponds maintained	
		By 2018, treat 50% of the unproductive and overgrown ponds to approach an approximate 1:1 ratio of open water to tall marsh vegetation (e.g., cattail-hardstem bulrush). Have all 28 ponds in desired condition by 2023.	Use chemical, mechanical, water management, and fire practices on larger (>0.25 ac) ponds.	Brooding ponds improved	
			Improve water management infrastructure (e.g., install/improve water control structures, improve ditches) that allow for draining and treatment of marsh units		
		Annually treat approximately 10% of 350 acres of mesic/wet meadow waterfowl nesting habitat to improve ecological condition of habitat in poor-fair category to good-excellent category. Evaluate condition every 5 years.	Use plantings, cooperative agreements, irrigation, burning, chemicals and grazing to increase diversity, floristic quality, and structure of Baltic rush, clustered field sedge , and other mesic meadow associations	Acres treated annually and acres improved every 5 years. Improved acres meeting the following standards: : increase the Floristic Quality Index by 5%, increase native species richness by 10%, decrease noxious/invasive weed cover by 50%, decrease % of flora comprised of non-native species by 10%.	
			Maintain fences to control trespass grazing		
			Remove existing Russian olive trees to increase mesic meadow habitat and decrease avian predator roosting and nesting.		
			Use standardized sampling techniques to evaluate Floristic Quality Index		

WMA Priority: Manage Wetland Habitat for Waterfowl and Other Wildlife Production					
Conservation Target: Marshes, Wet Meadows, Mesic Meadows and Alkaline-Saline Wetlands					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Provide high quality breeding, nesting and brood-rearing habitat for waterfowl, waterbirds, shorebirds and other wildlife	Annually provide 800 acres of high quality over water nesting cover	Use mowing, burning, water management, and grazing.	Acres provided	A, B, C, E, F, H
		Control noxious weeds on 100 acres annually	Use mowing, burning, grazing, mechanical, biological and chemical methods	Acres treated	
			Use state-wide weed data base to track efforts		
	Provide high quality cover and food sources for amphibians, including northern leopard frog, as well as breeding and migrating waterfowl, waterbirds, shorebirds and other wildlife, while maximizing potential water quality and ecosystem support functions	By 2018, implement moist soil management techniques in one existing 5+ ac wetland management unit to create plant community with >50% of the flora comprised of species with high nutritional value for migrating/staging waterfowl and other waterbirds (e.g., smartweed, beggartick, goosefoot, barnyard grass, etc.)	Gradually flood moist soil management unit to shallow depths from 1 March-15 April	Acres managed.	
			Gradually drawdown water levels in moist soil management unit during late April		
			Use mechanical disturbance (e.g., disking, mowing) and seeding, where appropriate, to promote desirable early seral wetland vegetation		
			Avoid flooding during peak mosquito production season		
			When possible, gradually re-flood moist soil management units in fall to shallow depths from 15 Sept- 30 November		
	Provide resting and staging areas for waterfowl	Provide 1 acres of ice free water annually	Use ground water pumping to provide year-round open water on the Johnson pond	Open water available	
	Provide high quality escape and winter cover for a variety of wildlife species and SGCN	Annually maintain 800 acres of dense hardstem bulrush and cattail stands	Ensure that larger stands (>10 ac) of dense, undisturbed emergent vegetation are available throughout the WMA for nesting, escape, and winter cover for waterbirds and SGCN	Acres maintained	
	Provide additional habitat	Work with willing sellers to acquire additional lands	Use fee title, easement, lease or legal agreement as opportunities arise.	Contacts made	
	Protect, alkaline-saline wetlands for the benefit of sensitive plants (e.g., iodine bush, red glasswort), unique plant associations, migratory waterbirds, and specially adapted biota (including invertebrates)	By 2018, inventory and map all alkaline-saline habitats for the presence of sensitive plant populations, plant associations, other biota, and document the primary hydrologic regimes	Working with Wildlife Diversity staff, inventory and map all alkaline-saline habitats for their potential to support sensitive plants; map and document sensitive plant populations and plant associations	Completed map	B, C
			Identify primary hydrologic process (e.g., groundwater discharge slope or recharge depression) of each mapped alkaline-saline habitat		
		By 2018, maintain (within +/-10% of level documented by inventory), or expand, total population of iodine bush and red glasswort by protecting alkaline-saline habitats and their hydrology.	Protect all alkaline-saline habitats by preventing new disturbances to soil or hydrology	Populations maintained or increased	
			Eliminate administrative vehicle traffic and minimize foot traffic in alkaline-saline habitats that are highly vulnerable to compaction; post signs instructing visitors to avoid hiking through these habitats		
			Before implementing meadow and marsh restoration or enhancement projects that are located adjacent to alkaline-saline habitats, assess the potential impacts to the hydrologic regime (determined from inventory) on the adjacent alkaline-saline wetland areas		
Landscape	Provide high quality breeding, nesting and brood-rearing habitat	By 2023, provide at least 25 acres of habitat on lands beyond SWMA	Work with Farm Bill Coordinator to make FSA funds available to private landowners.	Acres provided	A, B, C, E, F, H
			Use Habitat Improvement Program funds to develop projects on private lands		
			Work with BOR, BLM and Tribal staffs to identify and fund projects on their lands.		
	Promote off-site habitat conservation	By 2023, use Department program funds and work with other agencies to protect and develop 25 acres of habitat beyond SWMA	Use the HIP funds to support private land projects public outreach and technical assistance (BLM, BOR, Fort Hall Reservation, NRCS, etc.) to encourage off-site development and protection	Acres provided	
			Work with Farm Program Coordinator to identify and enroll projects for FSA funding		
			Coordinate with BOR, BLM and Fort Hall Reservation staff to identify projects and secure funding.		

WMA Priority: Manage Wetland Habitat for Waterfowl and Other Wildlife Production					
Conservation Target: Marshes, Wet Meadows, Mesic Meadows and Alkaline-Saline Wetlands					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
Landscape	Assess the conservation potential of wetlands in the landscape from Sterling, to Springfield, to the Snake River based on condition, functions, and values to waterfowl and other wildlife to improve conservation decisions.	By 2018, prioritize wetlands for conservation and restoration in the landscape according to estimated ecological condition, connectivity to other wetlands, and values to waterfowl and other wildlife.	Assist Bureau of Wildlife staff (e.g., Diversity Program, Wetland/Riparian Ecologist) to analyze existing spatial data products related to wetland condition and function in the landscape and prioritize wetland complexes.	Wetlands prioritized	B, C
		By 2020, develop a conservation and restoration plan for at least three high priority wetland complexes.	Assist potential partners in the field (private landowners, BLM, BOR, Fort Hall Reservation, NRCS, Idaho Dept. of Environmental Quality, Ducks Unlimited, etc.) to develop a conservation and restoration action plan for the highest priority wetland complexes with the highest likelihood of project implementation .	Plan Completed	
	Increase the amount of good to excellent condition habitat managed for waterfowl breeding, nesting, brood-rearing, and migratory use, while enhancing productivity, diversity, and functions (e.g., water quality improvement) and value to amphibians, waterbirds, shorebirds, and other wildlife.	By 2023, permanently conserve and/or restore at least one high priority wetland complex in the landscape identified in the conservation and restoration action plan.	Assist partners (private landowners, BLM, BOR, Fort Hall Reservation, NRCS, Idaho Dept. of Environmental Quality, Ducks Unlimited, etc.) to identify means to conserve high priority wetlands (acquire funding, identify programs, fee title, easement, and lease or legal agreement).	Wetland complex conserved or restored	
		By 2023, work with at least two willing landowners on at least 100 ac to implement management practices in moderately degraded mesic meadows in high priority wetlands for the purpose of improving waterfowl nesting habitat structure and decreasing noxious/invasive weed cover.	Provide technical assistance to willing landowners to remove Russian olive trees (to decrease avian predator roosting and nesting) and control noxious weeds for the purpose of improving mesic meadow nesting habitat.	Acres improved	
			Provide technical assistance to willing landowners on the use of fire, mowing, and herbicide control of noxious weeds (after nesting) to increase diversity, condition, and structure of mesic meadow habitat.		
		By 2023, work with at least two willing landowners on at least 100 ac to implement beneficial wetland management (e.g., flooding and periodic drawdowns) at the appropriate times and frequency to improve condition of degraded emergent marsh and wet meadow habitat for the purpose of improving waterfowl brood-rearing and migratory use, shorebird use, amphibian use, and beneficial functions.	Assist private landowners and partners to improve livestock management and agricultural practices to improve water quality. by minimizing inputs of nutrients and sediment into wetlands and waterways		
			Provide technical assistance to willing landowners on how and when to periodically drawdown flooded marshes and treat depauperate bulrush-cattail stands, increase duration of saturation in wet meadows to maximize invertebrate production, etc.		
			Assist private landowners, water users, conservation partners, and government agencies to identify programs or policies that expand or maintain flood irrigation practices across the Sterling - Springfield landscape for the purpose of enhanced waterbird foraging opportunity		

WMA Priority: Manage Sagebrush-steppe and Other Upland Habitats for Ring-necked Pheasant and Other Wildlife Production					
Conservation Target: Sagebrush-steppe and Other Uplands					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Provide quality breeding, nesting and brood-rearing habitat	Annually evaluate habitat for condition and need for maintenance	Refer to, and update, Vegetation Management Plan	Evaluation and control complete with success >30%	A, B, C, E, F, H
			Annually monitor waterfowl nesting success to ensure that success meets state target.. Comparing breeding pair count/brood counts annually and conduct nest searches/nesting success/nest loss evaluation every five years.		
			Routinely employ passive predator control by removing Russian olives and denning sites and active control when warranted.		

WMA Priority: Manage Sagebrush-steppe and Other Upland Habitats for Ring-necked Pheasant and Other Wildlife Production					
Conservation Target: Sagebrush-steppe and Other Uplands					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Provide quality breeding, nesting and brood-rearing habitat	Control noxious weeds on 100 acres annually	Use chemical, burning ,mechanical and biological methods	Acres controlled	A, B, C, E, F, H
			Use state-wide weed data base to track efforts		
		Annually maintain 4 acres of pheasant brood-rearing habitat	Maintain strips of forbs in close proximity to quality nesting habitat throughout the breeding season where irrigation is available	Acres maintained	
		Annually produce 30 acres of tall, dense, irrigated stands of high energy grain	Use cooperative agreements when possible or Department personnel to provide food plots or standing stubble	Acres produced	
	Provide quality escape and winter cover	Annually maintain >10 acres of woody escape and winter cover within each of the three tracts of SWMA	Use cooperative agreements and Department personnel to maintain woody cover plantings. Identify (Vegetation Plan/mapping) additional opportunities for habitat development.	Acres maintained	
	Provide quality breeding, nesting and brood-rearing habitat	By 2023, provide at least 25 acres of habitat on lands beyond SWMA	Work with Farm Bill Coordinator to inform landowners of opportunities with NRCS/FSA.	Acres provided	A, B, C, E, F, H
			Use Habitat Improvement Program funds to develop projects on private lands		
			Work with BOR, BLM and Tribal staffs to identify and fund projects on their lands		
			Use Habitat Improvement Program funds to buy food plots from private producers		
	Provide quality escape and winter cover	By 2023, provide at least 25 acres of habitat on lands beyond SWMA	Work with Farm Bill Coordinator to . inform landowners of opportunities with NRCS/FSA.	Acres provided	
			Use Habitat Improvement Program funds to develop projects on private lands		
			Work with BOR, BLM and Shoshone/Bannock Tribal staff to identify and fund projects on their lands.		
WMA Priority: Provide Hunting Opportunity					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA, Landscape	Manage healthy wildlife populations	Annually monitor disease and toxins as directed by Regional Wildlife Manager	Collect samples for West Nile virus, lead poisoning within SWMA and the American Falls reservoir	Samples collected	D
SWMA	Provide additional acres for hunting	Annually work with willing sellers to acquire additional lands	Use fee title, easement, lease or legal agreement as opportunities arise	Contacts made	A, B, C, E, F, H
	Provide a quality hunting experience	Annually release at least 2,700 rooster pheasants during the hunting season.	Release on random days and random sites to reduce hunter congestion	Pheasants released	A, C, E, F
		Annually monitor participation	Survey users annually and conduct a comprehensive survey at least every five years to monitor use	Survey completed	E, F
		Annually maintain 2 information centers	Keep information centers maintained and adequately stocked	Centers maintained	G, K, M
		Provide 3-4 sanitary facilities during hunting season	Install portable units during pheasant hunting season	Facilities provided	M
			Respond to all special requests for motorized access as needed		
		By 2018, provide 2 barrier-free hunting/viewing blinds and develop signage that educates the public on options for physically challenged users.	Maintain accessible hunting blind and accessible sanitary facility	Access provided	
			Install signs with contact information for physically challenged users		
			Provide public access on cooperative agreement properties		

WMA Priority: Provide Hunting Opportunity					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Provide a quality hunting experience	By 2017, provide and maintain 17 parking areas and directional signage from highway 39 for user access.	Maintain WMA parking areas	Parking areas provided	M
			Use barricades and public outreach to limit motorized access or other activity that could negatively impact habitat or legitimate use		
			Assure all access routes and boundaries are clearly marked		
			Construct 2 new parking areas in the Funk and Horsch segments		
		By 2017, ensure that known hazards to hunting dogs have been removed.	Remove unnecessary fences, junk piles and abandoned implements that may injure dogs	Hazards removed	
			Remove all net wire fencing		
			Replace bottom wire of fences with smooth wire		
			Develop and enforce trapping rules that are dog-friendly		
Landscape	Provide additional hunting access	By 2023, provide 2 additional properties for public hunting	Use fee title, easement, lease or legal agreement to obtain hunting access as opportunities arise.	Acres provided	A, B, C, E, F, H, I
			Supported by other programs promote Access Yes program		
Needs Identified in Conservation Target Coverage Assessment					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Develop strategies to address gaps identified in the viability assessment	By the end of 2016, develop and implement surveys to determine bat guild status	With Diversity recommendation, conduct driving and stationary surveys to monitor bat populations and to develop a species list.	Surveys completed	B, K
			With Diversity staff lead, identify areas of high concentrations of bats and identify habitat use.		
		By 2023, implement a survey to verify Desert valvata presence.	With Diversity staff lead, determine presence of Desert valvata on SWMA.		
			If presence is documented, coordinate with BOR to meet habitat needs.		
		By 2018, implement a survey to verify St. Anthony Dunes tiger beetle presence	Work with Wildlife Bureau staff to determine presence/ absence		
		By 2018, implement a survey to verify Ute Ladies' tresses presence	Work with Wildlife Bureau staff to determine presence/ absence		
		By 2018, implement a survey to verify Meadow milkvetch presence.	Work with Wildlife Bureau staff to determine presence/ absence		
Landscape	Develop strategies to address gaps identified in the viability assessment	By the end of 2016, develop and implement surveys to determine bat guild status	With Diversity staff lead, coordinate with BLM, conduct driving and stationary surveys to monitor bat populations and to develop a species list and to identify important areas for bats and identify habitat use.	Surveys completed	B, K
		By 2023, implement a survey to verify Desert valvata presence.	With Diversity staff lead, determine presence of Desert valvata within SWMA landscape		
		By 2023, implement a survey to St. Anthony Dunes tiger beetle presence.	With Diversity staff lead, determine presence of St. Anthony Dunes tiger beetle within SWMA landscape		
		By 2023, implement a survey to verify Ute Ladies' tresses presence	Work with Wildlife Bureau staff to determine presence/ absence within SWMA landscape		
		By 2023, implement a survey to verify Meadow milkvetch presence.			

Other Important SWMA Considerations					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
SWMA	Provide for other wildlife appreciation	Annually ensure that wildlife viewing information is available at 2 information sites.	Keep information centers maintained and stocked with wildlife viewing information.	Information available	H, M
			Identify and promote specific non-game wildlife viewing opportunities		
		Annually provide trapping opportunity for 1-2 trappers.	Provide trapping opportunity for up to 2 trappers per season.	Opportunity provided	E, M
		Annually provide fishing access through 3 SWMA segments	Provide access to American Falls Reservoir through the Funk, Horsch and Little Hole segments.	Access provided	
		By 2018, provide 2 barrier-free hunting/viewing blinds.	Construct 1 new blind on the Orth segment	Blinds are available for use	H, M
			Refurbish the existing blind on the Johnson pond		
			Maintain accessible viewing blinds throughout the year		
		Annually promote 2 youth-oriented educational opportunities.	Support youth hunting opportunities, hunter education, and wildlife education	Opportunities promoted	K
	Determine public use of SWMA	By the end of 2015, accurately assess all public use	Use a systematic sampling scheme to assess year-round public use	Surveys completed	F
		Annually collect user information at all parking areas to determine some user demographics and track changes in trends.	Provide sign-sheets at all parking areas to collect information on user origin, age, number of visits, and reason for visit.		
	Provide nesting structures for geese	Annually monitor and maintain 66 artificial nest structures	Inspect and maintain all goose boxes each winter.	Structures maintained	A, B, C, E, F, H
		Annually evaluate use and effectiveness of the 66 existing structures	Document use of all goose boxes each summer	Evaluation complete	
		Annually install or replace platforms as locations are identified.	Search out locations where new goose boxes would be used. Replace boxes that are non-functioning. Re-locate boxes that are not being used.	Boxes installed	
	Develop and maintain good relationships with neighbors and users through frequent contact and information	By March 1 of each year, inform users and neighbors of programs, practices and accomplishments on the WMA.	Send out an annual newsletter to inform users and neighbors	Information disseminated	J, K
			Expand mailing list as opportunities arise		
			Regularly contact neighbors and users by phone or in person		
			Provide information on recent activities and upcoming plans		
Landscape	Provide other sites for wildlife appreciation	By 2023, provide public access to at least 100 additional acres.	Work with other agencies (BOR and BLM) and private landowners (Access Yes!) to provide additional access off of SWMA	Access provided	H, I

Monitoring

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

In Table 3, future monitoring needs associated with performance targets and strategies identified in the SWMA Management Program Table are summarized. 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.

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.

Currently, several important ponds on SWMA are monitored. Monthly recording of pond levels on the main Orth Pond, north Orth Pond, and Johnson Pond has been ongoing since 2009. Additionally, the Johnson Pond pump output is recorded monthly.

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 SWMA 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. Past biological monitoring has included:

Waterfowl Nest Monitoring

In 1991, a nesting success evaluation on SWMA was undertaken and included waterfowl nest searches and subsequent monitoring. This was repeated in 1992-1996 by two graduate students

(Gazda 1994, Meidinger 1998). Department personnel followed identical protocol in 1997, 2001, and 2007.

Vegetation Mapping

GIS vegetation mapping was started in 1996 and completed in 2000. Major vegetation types were delineated as well as open water, agricultural ground, roads, goose boxes, fences, and water control structures. A long-term vegetation management plan was also developed.

In 2010, the Department 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.

Herpetological Surveys

Wildlife nongame program personnel conducted reptile and amphibian surveys on SWMA in 2005. In 2012, amphibians were surveyed in cooperation with the BLM, state office staff, and regional wildlife nongame program.

Aquatic Bird and Secretive Marsh Bird Surveys

Since 2009, state office staff (Idaho Bird Inventory and Survey), regional wildlife nongame program, and volunteers have conducted year-round aquatic bird surveys and secretive marsh bird survey during breeding season.

Currently, the following biological monitoring is ongoing:

Waterfowl Pair and Brood Monitoring

Surveys of waterfowl pairs and broods were started in 1994-1996 by graduate student Meidinger. Department personnel have been conducting the surveys annually since 2000. Throughout the early spring and summer, waterfowl pair counts and brood counts are conducted on SWMA to

provide an indication of nesting success. The statewide goal for waterfowl nesting success on WMAs is 30%.

Goose Box Monitoring

Documentation of goose box maintenance and use has been recorded since 1987.

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.

Sterling WMA User Surveys

Structured pheasant hunter surveys were conducted in 1981, 1982, 1987, 1992, 1998, 2003, 2009, and 2011. The first four of these surveys were based on randomized sampling of users throughout the pheasant hunting season. Estimates of total hunter days and harvest were calculated.

A non-systematic survey of users has been ongoing since 1999. Incidental contacts and sign-in sheets are used to determine purpose of visit, age of user, origin of user, and number of visits per year.

In 2003, traffic counters were installed at all parking areas to get total vehicle counts. Hunter contacts were made to determine hours hunted, success, number of hunters per vehicle, and number of parking lots visited in one day. In 2009, the traffic counters were deployed year-round to track all visits. For a portion of the year, a randomized sampling schedule was set up to contact non-hunting users. Surveys were conducted on weekdays and weekends from January through August. In 2011, cameras were set up to help verify traffic counter data. A thorough systematic sampling to cover all types of use year-round is a priority.

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.

Table 3. Monitoring for Sterling WMA, 2014-2023.

Performance Target	Survey Type	Survey Frequency
Manage waterfowl nesting habitat to maintain nest success of at least 30%	Pair and brood counts	Annually
	Nest search	Every five years
Manage goose nesting structures for >80% use	Summer inspection	Annually
Maintain hunter satisfaction >80% and monitor other public use	Personal contact survey of hunters and year round user survey	Annually for hunters and every ten years for all users beginning in 2014
By 2015, assess condition, potential function, and map habitat and water management potential of all wetland management units on SWMA	Wetland Ecosystem Services Protocol for the United States (WESPUS), water management mapping	Every five years beginning in 2014 or 2015
By 2018, monitor water quality of wetland management units most vulnerable to agricultural pollutants (determined by WESPUS assessment) and potential lead accumulation from hunting	Standard water quality and lead accumulation sampling protocols (Idaho Department of Environmental Quality)	Every five years beginning in 2014 or 2015
By 2018, treat 50% of the unproductive and overgrown ponds to approach an approximate 1:1 ratio of open water to tall marsh vegetation (e.g., cattail-hardstem bulrush). Have all 28 ponds in desired condition by 2023.	Baseline monitoring—vegetation sampling (composition, cover, and structure) at randomly selected locations across WMA (Department wetland habitat monitoring protocol); photopoints; Floristic Quality Assessment and plant species wildlife food value assessment.	Every ten years beginning by +/- 2015
Annually treat approximately 10% of 350 acres of mesic/wet meadow waterfowl nesting habitat to improve ecological condition of habitat in poor-fair category to good-excellent category as measured by floristic quality objectives, including: increase the Floristic Quality Index by 5%, increase native species richness by 10%, decrease noxious/invasive weed cover by 50%, decrease % of flora comprised of non-native species by 10%.	Effectiveness monitoring—supplemental vegetation sampling in targeted treatment areas (composition, cover, and structure) (modified Department wetland habitat monitoring protocol); photopoints; Floristic Quality Assessment and plant species wildlife food value assessment.	Before and at years 1, 2, 3, 5, and 10 after a stand is treated
By 2018, implement moist soil management techniques in one existing 5+ acre wetland management unit (if possible) to create plant community with >50% of the flora comprised of species with high nutritional value for migrating/staging waterfowl and other waterbirds (e.g., smartweed, beggartick, goosefoot, barnyard grass, etc.)	Mapping extent of all habitat types and open water using field GPS and remote GIS methods.	Every ten years beginning by +/- 2015
By 2018, maintain (within +/-10% of level documented by inventory), or expand, total population of iodine bush and red glasswort by protecting alkaline-saline habitats and their hydrology.	Population census	Every five years beginning by +/- 2015

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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

Sterling WMA is named after the town of Sterling, a farming community established in the early 1900s, located just northeast of the management area. The town site was laid out in anticipation of the flooding of the bottoms to the east by the American Falls Reservoir. Sterling seems to have absorbed some other small communities which had been located in or near the bottoms. A store, post office, and school were moved from the town of Otis, located in the bottoms to the southeast. A church from the community of Tilden was moved about the same time.

The name "Sterling" was reportedly drawn from a hat and referred to the sterling quality of the soil in the area. The town thrived for a number of years but was becoming a ghost town by the late 1940s, probably due to continuing drought and the consolidation of services at neighboring towns such as Aberdeen.

The wetlands in the area have long been recognized for their recreational value due mainly to the waterfowl they attract. Since the turn of the century, the character of the wetlands has varied. Water developments and management practices have constantly evolved beginning with the completion of the Aberdeen-Springfield Canal in 1910. This project brought water from the Snake River up onto the bench, which undoubtedly augmented various wetlands. More recently, drainage of wetlands, deep wells, and sprinkler irrigation have caused permanent, or at least seasonal, variations in the water table.

Developments were initially concentrated on removal of unneeded structures and fencing, the replacement or addition of fencing to facilitate controlled grazing and prevention of trespass grazing, and the construction of parking areas.

During the mid1980s, work on the Orth and Johnson segments providing an additional 50 acres of wetland. The development of the Johnson Segment also included the drilling of a well, installation of an electric pump to augment natural flows into the marsh, and a barrier-free hunting/viewing blind. Also since 1985, the area boundary fences were marked and an extensive signing program was put in place. Six shrub shelter belts have been planted and cared for through cooperative farming agreements and in conjunction with the Habitat Improvement Program.

Wetland projects in the 1990s were in cooperation with the Bureau of Reclamation. Nine potholes were excavated on the American Game segment (1995), 10 were blasted on the Plunkett segment (1996), two were blasted on the Thompson segment (1996), and seven were blasted on the Fingal segment (1997). Also in 1995, and in response to neighbor concerns, a dike was constructed on the Wells segment to catch run-off from the Thompson agricultural land.

Also in the mid- to late 1990s was an extensive program to reduce the number of Russian olive trees on the WMA. This action was in response to research that suggested predation on waterfowl nests by magpies was reducing nesting success to less than 3%. The high density of magpies was associated with the high density of Russian olive trees. Once the number of trees was reduced, nesting success for waterfowl increased.

In the early 2000s, emphasis was on reclaiming older ponds that had grown in with emergent vegetation. Six ponds were excavated to increase the open water. An additional pond was excavated in the Orth segment in 2000. Two important nesting fields were burned to improve the vegetation, and three old agricultural fields were re-seeded to a grass mix. The new shop/headquarters for SWMA was constructed in 2001.

In 2011, the Aberdeen-Springfield Canal Company re-aligned the ditch that ran through the Johnson segment to bring it across the Vanderford segment, reducing impacts to SWMA and a neighboring property.

In 2013, the Department cooperated with a neighbor to redirect the Orth Ponds drain. The resulting construction project kept an existing natural flow within SWMA for an additional .25 miles and rerouted another .5 miles of stream onto the SWMA which had been completely bypassing the WMA. The project has created additional wetland and allowed the neighbor to more efficiently farm adjacent agricultural ground.

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 SWMA lands. Certain activities are prohibited from funding with Federal Aid funds, and all provisions of Federal Aid funding will be followed.

Other federal and state laws also affect management of the SWMA. 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 SWMA lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on the SWMA.

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. VISITOR USE DATA AND USER SURVEY

Surveys to assess public use have been conducted intermittently on SWMA since 1981. The following table indicates documented types of use compiled mostly from voluntary sign-in stations posted at all parking areas. Traffic counter data suggests in excess of 5,000 user visits per year.

Yearly sample of Sterling WMA types of public use.

Year	Hunting	Photography	Horse riding	Wildlife Viewing	Fishing	Other
1998	172	3	1	1	0	0
1999	49	0	0	6	0	0
2000	76	0	0	0	0	0
2001	49	0	0	0	0	0
2002	101	0	0	0	0	0
2003	222	0	0	1	0	0
2004	221	0	0	0	0	0
2005	111	0	0	2	0	0
2006	214	0	0	1	0	0
2007	242	0	0	16	16	9
2008	196	0	0	13	0	1
2009	241	0	0	7	0	7
2010	173	0	0	6	0	0
2011	115	0	0	11	0	0
2012	187	0	0	0	0	0

Access Facilities

All lands are available for wildlife-based recreation with some restrictions regarding motorized traffic and administrative sites (see below). Two private land inholdings that involve farming cooperative agreements (350 acres) are available for public hunting. The SWMA also provides public access to American Falls Reservoir at several points.

Fifteen parking areas are provided throughout the WMA for visitor convenience. All parking areas are posted with pertinent information and are equipped with sign-in stations. Two parking areas serve as “information centers” and are stocked with maps and brochures including pertinent harvest regulations.

An accessible hunting blind is available for those with special needs (by appointment) and available to all first come-first served for wildlife viewing.

Educational Use

Tours of the WMA are provided by appointment. A youth pheasant hunting clinic is typically sponsored by the regional Hunter Education program and cooperating sportsman organizations in October. Use of the property for outdoor education and workshops by schools and other organizations is encouraged.

Restrictions and Special Use

Sterling WMA is open to public travel use with the following restrictions:

- Vehicles must remain on established, open roads/parking areas
- No overnight camping is allowed (camping facilities provided at Sportsman's Park)

All rules pertaining to public use of Department-controlled lands are in effect (IDAPA 13.01.03, posted at maintained parking areas), and users must also comply with pertinent Idaho hunting, trapping, and fishing regulations (available at all license vendors and SWMA information centers). Special use provisions can be authorized by permit issued from the Pocatello Regional Office.

2012 USER SURVEY

The Idaho Department of Fish and Game (IDFG) has 32 Wildlife Management Areas (WMAs) covering 350,000 acres. In 2012, the Department will begin updating the long-term management plans for each WMA. This survey will help us know more about the public uses and opinions about these important wildlife habitats.

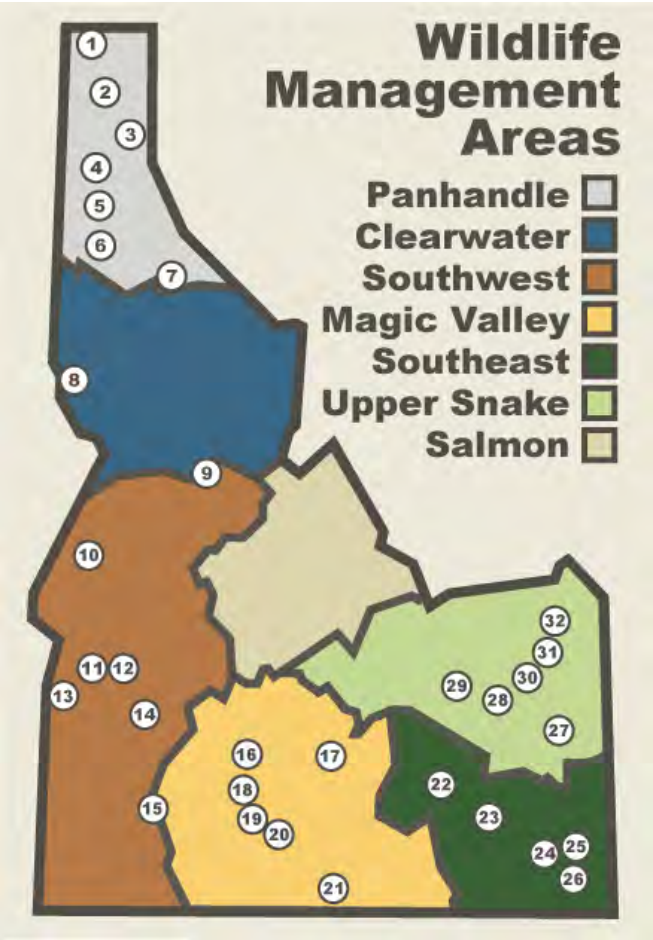
If you have any questions about the management of the WMA contact the regional office associated with that WMA.

1. Have you visited any of the WMAs in Idaho during 2011?

   ☐ Yes ☐ No

2. During 2011 which WMAs have you visited and how many days did you spend at each? Please count partial days as one day. (An estimate is fine)

Days	WMAs
_____	1 Boundary Creek WMA
_____	2 McArthur Lake WMA
_____	3 Pend Oreille WMA
_____	4 Farragut WMA
_____	5 Coeur d' Alene WMA
_____	6 St. Maries WMA
_____	7 Snow Peak WMA
_____	8 Craig Mountain WMA
_____	9 Red River WMA
_____	10 Andrus (formerly Brownlee) WMA
_____	11 Payette River WMA
_____	12 Montour WMA
_____	13 Fort Boise WMA
_____	14 Boise River WMA
_____	15 C. J. Strike WMA
_____	16 Camas Prairie/Centennial Marsh WMA
_____	17 Carey Lake WMA
_____	18 Billingsley Creek WMA
_____	19 Hagerman WMA
_____	20 Niagara Springs WMA
_____	21 Big Cottonwood WMA
_____	22 Sterling WMA
_____	23 Portneuf WMA
_____	24 Blackfoot River WMA
_____	25 Georgetown Summit WMA
_____	26 Montpelier WMA
_____	27 Tex Creek WMA
_____	28 Market Lake WMA
_____	29 Mud Lake WMA
_____	30 Deer Parks WMA
_____	31 Cartier Slough WMA
_____	32 Sand Creek WMA
_____	32 Sand Creek – Chester Segment WMA



Please answer the following questions for <u>each WMA</u> that you visited during 2011.

If you did not spend time at any WMAs, please skip to Question 8.

IF you visited more than 4 WMAs during 2011 please answer for the 5 WMAs that you spent the **most** days at.

_____WMA (please write the WMA you spent time at)

3. What were the three most important activities at **this** WMA? Please number 1 – 3 with 1 being the **most** important.

_____	ATV Riding	_____	Horseback Riding
_____	Being outside	_____	Hunting/Scouting
_____	Biking	_____	Photography
_____	Birding	_____	Picnicking
_____	Camping	_____	Running
_____	Canoe/Kayak/Boat	_____	Snowmobiling
_____	Dog training	_____	Swimming
_____	Dog Walking	_____	Trapping
_____	Fishing	_____	Wildlife Viewing
_____	Hiking	_____	Other (please describe) _____

4. How satisfied were you with your visit to this WMA?

Very Unsatisfied	Unsatisfied	Neutral/No Opinion	Satisfied	Very Satisfied
☐	☐	☐	☐	☐

5. How likely is it that you will visit this WMA again?

Very Unlikely	Unlikely	Neutral/No Opinion	Likely	Very Likely
☐	☐	☐	☐	☐

6. What could IDFG do to improve your visits to this WMA?

_____

_____

7. Do you have any specific suggestions or comments about the management of this WMA?

8. Where do you get most of your information about WMAs?

_____	Fish & Game office
_____	Fish & Game website
_____	Newspaper
_____	Radio
_____	Signage

_____ Social media (such as Facebook or Twitter)

_____ Television

_____ Word of mouth

_____ Other internet site, please list: _____

_____ Other, please tell us how you get information about IDFG WMAs:

_____

_____

IDFG manages Idaho WMAs to achieve these goals:

- Provide high quality habitat
- Provide high quality wildlife-based public recreation (hunting, fishing, wildlife viewing, etc.)
- Educate users about wildlife and the habitats they use
- Maintain positive working relations with neighbors

9. Do you agree with these goals?

Strongly Disagree	**Somewhat Disagree**	**Neutral/No Opinion**	**Somewhat Agree**	**Strongly Agree**
☐	☐	☐	☐	☐

10. Do you have specific suggestions or comments on how to improve these goals or current management of IDFG WMAs?:

_____

_____

11. To the best of your knowledge, what is the primary source of funding for operation and maintenance of IDFG WMAs?

_____ State taxes

_____ Federal taxes

_____ Idaho Fish & Game license sales

_____ I don't know

_____ Other, please describe _____

Historically, hunters and anglers have been Fish and Game's primary constituents. They have provided most of our agency funding through the sale of licenses and tags and through a FEDERAL tax on firearms, ammunition, and fishing supplies. No State taxes are used to operate WMAs.

Fish and Game is experiencing increasing demands on its lands and services by a growing constituency who are neither hunters nor anglers. This includes use of Fish and Game land for outdoor recreation other than hunting and fishing.

12. One option to better fund operation of these WMAs is to require WMA users 18 or older who do not possess a fishing, hunting or trapping license to purchase conservation permit to use Fish & Game WMAs.

    To what extent do you disagree or agree with this option?

Strongly Disagree	Somewhat Disagree	Neutral/No Opinion	Somewhat Agree	Strongly Agree
☐	☐	☐	☐	☐

13. If a conservation permit is required for WMA users who do not possess a hunting, fishing or trapping license how much should it cost?

    _____ $ 5 - $10
    _____ $ 11 - $15
    _____ $ 16 - $20
    _____ $ 21 - $30
    _____ Do not support requiring a permit.

14. If WMA users were required to purchase either a hunting, fishing, or trapping license OR a conservation permit to use WMAs, how likely are you to continue to use WMAs?

Very Unlikely	Unlikely	Neutral/No Opinion	Likely	Very Likely
☐	☐	☐	☐	☐

15. Do you have other specific suggestions or comments on a potential WMA conservation permit?

    _____
    _____

16. Do you have other specific suggestions or comments on how to fund management of WMAs?

    _____
    _____

Are you an Idaho resident? (If no, please go to Question 19.)

☐ Yes ☐ No

17. If you are an Idaho resident, what county do you live in? _____

18. If you are not an Idaho resident, what City and State do you live in?

    City: _____ State: _____

19. In 2011, did you purchase an Idaho fishing, hunting or trapping license?

- ☐ Yes
- ☐ No
- ☐ Not in 2011, but I have before

If you would like to be informed about WMA management in the future, including availability of new draft management plans during the summer of 2012, please provide us your contact information:

Email: _____

Name: _____

Address: _____

_____

City, ST: _____

Zip code: _____

V. 1999-2013 ACCOMPLISHMENTS

Since the Sterling WMA plan was last revised in 1999, the following accomplishments were achieved.

Goal: Develop habitat improvement projects.

Objective: Plant and maintain wood cover projects.

Accomplishment:

- Two additional acres of shelterbelts were planted as part of a cooperative agreement, and two more were planted by Department personnel. A total of 30 acres of shelterbelts were maintained.

Objective: Plant and maintain food plots.

Accomplishment:

- Forty-four acres of annual food plots are planted and maintained annually. Eleven of those acres were established by Department personnel while the rest were completed through cooperative agreements.

Objective: Plant and maintain dense nesting cover.

Accomplishment:

- Forty-five additional dense nesting cover acres were planted by Department personnel.

Objective: Use controlled burning to maintain vegetation that benefits ground nesting birds.

Accomplishment:

- Fifty-five acres of nesting cover were burned to improve the vegetative condition.

Objective: Remove Russian olive trees to improve nesting success of ground nesting birds.

Accomplishment:

- An additional four acres have been removed.

Objective: Provide large ponds for waterfowl brooding areas.

Accomplishment:

- Two new ponds were created and three other ponds were excavated to provide more open water for broods.

Objective: Construct, maintain, and monitor nesting structures.

Accomplishment:

- Approximately 65 goose boxes were maintained and monitored annually. All mallard structures were removed because of lack of use.

Objective: Improve management of water levels to benefit habitat.

Accomplishment:

- Three water control structures were replaced. Vegetation growing near an additional two structures was removed to improve water flow. Extensive excavation was made near another structure to ensure adequate water.

Goal: Use cooperative farming agreements to enhance wildlife habitat in areas where either financial or irrigation constraints would make it impossible for the Department to develop the area.

Objective: Design agreements so that SWMA habitat development is enhanced.

Accomplishment:

- Three farming cooperative agreements and one grazing agreement are in place every year.

Objective: Ensure that the Department receives equitable compensation for any farming or grazing done on the WMA.

Accomplishment:

- The current agreements provide maintenance for 23 acres of shelter belts, 22 acres of dense nesting cover, and two days of noxious weed spraying. Also, 38 acres of food plots are planted and maintained.

Objective: Develop a cooperative agreement with the University of Idaho Experiment Station Plant Materials Center.

Accomplishment:

- A 25-year cooperative agreement was signed in 2001.

Goal: Control Canada thistle, whitetop, and other noxious weeds on SWMA.

Objective: Use available resources to control noxious weeds through chemical, biological, and mechanical means.

Accomplishment:

- An annual effort is made to control thistle, whitetop, and perennial pepperweed through spraying, mowing, and insects.

Goal: Develop and maintain good relationships with neighbors.

Objective: Increase public awareness of issues, procedures, and practices on SWMA.

Accomplishment:

- Most adjacent landowners are sent an annual newsletter that highlights projects and plans for the SWMA.

Objective: Address neighbor concerns.

Accomplishment:

- Valid neighbor concerns have been received. Department personnel acted on concerns pertaining to inadvertent flooding, possible misuse of water rights, and mosquito control related to West Nile Virus. Established working relationship with county mosquito abatement district.

Objective: Manage water and waterways in a manner that provides the least inconvenience to neighbors while still fulfilling the goals of the WMA.

Accomplishment:

- The Johnson Pond was lowered a few inches to reduce impacts on a neighbor. The Thompson control structure and administrative road were improved to reduce impacts on a neighbor. A storage pond was excavated on the Wells segment to reduce spillage into the wetland.

Objective: Conduct periodic “checks” on public opinion.

Accomplishment:

- A concerted effort is made to make personal contacts with WMA users and neighbors in order to get a feel for public opinion. Survey information is collected regularly, and newsletters are distributed annually. Personal contact with cooperators and other neighbors occurs regularly.

Goal: Provide controlled vehicle and foot access to the SWMA.

Objective: Provide and maintain access points throughout the WMA.

Accomplishment:

- Fifteen parking areas are maintained throughout the WMA. New WMA signs were installed. Additional foot bridges and fence stiles were constructed.

Objective: Maintain facilities, like a barrier-free blind, so that public use is maximized.

Accomplishment:

- A barrier-free hunting/viewing blind is maintained.

Goal: Collect information on hunter utilization of pen-reared pheasants on SWMA.

Objective: Determine level of harvest of pen-reared pheasants.

Accomplishment:

- A survey was conducted to estimate harvest of pen-reared pheasants. An annual survey is conducted to estimate the harvest of all pheasants.

Goal: Maintain predator levels that are consistent with the purpose and goals of the SWMA.

Objective: Incorporate passive predator management.

Accomplishments:

- Passive management is being utilized every year by removing or restricting access to denning or nesting sites.

Objective: Incorporate active predator management for three years if passive management does not produce the desired results.

Accomplishment:

- Active predator removal was used for nine years until budget constraints no longer allowed for the expense.

Goal: Use nongame budgets or outside donations to fund nongame projects.

Objective: Ensure that projects that only benefit nongame species will be funded through nongame budgets.

Accomplishment:

- All nongame surveys were conducted using nongame budgets or outside funding.

Goal: Construct a new administrative facility on SWMA.

Objective: Secure funding for a new building.

Accomplishment:

- A new shop building was constructed using BOR and Department funds in 2001. The former building was razed.

Goal: Improve and protect wildlife habitat by acquiring land or easements.

Objective: Purchase land adjacent to SWMA.

Accomplishment:

- A cooperative agreement was signed with the BOR that transferred an additional 450 acres to be managed as part of the SWMA. A cooperative agreement was signed with the BLM that transferred management of an additional 111 acres to be part of the SWMA.

Additional Accomplishments

- Worked with the Aberdeen-Springfield Canal Company to relocate a lateral canal from the Johnson segment to the Vanderford segment. This effort was mutually beneficial to the canal company, neighbors, and the Department.
- Worked with neighbor to relocate a drain onto SWMA. This project took a deeply-cut drain that was off of the WMA and created a meandering stream that will provide wildlife benefits on the WMA.

VI. VEGETATION

Cover Types

A vegetation management plan and map for SWMA describing cover types and long term monitoring and management is completed.

Sterling WMA cover types.

Vegetation Type	Number of Acres	Percent
Big Sagebrush (Shrub-steppe)	1,284.87	31.3
Cattail/Hardstem bulrush (Marsh)	833.00	20.3
Agricultural	696.00	16.9
Grass (Introduced-seeded)	360.00	8.8
Rush, Sedge and Saltgrass Meadow (Wet, Mesic and Alkaline Meadow)	333.20	8.1
Open Water	333.20	8.1
Russian Olive Woodland	266.10	6.5

Surveys

No recent vegetation surveys have been conducted. The listing below is based on previous plans, known plantings, and records of occurrence according to the Idaho Fish and Wildlife Information System. There is a need for more current surveys to assess occurrence and abundance of a number of groups.

Plant Species List

Common and special status plant species: additional information available at www.idfg.idaho.gov. Status Designation: Idaho Conservation Data Center -sensitive = 1; Federal listing = 2, -e(endangered), -t(threatened), -c(candidate); USFS ranking = 3, -e(endangered), -t(threatened), -s(sensitive); BLM ranking = 4, -1(Type 1), -2(Type 2), -3(Type 3), -4(Type 4), -5(Type 5). Occurrence: Record within SWMA managed lands = 1, Record within SWMA landscape = 2.

Common	Scientific Name	Status	Occurrence	Management Considerations
Trees				
Russian olive	*Elaeagnus angustifolia*		1	introduced
Rocky Mountain juniper	*Juniperus scopulorum*		1	shelterbelt
Blue spruce	*Picea pungens*		1	shelterbelt
Red pine	*Pinus resinosa*		1	shelterbelt
Scotch pine	*Pinus sylvestris*		1	shelterbelt
White poplar	*Populus alba*		1	introduced
Eastern cottonwood	*Populus deltoides*		1	introduced
Black locust	*Robinia pseudoacacia*		1	introduced
Shrubs				
Iodine bush	*Allenrolfea occidentalis*	1	1	preserve alkaline wetlands
Wyoming big sagebrush	*Artemisia tridentata* ssp. *wyomingensis*		1	
Siberian peashrub	*Caragana arborescens*		1	shelterbelt
Cotoneaster	*Cotoneaster* spp.		1	shelterbelt
Gray rabbitbrush	*Ericameria nauseosus*		1	
American plum	*Prunus americana*		1	shelterbelt
Nanking cherry	*Prunus tomentosa*		1	shelterbelt
Woods' rose	*Rosa woodsii*		1	
Coyote willow	*Salix exigua*		1	
Black greasewood	*Sarcobatus vermiculatus*		1	
Forbs				
Silverweed cinquefoil	*Argentina anserina*		1	
Meadow milkvetch	*Astragulus diversifolius*	1, 3-s, 4-3	2	search alkaline wetlands
Whitetop	*Cardaria draba*		1	noxious weed
Water hemlock	*Cicuta douglasii*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Forbs (cont.)				
Canada thistle	*Cirsium arvense*		1	noxious weed
Bull thistle	*Cirsium vulgare*		1	introduced
Poison hemlock	*Conium maculatum*		1	noxious weed
Field bindweed	*Convolvulus arvensis*		1	noxious weed
Willow weed	*Epilobium* spp.		1	
Perennial pepperweed	*Lepidium latifolium*		1	noxious weed
Red glasswort	*Salicornia rubra*	1, 4-4	1	preserve alkaline wetlands
Russian thistle	*Salsola tragus*		1	introduced
Climbing nightshade	*Solanum dulcamara*		1	introduced
Field sowthistle	*Sonchus arvensis*		1	noxious weed
Ute ladies' tresses	*Spiranthes diluvialis*	1, 2-t, 3-t, 4-1	2	search wet meadows
Grasses, Sedges, and Grass-like Species				
Crested wheatgrass	*Agropyron cristatum*		1	introduced
Cheatgrass	*Bromus tectorum*		1	introduced
Nebraska sedge	*Carex nebrascensis*		1	
Clustered field sedge	*Carex praegracilis*		1	
Saltgrass	*Distichlis spicata*		1	
Spikerush	*Eleocharis* spp.		1	
Squirreltail	*Elymus elymoides*		1	
Baltic rush	*Juncus balticus*		1	
Basin wildrye	*Leymus cinereus*		1	
Alkali scratchgrass	*Muhlenbergia asperifolia*		1	
Bluebunch wheatgrass	*Pseudoroegneria spicata*		1	
Hardstem bulrush	*Schoenoplectus acutus*		1	
Intermediate wheatgrass	*Thinopyrum intermedium*		1	introduced
Tall wheatgrass	*Thinopyrum ponticum*		1	introduced
Cattail	*Typha latifolia*		1	

VII. WILDLIFE AND FISH SPECIES LIST

Surveys

Several wildlife management surveys are undertaken regularly. Species occurrence and abundance surveys have been less thorough. The listing below is based on previous plans, incidental observations, and records of occurrence according to the Idaho Conservation Data Center. There is a need for more current surveys to assess occurrence and abundance of a number of groups.

Common and special status animal species (fish, amphibians, reptiles, birds and mammals) and special status species only of invertebrates: additional information available at www.idfg.idaho.gov. Status Designation: Idaho Species of Greatest Conservation Need = 1; Federal listing = 2, -e(endangered), -t(threatened), -c(candidate); USFS ranking = 3, -e(endangered), -t(threatened), -s(sensitive); BLM ranking = 4, -1(Type 1), -2(Type 2), -3(Type 3), -4(Type 4), -5(Type 5). Occurrence: Record within SWMA managed lands = 1, Record within SWMA landscape = 2.

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds				
Cooper's hawk	*Accipiter cooperii*		1	
Northern goshawk	*Accipiter gentilis*		1	
Sharp–shinned hawk	*Accipiter striatus*		1	
Spotted sandpiper	*Actitis macularius*		1	
Clark's grebe	*Aechmophorus clarkii*	1	2	
Western grebe	*Aechmophorus occidentalis*	1	2	
Red–winged blackbird	*Agelaius phoeniceus*		1	
Wood duck	*Aix sponsa*		1	
Northern pintail	*Anas acuta*	1	1	Focal species
American widgeon	*Anas americana*		1	
Green–winged teal	*Anas carolinensis*		1	
Northern shoveler	*Anas clypeata*		1	
Cinnamon teal	*Anas cyanoptera*		1	
Blue–winged teal	*Anas discors*		1	
Eurasian widgeon	*Anas penelope*		1	
Mallard	*Anas platyrhynchos*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds (cont.)				
Gadwall	*Anas strepera*		1	
Golden eagle	*Aquila chrysaetos*		1	
Black–chinned hummingbird	*Archilochus alexandri*		1	
Great egret	*Ardea alba*	1	1	
Great blue heron	*Ardea herodias*		1	
Sage sparrow	*Artemisiospiza belli*		2	
Short-eared owl	*Asio flammeus*		1	
Long-eared owl	*Asio otus*		1	Focal species
Western burrowing owl	*Athene cunicularia*	1, 4-5	1	
Lesser scaup	*Aythya affinis*	1	1	
Redhead	*Aythya americana*		1	
Ring–necked duck	*Aythya collaris*		1	
Greater scaup	*Aythya marila*		1	
Canvasback	*Aythya valisineria*		1	
Cedar waxwing	*Bombycilla cedrorum*		1	
Bohemian waxwing	*Bombycilla garrulus*		1	
American bittern	*Botaurus lentiginosus*		1	
Canada goose	*Branta canadensis*		1	
Cattle egret	*Bubulcus ibis*	1	1	
Bufflehead	*Bucephala albeola*		1	
Common goldeneye	*Bucephala clangula*		1	
Barrow's goldeneye	*Bucephala islandica*		2	
Red–tailed hawk	*Buteo jamaicensis*		1	
Rough–legged hawk	*Buteo lagopus*		1	
Ferruginous hawk	*Buteo regalis*	1, 4-3	2	
Swainson's hawk	*Buteo swainsoni*	1, 4-5	1	
Baird's sandpiper	*Calidris bairdii*		1	
Stilt sandpiper	*Calidris himantopus*		1	
Western sandpiper	*Calidris mauri*		1	
Least sandpiper	*Calidris minutilla*		1	
Semipalmated sandpiper	*Calidris pusilla*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds (cont.)				
Wilson's warbler	*Cardellina pusilla*		1	
Turkey vulture	*Cathartes aura*		1	
Brown creeper	*Certhia americana*		1	
Semipalmated plover	*Charadrius semipalmatus*		1	
Killdeer	*Charadrius vociferus*		1	
Snow goose	*Chen caerulescens*		1	
Ross's goose	*Chen rossii*		1	
Black tern	*Chlidonias niger*	1, 4-3	2	
Common nighthawk	*Chordeiles minor*		1	
Northern harrier	*Circus cyaneus*		1	
Marsh wren	*Cistothorus palustris*		1	
Yellow-billed cuckoo	*Coccyzus americanus*	1, 2-c, 3-s, 4-1	2	
Northern flicker	*Colaptes auratus*		1	
Rock pigeon	*Columba livia*		1	
Olive–sided flycatcher	*Contopus cooperi*		1	
Western wood–pewee	*Contopus sordidulus*		1	
American crow	*Corvus brachyrhynchos*		1	
Common raven	*Corvus corax*		1	
Trumpeter swan	*Cygnus buccinator*	1, 3-s, 4-3	1	Focal species
Tundra swan	*Cygnus columbianus*		1	
Snowy egret	*Egretta thula*	1	1	
Willow flycatcher	*Empidonax traillii*		1	
Horned lark	*Eremophila alpestris*		1	
Brewer's blackbird	*Euphagus cyanocephalus*		1	
Merlin	*Falco columbarius*	1	1	
Prairie falcon	*Falco mexicanus*		1	
Peregrine falcon	*Falco peregrinus*	1, 3-s, 4-3	1	
American kestrel	*Falco sparverius*		1	
American coot	*Fulica americana*		1	
Wilson's snipe	*Gallinago delicata*		1	
Common loon	*Gavia immer*	1, 3-s	2	

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds (cont.)				
MacGillivray's warbler	*Geothlypis tolmiei*		1	
Common yellowthroat	*Geothlypis trichas*		1	
Sandhill crane	*Grus canadensis*	1	1	Focal species
House finch	*Haemorhous mexicanus*		1	
Bald eagle	*Haliaeetus leucocephalus*	1, 3-s,4-1	1	
Black-necked stilt	*Himantopus mexicanus*	1	1	
Barn swallow	*Hirundo rustica*		1	
Yellow–breasted chat	*Icteria virens*		1	
Bullock's oriole	*Icterus bullockii*		1	
Dark–eyed junco	*Junco hyemalis*		1	
Loggerhead shrike	*Lanius ludovicianus*		1	
California gull	*Larus californicus*	1	1	
Ring–billed gull	*Larus delawarensis*		1	
Franklin's gull	*Larus pipixcan*	1	1	
Long–billed dowitcher	*Limnodromus scolopaceus*		1	
Marbled godwit	*Limosa fedoa*		1	
Hooded merganser	*Lophodytes cucullatus*	1	1	
Belted kingfisher	*Megaceryle alcyon*		1	
Western screech–owl	*Megascops kennicottii*		1	
Wild turkey	*Meleagris gallopavo*		1	Introduced
Song sparrow	*Melospiza melodia*		1	
Common merganser	*Mergus merganser*		1	
Red–breasted merganser	*Mergus serrator*		2	
Brown–headed cowbird	*Molothrus ater*		1	
Townsend's solitaire	*Myadestes townsendi*		1	
Long-billed curlew	*Numenius americanus*	1, 4-5	1	Focal species
Black-crowned night heron	*Nycticorax nycticorax*	1	1	
Sage thrasher	*Oreoscoptes montanus*		1	
Ruddy duck	*Oxyura jamaicensis*		1	
Osprey	*Pandion haliaetus*		1	
House sparrow	*Passer domesticus*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds (cont.)				
Savannah sparrow	*Passerculus sandwichensis*		1	
Lazuli bunting	*Passerina amoena*		1	
American white pelican	*Pelecanus erythrorhynchos*	1, 4-2	1	
Gray partridge	*Perdix perdix*		1	Introduced
Cliff swallow	*Petrochelidon pyrrhonota*		1	
Double–crested cormorant	*Phalacrocorax auritus*		1	
Red–necked phalarope	*Phalaropus lobatus*		1	
Wilson's phalarope	*Phalaropus tricolor*	1, 4-5	1	
Ring–necked pheasant	*Phasianus colchicus*		1	Focal species - Introduced
Black–headed grosbeak	*Pheucticus melanocephalus*		1	
Black–billed magpie	*Pica hudsonia*		1	
Downy woodpecker	*Picoides pubescens*		1	
Hairy woodpecker	*Picoides villosus*		1	
Green–tailed towhee	*Pipilo chlorurus*		2	
Spotted towhee	*Pipilo maculatus*		2	
Western tanager	*Piranga ludoviciana*		2	
White-faced ibis	*Plegadis chihi*	1, 4-4	1	
Horned grebe	*Podiceps auritus*		2	
Red-necked grebe	*Podiceps grisegena*		2	
Eared grebe	*Podiceps nigricollis*		1	
Pied–billed grebe	*Podilymbus podiceps*		1	
Black–capped chickadee	*Poecile atricapillus*		1	
Mountain chickadee	*Poecile gambeli*		2	
Vesper sparrow	*Pooecetes gramineus*		1	
Sora	*Porzana carolina*		1	
Flammulated owl	*Psiloscops flammeolus*	1, 3-s, 4-3	2	
Common grackle	*Quiscalus quiscula*		1	
Virginia rail	*Rallus limicola*		1	
American avocet	*Recurvirostra americana*	1	1	
Ruby–crowned kinglet	*Regulus calendula*		1	
Bank swallow	*Riparia riparia*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Birds (cont.)				
Calliope hummingbird	*Selasphorus calliope*		2	
Broad–tailed hummingbird	*Selasphorus platycercus*		1	
Rufous hummingbird	*Selasphorus rufus*		1	
Yellow–rumped warbler	*Setophaga coronata*		1	
Yellow warbler	*Setophaga petechia*		1	
Mountain bluebird	*Sialia currucoides*		1	
Red–breasted nuthatch	*Sitta canadensis*		1	
White–breasted nuthatch	*Sitta carolinensis*		1	
Red–naped sapsucker	*Sphyrapicus nuchalis*		1	
American goldfinch	*Spinus tristis*		1	
Brewer's sparrow	*Spizella breweri*	1, 4-3	1	
Chipping sparrow	*Spizella passerina*		2	
Northern rough–winged swallow	*Stelgidopteryx serripennis*		1	
Caspian tern	*Sterna caspia*	1	1	
Forster's tern	*Sterna forsteri*	1	1	
Eurasian collared dove	*Streptopelia decaocto*		1	
Western meadowlark	*Sturnella neglecta*		1	
European starling	*Sturnus vulgaris*		1	
Tree swallow	*Tachycineta bicolor*		1	
Lesser yellowlegs	*Tringa flavipes*		1	
Greater yellowlegs	*Tringa melanoleuca*		1	
Willet	*Tringa semipalmata*		1	
House wren	*Troglodytes aedon*		1	
American robin	*Turdus migratorius*		1	
Eastern kingbird	*Tyrannus tyrannus*		1	
Western kingbird	*Tyrannus verticalis*		1	
Barn owl	*Tyto alba*		1	
Virginia's warbler	*Vermivora virginiae*	1, 4-5	2	
Yellow–headed blackbird	*Xanthocephalus xanthocephalus*		1	
Mourning dove	*Zenaida macroura*		1	
White–crowned sparrow	*Zonotrichia leucophrys*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Mammals				
Moose	*Alces alces*		2	
Pronghorn	*Antilocapra americana*		1	
Pygmy rabbit	*Brachylagus idahoensis*	1, 3-s, 4-2	2	
Coyote	*Canis latrans*		1	
North American beaver	*Castor canadensis*		1	
Townsend's big–eared bat	*Corynorhinus townsendii*		1	
Ord's kangaroo rat	*Dipodomys ordii*		2	
Big brown bat	*Eptesicus fuscus*		1	
North American porcupine	*Erethizon dorsatum*		1	
North American wolverine	*Gulo gulo*	1, 2-c, 3-s, 4-3	2	
Silver–haired bat	*Lasionycteris noctivagans*		1	
Hoary bat	*Lasiurus cinereus*		1	
Black–tailed jackrabbit	*Lepus californicus*		1	
River otter	*Lontra canadensis*		1	
Bobcat	*Lynx rufus*		2	
Yellow–bellied marmot	*Marmota flaviventris*		1	
Striped skunk	*Mephitis mephitis*		1	
Montane vole	*Microtus montanus*		1	
Meadow vole	*Microtus pennsylvanicus*		1	
House mouse	*Mus musculus*		1	
Ermine	*Mustela erminea*		1	
Long–tailed weasel	*Mustela frenata*		1	
American mink	*Mustela vison*		1	
Western small–footed myotis	*Myotis ciliolabrum*		1	
Long–eared myotis	*Myotis evotis*		1	
Little brown myotis	*Myotis lucifugus*		1	
Fringed myotis	*Myotis thysanodes*		1	
Long–legged myotis	*Myotis volans*		1	
Least chipmunk	*Neotamias minimus*		1	
Mule or black–tailed deer	*Odocoileus hemionus*		1	
White–tailed deer	*Odocoileus virginianus*		1	

Common	Scientific Name	Status	Occurrence	Management Considerations
Mammals (cont.)				
Common muskrat	*Ondatra zibethicus*		1	
Northern grasshopper mouse	*Onychomys leucogaster*		2	
Deer mouse	*Peromyscus maniculatus*		1	
Northern raccoon	*Procyon lotor*		1	
Eastern fox squirrel	*Sciurus niger*		1	
Merriam's shrew	*Sorex merriami*	1	1	
Vagrant shrew	*Sorex vagrans*		2	
Uinta ground squirrel	*Spermophilus armatus*		2	
Piute ground squirrel	*Spermophilus mollis*	1, 4-3	2	
Western spotted skunk	*Spilogale gracilis*		1	
Mountain cottontail	*Sylvilagus nuttallii*	1	1	
American badger	*Taxidea taxus*		1	
Idaho pocket gopher	*Thomomys idahoensis*	1	2	
Northern pocket gopher	*Thomomys talpoides*		1	
Townsend's pocket gopher	*Thomomys townsendii*	1	2	
Red fox	*Vulpes vulpes*		1	
Mollusks				
Desert valvata	*Valvata utahensis*	1, 4-1	2	
Fish				
Utah sucker	*Catostomus ardens*		2	
Bluehead sucker	*Catostomus discobolus*		2	
Mottled sculpin	*Cottus bairdii*		1	
Common carp	*Cyprinus carpio*		1	
Utah chub	*Gila atraria*		2	
Yellowstone cutthroat trout	*Oncorhynchus clarkii bouvieri*	1, 3-s, 4-2	2	
Rainbow trout	*Oncorhynchus mykiss*		2	
Longnose dace	*Rhinichthys cataractae*		1	
Speckled dace	*Rhinichthys osculus*		2	
Redside shiner	*Richardsonius balteatus*		1	
Brown trout	*Salmo trutta*		2	

Common	Scientific Name	Status	Occurrence	Management Considerations
Amphibians				
Tiger salamander	*Ambystoma tigrinum*		1	
Western toad	*Anaxyrus boreas*	1, 4-3	2	
Boreal chorus frog	*Pseudacris maculata*		1	
Northern leopard frog	*Rana pipiens*	1, 4-2	1	Focal species
Great Basin spadefoot	*Spea intermontana*		2	
Reptiles				
Rubber boa	*Charina bottae*		1	
Painted turtle	*Chrysemys picta*		1	Introduced
Western yellow-bellied racer	*Coluber constrictor mormon*		1	
Western rattlesnake	*Crotalus oreganus*		2	
Western skink	*Eumeces skiltonianus*		2	
Gopher snake	*Pituophis catenifer*		1	
Common sagebrush lizard	*Sceloporus graciosus*		1	
Western fence lizard	*Sceloporus occidentalis*		2	
Western terrestrial garter snake	*Thamnophis elegans*		1	
Common garter snake	*Thamnophis sirtalis*		1	

VIII. LAND ACQUISITIONS, AGREEMENTS, AND INFRASTRUCTURE

Land Acquisitions – Fee Title				
Year	**Funds Used**	**Segment**	**Acres**	**Acquired From**
1968	Gift	Am. Game	121.55	American Game Assoc.
1971	PR	Orth	201.00	Harold Orth
1973	FG	Wells	233.30	Ellis F. Wells
1975	FG	Various	616.65	USR and PP Act (BLM)
1975	PR	Thompson	140.00	Wilbur Thompson
1981	FG	Various	638.77	USR and PP Act (BLM)
		Subtotal	1,951.27	

Cooperative Land Agreements				
Year	**Type**		**Acres**	**Leased From**
2011	20 years	All BOR	1,700.00	USDI Bureau of Reclamation
2005	Perpetual	Horsch	115.00	Bureau of Land Management[a]
2008	Renewable	Funk	160.00	Robert Geisbrecht
2008	Renewable	Horsch	180.00	Ken and Dwight Horsch
		Subtotal	2,155.00	
		SWMA Total	***4,106.27***	

[a] Actually closer to 120 – database figure is 115

Water Rights	
Year	**Type**
1973	80 shares of Aberdeen-Springfield Canal Co.
	80 acre feet of American Falls Reservoir
1975	60 shares of Aberdeen-Springfield Canal Co.
	45 acre feet of American Falls Reservoir
1981	100 shares of Aberdeen-Springfield Canal Co.
Total	240 shares of Aberdeen-Springfield Canal Co.
	125 acre feet of American Falls Reservoir

Easements/Inholdings
Aberdeen Springfield Canal Company

IX. INFRASTRUCTURE

Infrastructure
1 – Shop/Headquarters
16 – Parking Areas/Information Centers
8.5 – Roads/Trails (Miles)
8 – Earth structures -Dikes/Water controls/Ponds
1 – Accessible Blind
20 – Fences (Miles)
Irrigation
2 – Pumps
2,640 – Mainline (Feet)
10,000 – Portable Pipe (Feet)

STERLING

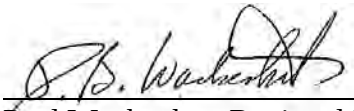
WILDLIFE MANAGEMENT AREA PLAN

Approval

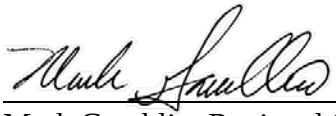
Submitted by:

Dean Rose, Habitat Biologist

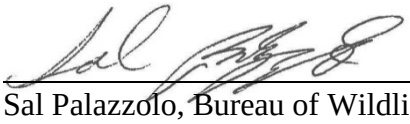
Reviewed by:



Paul Wackenhut, Regional Habitat Manager



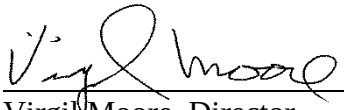
Mark Gamblin, Regional Supervisor



Sal Palazzolo, Bureau of Wildlife

Tom Hemker, State Habitat Manager

Approved by:



Virgil Moore, Director