Cecil D. Andrus
Wildlife Management Area

Management Plan
2014

Southwest Region

Cecil D. Andrus Wildlife Management Area

2014 – 2023 Management Plan

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Idaho Department of Fish and Game
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Executive Summary

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

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

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

The Department's Southwest Region includes six WMAs containing approximately 95,000 acres of land with a primary management focus of maintaining highly functional wildlife habitat, as well as providing wildlife-based recreation. Andrus WMA, at the upper end of Hells Canyon in Washington and Adams counties, is an important wintering area for deer and elk. Boise River WMA, in Ada, Boise, and Elmore counties, provides critical winter range for mule deer and elk near Idaho's largest human population centers. The other four Southwest Region WMAs comprise wetland, riparian, and upland habitats managed with an emphasis on upland game and waterfowl production and hunting. These include Fort Boise WMA at the confluence of the Boise and Snake rivers in Canyon County; Payette River and Montour WMAs along the Payette River in Payette and Gem counties; and C.J. Strike WMA on the Bruneau and Snake rivers near C.J. Strike Reservoir in Owyhee and Elmore counties.

Each WMA is managed as part of a larger habitat district, which may also include other lands owned or operated by the Department for wildlife habitat or public access. Management of lands for wildlife habitat could not succeed without the cooperation and collaboration of many partners, with the Department as either a licensed tenant or a neighbor. Examples include Idaho

Department of Lands (IDL), U.S. Army Corps of Engineers, USDI Bureau of Reclamation (BOR), BLM, USDA Forest Service (USFS), Bonneville Power Administration (BPA), Idaho Power Corporation, and other private landowners.

Personnel and operating funds for regional wildlife habitat programs are provided through a combination of hunting licenses and fees, federal aid from excise taxes under the Pittman-Robertson Act, and to some degree by BPA and BOR as mitigation for habitat losses resulting from construction of various dams in the region. Hunters fund a large portion of management costs, and they are rewarded with habitat management areas that sustain many of the region's big game herds and provide consistent waterfowl and upland game bird production and hunting opportunities. Non-hunters, who value the varied benefits provided by the Southwest Region's WMAs, also benefit from the broad ranging conservation values associated with Department lands.

The Cecil D. Andrus Wildlife Management Area (AWMA) was originally acquired by the Mellon Foundation and gifted to the Department through The American Land Conservation Program for purposes of wildlife conservation. It was also intended that the AWMA be an example of a working conservation ranch, where wildlife and livestock values could be demonstrated. Since the inception of the WMA, the Department has entered into agreements with the IDL, BLM, and USFS to manage intermingled lands within the WMA for wildlife. The Department has primary management responsibility.

This document provides direction in the form of goals, objectives, and strategies for the management of the AWMA. Issues pertaining to the AWMA were identified by the public and the Department. These issues were developed into goals, objectives, and strategies consistent with the Department Strategic Plan, *The Compass*.

This plan will serve as a guide for current and future managers in planning where to direct efforts and resources for maximum wildlife benefit, public enjoyment, and efficient operation. As new information and techniques become available, strategies may be modified to most effectively reach the goals and objectives in this plan. All goals, objectives, and strategies are dependent on adequate funding, personnel, and public support.

Introduction

This management plan is designed to provide broad guidance for the long-term management of the Cecil D. Andrus Wildlife Management Area (AWMA). It replaces an earlier management plan written in 2006 and this updated plan was completed during 2012 and 2013 with extensive public input. This plan is tiered off other Idaho Department of Fish and Game (Department) plans and policies, including:

- 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)

Department Mission

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

Department Strategic Goals

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

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

The 2014 Wildlife Management Area (WMA) plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* 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.

Cecil D. Andrus WMA Vision

Protect and manage the wildlife resources of the AWMA to ensure sufficient quantities of high quality and secure habitat for wintering big game and for a wide variety of other game and nongame species. Provide high quality wildlife-based recreational opportunities and nature viewing compatible with this primary mission for the benefit of the public.

Duration of Plan

This plan provides broad, long-term management of the AWMA and has a 10-year life span. It will be evaluated every five years to determine if adjustments are needed. The plan will be modified as needed to accommodate changing conditions and goals and to incorporate available advancements in management knowledge and techniques.

Other Considerations

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

Area Description and Current Status

Andrus WMA encompasses 23,928 acres in the breaks of the Snake River canyon along Brownlee Reservoir (Figure 1). The AWMA is composed of intermingled lands owned by several government agencies. The Department holds title to 10,087 acres of land and manages an additional 12,821 acres of Idaho Department of Land (IDL) lands through the Conservation Lease #M50004 and 320 acres of IDL lands through the Mineral Lease #9140; 320 acres of U.S. Forest Service (USFS) lands through the Weiser Allotment Environmental Assessment (2011); and 800 acres of Bureau of Land Management (BLM) lands through the 2013 Memorandum of Understanding (MOU). Approximately 100 acres of private inholdings occur within the AWMA, of which 40 acres comprise the Cimanchi and Hercules mining claims.

Elevations at AWMA range from 2,077 feet at Brownlee Reservoir to over 5,000 feet on Cuddy Mountain. Soils are derived mainly from basalt and basalt with granitic parent material. Significant amounts of clay loam subsoils are also present. Steep slopes with rock outcrops and lava rock rims predominate in canyon areas (Appendix VI). Soil erosion can be significant during spring runoff and summer storm events.

Temperatures range from -20 degrees F to 118 degrees F. The mean annual temperature is about 54 degrees F at the lower elevations. The growing season generally ranges from 80 - 140 days depending on elevation. Mean annual precipitation ranges from about 12 to 16 inches, increasing from lower to higher elevations across the area. Most precipitation falls as snow and spring rains. The area can experience severe summer thunderstorms.

Normal snow depths are low to mild over most of the area. Low elevation south facing slopes (<3,000 feet) are often snow-free most of the winter, with eight to 10 inches being the normal maximum depth at mid elevations. The higher elevation portions of the area (>4,000 feet) will normally accumulate one to two feet of snow.

Mancuso and Moseley (1995) mapped and described vegetation types. In 2011, vegetation composition, structure, and condition were measured across AWMA (Moser 2012). This included establishment of habitat monitoring transects, grazing utilization, and riparian functional assessment.

Most of the AWMA is characterized by highly dissected, steep canyon slopes and associated ridges. Perennial bunchgrass communities of bluebunch wheatgrass (*Pseudoroegneria spicata*) and Idaho fescue (*Festuca idahoensis*), or degraded versions characterized by invasive annual grasses (e.g., cheatgrass, *Bromus tectorum*), dominate the canyon faces. Xeric big sagebrush (*Artemisia tridentata* ssp. *xericensis*) communities are common in areas of gentle canyon topography south of Brownlee Creek. A mosaic of bitterbrush (*Purshia tridentata*), big sagebrush, scabland, and deciduous shrub communities also occur within the canyon landscape. Narrow bands of woody riparian vegetation, often dominated by trees, such as black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) or white alder (*Alnus rhombifolia*), or shrubs, namely

water birch (*Betula occidentalis*), redosier dogwood (*Cornus sericea*), and syringa (*Philadelphus lewisii*), follow all the perennial streams within the AWMA.

Prescribed burns in the past have reduced sagebrush cover over large sections of these uplands. Much of the AWMA's upper elevations, including nearly all areas along its eastern border, can be characterized as transitional between forest and non-forest habitats. This transitional-type vegetation is comprised of a complex mosaic of mesic grassland, mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), black hawthorn (*Crataegus douglasii*) and other deciduous shrublands, aspen (*Populus tremuloides*), and conifer (primarily Douglas-fir, *Pseudotsuga menziesii*) patch habitats. Spring and seep-fed meadows on the Brownlee-Pine Creek divide support two of the 14 known Indian Valley sedge (*Carex aboriginum*) populations in the world. Throughout the AWMA, aspect and microtopography are pivotal factors in controlling the distribution of these various plant communities.

Andrus WMA had significant infrastructure in place at the time of its transfer to the Department including approximately 100 miles of fence, 47 spring/tank water developments, seven livestock ponds, 26 buildings and other structures, and 50 miles of roads with gates. Since acquisition, numerous small sheds and a range rider trailer have been removed and the manager's residence replaced. Fences, corrals, water developments and roads are maintained annually and each year portions of them are upgraded or replaced with the use of volunteers and as funding allows.

Recent monitoring and assessment work has shown approximately 7.5% of the AWMA to be dominated by annual grasses and other invasives. Riparian areas showed 28% to be unstable or insufficiently covered.

Noxious weeds on the AWMA are controlled by a variety of methods including biological, mechanical, and chemical. Management actions regarding noxious weeds work to prevent the establishment and spread of new noxious weeds, to contain and reduce the acreage dominated by established noxious weeds, to return plant communities invaded by noxious weeds to desirable species, and to test and monitor selected treatments of noxious weeds. The Department works in cooperation with adjacent landowners and other agencies as part of its noxious weed control program, including the IDL, the Washington County Weed Department, the Lower Weiser River Cooperative Weed Management Area , Idaho Power Company, the BLM Four Rivers Field District, and the USFS Payette National Forest. All AWMA permanent staff maintain Professional Applicator's Licenses for the purchase and application of herbicides.

Andrus WMA is home to a variety of migratory and resident mammals, birds, reptiles, amphibians, and fish. A description of the wildlife present on the AWMA can be found in Appendix VII.

Andrus WMA receives approximately 1,000 visitor use days per year. Most use occurs during the fall hunting seasons. Livestock grazing is active on the WMA and commercial beehives are placed on the WMA during the spring and fall. There are two mining claims within the AWMA, neither are currently active, but that is subject to change with economic conditions.

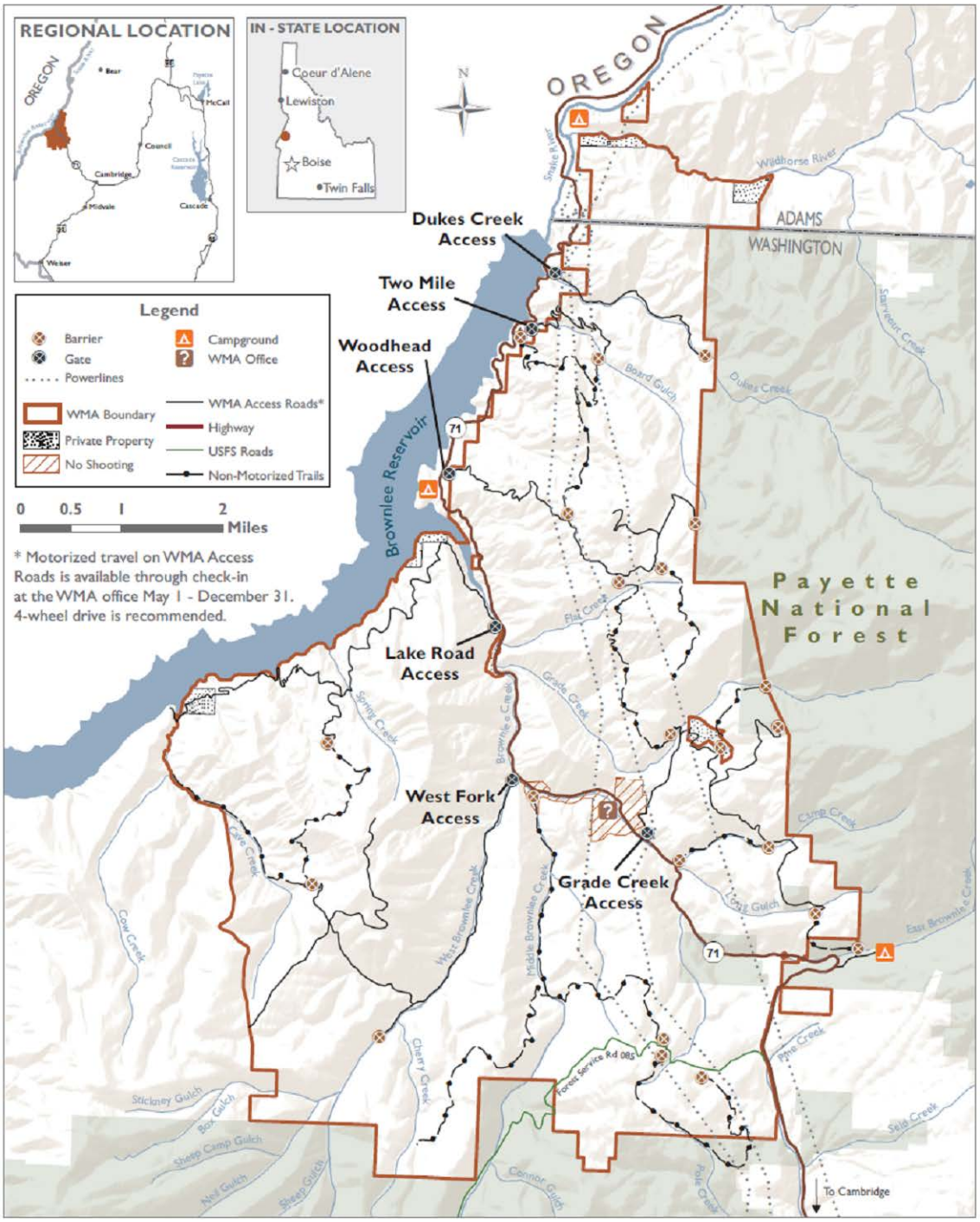

Figure 1. Map of Cecil D. Andrus Wildlife Management Area.

Management Issues

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

Eighty one percent of public respondents indicated they were satisfied or very satisfied with their AWMA experience. Many commented they liked the current access program, felt the staff was helpful, and had very few suggestions for improvements. Thirteen percent of respondents were unsatisfied or very unsatisfied with their experience. Many commented they wanted more access, more game, fewer restrictions, fewer predators, and fewer hunters. Five percent of respondents felt neutral or had no opinion about their experience.

Issues from all respondents are categorized as the following:

- Approve of current management programs
- Would like more access and fewer limitations
- Would like less motorized access and more restrictions
- Would like more game and fewer predators
- Would like more habitat improvements
- Would like livestock grazing reduced or eliminated

The following list of issues was developed after extensive public input as described in Appendix IV. Department policy direction and WMA staff management experience also helped shape the list of current issues. The issues identified were grouped, based on similarity, into three general categories, Habitat Management, Infrastructure Management, and Public Use Management. Each issue is summarized and includes some potential management options.

Habitat Management

1. **Shifts in Plant Communities.**

   a. **Non-native Annual Grass Impacts.**

      Discussion: Non-native annual grasses occur throughout the AWMA and dominate areas where historic lands uses degraded or eliminated native plant communities. These grasses prevent sagebrush and bitterbrush essential to wintering big game from establishing, and they increase wildfire frequency. There are currently no cost effective methods to treat and establish desirable vegetation in annual grass dominated areas. Management options for annual grasses include livestock grazing, herbicide applications, and revegetation with desirable species on a limited scale; and future application of biological control agents as

they become available. Because of the steep terrain, limited rainfall, extent of annual grass establishment, and available funding, management of annual grasses on the landscape to prevent their conversion to even less desirable species is the most practical large scale approach.

b. Douglas-fir and Ponderosa Pine Invasion of Quaking Aspen and Shrublands.

Discussion: As a part of normal plant community succession, Douglas-fir and ponderosa pine (*Pinus ponderosa*) are encroaching into aspen stands and shrub communities on both the AWMA and throughout the Snake River breaks. Conversion of shrub communities to forest can negatively impact shrub-dependent wildlife species, especially wintering big game. There are management options to address habitat succession; however, because of the landscape scale it is occurring at, any actions taken on the AWMA will have little meaningful impact to wildlife populations.

c. Noxious Weed and Invasive Species Presence.

Discussion: Invasive species occur on the AWMA and include noxious weeds, other non-native forbs, and annual grasses. Andrus WMA has an active weed control program in place and uses chemical, mechanical, cultural, and biological control methods in an integrated pest management approach. The AWMA staff also work closely with the Lower Weiser River Cooperative Weed Management Area (LWRCWMA) on noxious weed issues that transcend AWMA borders. Activities on the WMA are managed to reduce soil disturbance and resist invasion by these undesirable plants. The AWMA weed control program prioritizes noxious weed species and treatments to make the best use of available resources. Because resources are limited, more biological control agents are being utilized as a cost effective method for long term weed control.

d. Changes in Weather Patterns Affects Habitat.

Discussion: Changes are occurring in weather patterns across the west, including Idaho. Climate models show that overall, southern Idaho can expect to experience warmer, wetter winters and hotter, drier summers. Changing weather conditions are already impacting AWMA shrub communities and adjacent forest communities. Many of these weather changes will favor non-native and invasive plants over native species, resulting in changes to plant communities and the wildlife populations these communities support. Wildfires are expected to increase in size, severity, and frequency, and reduced snow and rain will increase the frequency and severity of drought conditions. Because influencing weather patterns is not within the realm of AWMA staff abilities, management programs and actions will need to reflect impacts of weather pattern changes.

2. Mineral Rights are Not Owned or Managed by the Department.

Discussion: The Department does not own or manage a large portion of the mineral rights on the lands within the AWMA boundary. There are two mining claims within the WMA, with

the potential for approximately 1/4 of the AWMA land area to be impacted by mining activities. Mining activities will impact wildlife habitat and populations, public access and use, infrastructure, and the livestock grazing program. The Department will work with the IDL, who permits mining activities, and the holder of the mineral rights to ensure that wildlife, habitat and public access are minimally impacted from mining related activities; that wildlife habitat is restored on impacted lands; and that any non-mining activities are managed within the AWMA access management program.

3. Livestock Grazing Program.

Discussion: When the AWMA was gifted to the Department, the Fish and Game Commission (Commission) directed it be managed as a "Conservation Ranch," emphasizing wildlife conservation while maintaining some level of livestock grazing. After acquisition, the IDL and Department jointly developed an AWMA Grazing Management Plan which reduced available AUMs and set a rest rotation grazing system in place. Vegetation monitoring occurs on the WMA each year in part to evaluate the impacts of livestock grazing. The AWMA receives few to no complaints about grazing each year. Continued livestock grazing on the WMA meets the intent set by the Commission and demonstrates that wildlife values and livestock grazing can exist compatibly on public lands.

4. Issues that Cross AWMA Boundaries.

a. Andrus WMA is Part of a Larger Landscape.

Discussion: Andrus WMA is part of the Snake River Breaks that runs from Steck Park (outside the town of Weiser) north to the Hells Canyon National Recreation Area at Hells Canyon Dam. The area is primarily public lands or private lands with a conservation priority (Idaho Power Corporation mitigation properties; Rocking M Ranch Conservation Easement Area). Within this landscape is a unique potential to cooperatively manage and improve wildlife habitat, especially critical big game wintering habitat, at a meaningful scale. However, it must also be recognized that wildlife and natural events do not recognize human defined boundaries. Often what occurs across a landscape is not within the ability of the Department to significantly influence or control (i.e., habitat succession, urban development), nor will management actions taken on the AWMA always significantly influence the larger landscape.

b. Multiple Landownership Within Andrus WMA.

Discussion: The lands comprising the AWMA are owned by the Department, IDL, USFS, BLM, Idaho Power Corporation, Anglo Bomarc Mining, and one private landowner. Because each entity has its own goals and objectives for their lands, working cooperatively to address management issues is essential. The Department currently has good working relationships with the major land management agencies and serves as the lead management agency for activities on the WMA. All AWMA issues that span or

could impact multiple land ownerships are cooperatively addressed with the appropriate parties.

c. Management of the Rocking M Ranch Conservation Easement Area (RMRCEA).

Discussion: The easement on the Rocking M Ranch was acquired by the Department for public access and wildlife values. The Department worked with the BLM to define a conservation area that included easement and BLM lands, and to develop a livestock grazing system for the area. The Department has invested in habitat and infrastructure improvements on the RMRCEA; however, there is no specific budget for management of the RMRCEA and projects are developed on it as funding permits. The RMRCEA is extensively used by the public for wildlife-based recreation. The Department is unable to maintain regular presence due to limits in management funding, and over time, there have been increased incidents of inappropriate motorized use. The Department is working with the landowner and BLM to address this and other issues.

d. Working with Neighboring Landowners.

Discussion: Public lands managed by USFS and IDL border the majority of the AWMA. Idaho Power manages several large properties adjacent to or near the AWMA. Idaho Power also has an access easement through the AWMA on the Lake Road to reach its mitigation property in Cottonwood Creek. Andrus WMA staff has worked with its neighbors to address common issues, including maintenance of the Lake Road, public access, wildfire impacts, monitoring, livestock trespass, and noxious weeds. Different priorities, timelines, processes, funding levels, and changes in staff within these entities often influences the timeline needed to address issues.

5. Improve Habitat for Wildlife, Especially Upland Game Birds.

Discussion: There are six acres of cereal grain food plots near the AWMA headquarters for upland game birds, primarily quail and turkeys. These plots have been in wheat since approximately 1994, and harbor the source population for the kochia (*Kochia scoparia*) infestation spreading on the AWMA along the road system and wildlife trails. Due to changing environmental conditions, primarily increased drought severity and decreased rainfall, the future success of these food plots is doubtful. Replacing them with permanent cover would establish vegetation that could serve for foraging and nesting, and would not be prone to failure from drought once established.

Tree and shrub plantings have been done on the AWMA to benefit birds, big game and other wildlife. Successfully establishing plantings and seedings can be difficult on the AWMA, due to water, terrain, and resource limitations. Most large scale plantings in the past have failed due to environmental conditions, so improvements are now limited in scale so additional water can be provided where possible to help improve survival. Recent habitat improvements have targeted the replacement of invading annual grasses with perennial vegetation through small scale herbicide treatments, seedings, and shrub plantings.

Infrastructure Management

1. **Andrus WMA Infrastructure Maintenance/Replacement Needs.**

   Discussion: There is significant infrastructure present on the AWMA including over 50 miles of roads, numerous gates and access management structures, five bridges, 100 miles of fence, over 50 spring/tank water developments and ponds, and 26 buildings and other structures. All of it requires annual maintenance inspection and some level of repair and/or replacement as problems are identified. Every attempt is made to identify problems early and make timely repairs to keep costs low and prevent problems from escalating. As infrastructure reaches its effective lifespan, it is evaluated for removal without replacement. Only those items essential to the AWMA and Habitat Program mission will be replaced.

   The case can be made that there is still too much infrastructure on the AWMA as repair/replacement needs often exceed funding availability. Currently, there are seven water developments, two bridges, and three residence buildings with significant maintenance issues which are in need of replacement. In order to ensure safe living, working, and recreation environments for the public and staff, and effective habitat management, additional funds for infrastructure maintenance and replacement need to be identified, secured, and a timeline for projects initiated.

2. **Size of No-Shooting Safety Zone.**

   Discussion: The current AWMA No-Shooting Safety Zone was delineated to protect AWMA staff, the public, infrastructure buildings, and working livestock. The safety zone is also popular with the public for wildlife viewing and photography. Hunters are able to travel through it to reach areas open to shooting beyond its boundaries. A segment of public users would like the size of the safety zone reduced. A reduction in its size would increase the potential for serious injury to people and working livestock, and damage to structures from firearm discharges. The Department has a responsibility to provide safe facilities and environments for staff and the public, and the current safety zone meets that responsibility.

Public Use Management

1. **The Current Access Program is Meeting Expectations.**

   Discussion: Public comments gathered by the 2012 online public survey and from AWMA user surveys indicate the access program as it is currently managed is meeting the public's expectation. The majority of users are happy with the access program and motorized vehicle use management, and the positive comments indicate that the greater AWMA management is achieving its goals of providing quality wildlife habitat and opportunity for quality wildlife-based recreation.

2. Motorized Access Issues.

Although the majority of AWMA users indicate satisfaction with the current access program, there are some users who wish to see:

- Motorized access further restricted or eliminated
- Motorized access allowed during the January through April closure
- More keys per road available for access during hunting seasons
- No motorized restrictions or closed roads

The goal of the Department is to provide for quality wildlife-based recreation on the AWMA. The current program attempts to balance the needs of wildlife, habitat, the public, and infrastructure with the funding and personnel resources available to support those needs. Although not everyone is satisfied with the level of access provided, the vast majority of users support the existing program and the level of quality it provides. Increased motorized access would decrease the quality and satisfaction for the majority of AWMA users and increase user conflicts. It would also conflict with the needs of wildlife, especially wintering big game, significantly lowering the quality of winter habitat and ultimately wildlife survival.

3. Increase Office Hours.

The AWMA office hour structure reflects funding and personnel resources available and the level of public demand throughout the year. Volunteers are used each year to help meet the public's demand for access and information on the AWMA. Staff also regularly provides assistance to the public after working hours. Office hours are evaluated each year for areas where increases can be made; however, any increases have to be balanced with other priorities and obligations, and limits of funding resources.

Cecil D. Andrus WMA Management Program

The Department is responsible for the preservation, protection, perpetuation, and management of all wildlife, fish, and plants in Idaho. Wildlife Management Areas allow the Department to directly affect habitat to maximize suitability for species in key areas. Management to restore and maintain important natural habitats, and create hyper-productive habitats to enhance carrying capacity for selected wildlife species remains a key strategy on AWMA. 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, likely come from outside their boundaries. Therefore, WMA managers must recognize and create opportunities to participate in collaborative conservation and management programs with adjacent landowners, enabling broader influence to maintain the ecological functions that sustain WMA-dependent wildlife.

We propose that an effective way to enable a broader influence over the future of AWMA is through the use of focal species management. According to Noss et al. (1999), focal species are those used by planners and 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 AWMA, a carefully selected suite of focal species can act as a surrogate for the conservation of many species.

Identifying landscape-scale species priorities across ownership boundaries comprehensively addresses wildlife-related issues on the AWMA and creates a platform for conservation partnerships in the surrounding landscape. This step is also crucial for increasing the likelihood that WMA functions are resilient to inevitable changes in their associated landscapes.

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

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

Summary of Management Priorities

The development of management priorities for Cecil D. Andrus WMA was done using substantial input from the public, from Department personnel, and from other state and federal agencies. However, there are several sideboards associated with management of habitat, wildlife populations, Department land, and specific WMAs that helped direct and guide the development of management priorities for WMAs. These include the Department Mission (page 8), the Department Strategic Plan (Appendix I), the Department Statewide Vision (page 9), and various state and federal laws associated with land, water, cultural, habitat, and wildlife resources (Appendix III). Also, all land acquisitions that contributed to AWMA were completed with particular objectives and therefore have inherent management priorities associated with the properties (Appendix III).

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 State Wildlife Action Plan (SWAP). The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (IDFG 2005). The SWAP does not distinguish between game and nongame species in its assessment of conservation need and is Idaho's seminal document identifying species at-risk. Therefore, at-risk species identified in the SWAP, both game and nongame, are a management priority for the Department.

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

Cecil D. Andrus Management Priorities:

1. Provide secure, high quality habitat for big game, upland game, and other game and nongame species.
2. Provide opportunities for high quality wildlife-based recreation including public hunting, fishing, and nature viewing, and public educational opportunities.
3. Provide for livestock grazing as intended by the Commission, compatible with AWMA wildlife management goals.
4. Maintain AWMA infrastructure to provide safe facilities and working environments for staff and the public.

Focal Species Assessment

This section of the AWMA Plan is an assessment of conservation priority fish, wildlife, and plant species on the AWMA and adjacent watersheds in order to identify focal species to guide management. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or special status species (i.e., at-risk) identified by the Department in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005) 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., Brownlee Creek watershed), a threat (e.g., habitat loss or climate change), organization (e.g., state government or non-government organization), or geographic region (e.g., protected area, Department Region or state; Veríssimo et al. 2009). Ungulate big game is an example of a group that fit the criteria as flagship species. In addition, they are a culturally and economically important species in Idaho and represent a founding priority for establishment of the AWMA. Therefore, ungulate big game is an important flagship species group considered in the WMA assessment.

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

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

Although the Idaho SWAP SGCN 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 Brownlee Creek watershed, including the AWMA is a mosaic of land ownerships including private, state, and federal lands. The IDL, USFS, and BLM are key partners in this landscape as their management actions directly influence ecological function on AWMA. To maximize coordination, communication, and partnership opportunity, we include both USFS and BLM Sensitive Species in our biodiversity assessment.

United States Forest Service Sensitive Species are animal species identified by the Intermountain Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or significant current or predicted

downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service Manual (FSM 2670.22) directs the development of sensitive species lists. This designation applies only on USFS–administered lands.

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

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

Suitability of assessed species as a focal species were estimated by Southwest Regional Habitat and Department Diversity staff based on descriptions in Groves (2003) and USFWS (2005). 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)

Selection of Focal Species and Associated Habitats

The focal species assessment identified 29 species that are suitable or potentially suitable as focal species for management on the AWMA. Species not known to occur on the WMA, but that are known to occur on or in close proximity to the WMA and that occupy similar habitats found on AWMA were included for potentially suitable consideration. Sensitive plants were also included in the process of focal species selection as a means of identifying potential conflicts management actions might have directly on rare and sensitive botanical species found on or in close proximity to the WMA. Of the species considered, mule deer and elk were selected to serve as focal species for all those dependent on healthy sagebrush steppe habitat. The assessment also identified numerous species that are dependent on functional riparian habitat. Given this, riparian habitat was chosen as a focal habitat for management on AWMA.

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

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Mammals					
Mule Deer (*Odocoileus hemionus*)	Flagship	Andrus WMA is crucial winter range for mule deer from Department game management units 22 and 31. In recent years the WMA and the immediate vicinity has provided winter habitat for approximately 1,600 mule deer.	Loss of foraging habitat in summer and winter range.	Protect and expand existing winter range; work collaboratively with the USFS to maintain thriving mule deer herds on the landscape.	***Suitable as a focal species.*** Mule deer are a foundational priority for the creation of Andrus WMA and the Department has extensive data on their use of the area. Mule deer are a culturally and economically important wildlife species in southwest Idaho and are a species with a good potential for developing conservation partnerships.
Elk (*Cervus elaphus*)	Flagship	Andrus WMA is crucial winter range for elk from Department game management units 22 and 31. In recent years the WMA and the immediate vicinity has provided winter habitat for approximately 800 elk.	Loss of foraging habitat in summer and winter range.	Protect and expand existing winter range; work collaboratively with the USFS to maintain adequate elk security cover.	***Suitable as a focal species.*** Elk are a foundational priority for the creation of Andrus WMA and the Department has extensive data on their use of the area. Elk are a culturally and economically important wildlife species in southwestern Idaho and are a species with a good potential for developing conservation partnerships.
Black Bear (*Ursus americanus*)	Flagship	Andrus WMA is known for having large populations of Black Bear and is a popular tag for those wanting to harvest. Black bears occur regularly in the upland areas of the WMA during the spring months and riparian areas, wet springs and seeps during the summer and fall months. Bear watching has also increased on the WMA due to increased publicity on their visibility and large numbers.	Loss of foraging and wintering habitats.	Protect utilized habitat which includes upland, riparian and dense spring locations for forage and shelter.	***Suitable as a focal species.*** Black Bear are a culturally and economically important wildlife species in southwestern Idaho and are a species with a good potential for developing conservation partnerships.
Canada Lynx (*Lynx canadensis*)	ESA Threatened, USFSR4 Threatened, BLM Threatened, IDFG SGCN	In Idaho the Canada lynx inhabits montane and subalpine coniferous forests typically above 1200 m (4000 ft). Habitat used during foraging is usually early successional forest. There have been no documented sightings of Canada Lynx on the WMA and little habitat exists within its borders.	Habitat degradation, fragmentation, and loss are the primary threats to lynx populations. Fire suppression and timber management practices have affected landscape-scale characteristics of vegetation composition and structure. Increasing road densities causes habitat fragmentation and also leads to increased human disturbance.	No preferred habitat exists within the management area; therefore no management is planned for this species specifically.	***Unsuitable as a focal species.*** Limited information on distribution in the project area. Based on known habitat requirements, no preferred habitat exists on Andrus WMA
Fisher (*Martes pennanti*)	USFS Sensitive, BLM Imperiled, IDFG SGCN	There have been no sightings documenting the occurrence of Fisher on Andrus WMA, suitable habitat if any most likely occurs across the WMA boundary on USFS property and does not fall under the direct management of the Department. One known sighting in 1997 occurred on the North side of Cuddy Mountain approximately 10 miles from the WMA border. This single occurrence	Habitat loss and degradation continue to threaten populations. Loss of forested habitat, particularly old growth forests, to fire and timber harvest results in the reduction and fragmentation of suitable habitat. Incidental trapping of fishers with marten traps may also be an important source of mortality, particularly where populations are small and fragmented.	Less than 5% of Andrus WMA contains suitable forested habitat preferred by Fisher. Conifer encroachment has been mitigated in areas on the south border of the WMA in proximity to Aspen groves. Removal of these trees was not conducted in areas with potential Fisher habitat.	***Unsuitable as a focal species.*** Limited information on distribution in the project area in addition to limited habitat on the WMA. Adjacent habitat in the Dukes and No Business drainages could hold suitable habitat but no surveys have occurred to date. Forthcoming research on Fisher distribution in Idaho and their habitat associations may aid staff in identifying potential habitats in the future.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
		indicates that there may be Fisher found in suitable habitat in the area but none would likely be found on the WMA.			
California Myotis (*Myotis californicus*)	BLM SoC, IDFG SGCN	This species was documented adjacent to Andrus WMA in 1930. No records since that date have been made. Little information is available to describe habitat affiliations or ecology of this species in Idaho. Dry conifer forest, sagebrush steppe, riparian, and juniper habitats have been reported. Roost types in Idaho are also poorly known. Mines and caves are reportedly used.	The distribution of this species in the state is incompletely documented, and few data indicate habitat needs. Mine reclamation is a threat to roosting habitat in some areas. Timber harvest practices that remove large diameter snags could be detrimental to maternity colonies and local populations. Due to the lack of open shaft mines and large areas of forest, there is not a significant amount of suitable habitat.	Due to the lack of timber snags and open shaft mines on the WMA, and the lack of good information on their immediate distribution in the management area little is known on the management benefits for this species.	Unsuitable as a focal species. Limited information on distribution in the project area.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	USFS Sensitive, BLM Imperiled, IDFG SGCN	Populations in Idaho occur predominately on the Snake River Plain, but scattered populations have been reported throughout the State. The only known sighting of this species was a single occurrence in 1998 in the Wildhorse drainage on the north border of the WMA. No known suitable locations for maternal colonies or hibernacula exist within the WMA borders. Most occurrences are likely individuals passing through the area. Further study into the bat populations in the vicinity could answer questions pertaining to the occurrence of several bat species.	The primary issue facing this species is disturbance and destruction of roost sites through mine closures, renewed mining, recreational caving, and other roost-disturbing activities. This species is sensitive to anthropogenic disturbances.	Due to the lack of potential aggregation roosts sites for this species and the lack of good information on their immediate distribution in the management area little is known on the management benefits for this species.	***Potentially Suitable as a focal species.*** Limited information on the current distribution in the project area.
Northern Idaho Ground Squirrel (*Spermophilus brunneus brunneus*)	ESA Threatened, USFSR4 Threatened, BLM Threatened, IDFG SGCN	The northern Idaho ground squirrel occupies dry montane meadows at elevations between 1000-1700 m (3280-5600 ft). Meadows of grasses and forbs and, to a lesser extent, sagebrush are surrounded by ponderosa pine or Douglas-fir forest. The northern Idaho ground squirrel is endemic to Adams and Valley counties. There are no known populations of the Northern Idaho Ground Squirrel in the Andrus WMA landscape and no suitable habitat within its borders.	Landscape-level habitat changes are the primary cause of population declines. Fire suppression has reduced meadow habitat, limiting the amount of habitat available to ground squirrels and closing dispersal corridors. Changes in habitat quality due to fire suppression, changes in grazing regimes, and land conversions have resulted in poorer quality food plants that lack the nutritional value squirrels need to sustain prolonged hibernation.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** Due to the lack of montane meadows on Andrus WMA there is no habitat in the management area.
Southern Idaho Ground Squirrel (*Spermophilus brunneus endemicus*)	ESA Candidate, USFSR4 Sensitive, BLM Sensitive, IDFG SGCN	The southern Idaho ground squirrel occurs in an area of about 200 km2 in Payette, Gem, and Washington counties. Local population distribution and abundance is incompletely known. At present, most populations are small groups that are discontinuously distributed in the southern part of the former range. New populations have been discovered during recent years, but sampling effort has been uneven.	Habitat has been altered through livestock grazing, agricultural development, invasive plants, and a shift of the fire regime to more frequent and severe range fires. An understanding of population trend is currently lacking, as is landscape-scale patterns of distribution and abundance.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of the Southern Idaho Ground Squirrel on the Andrus WMA. Surveys have been made in the immediate vicinity, but the known populations occur south of Hitt Mountain.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Coast Mole (*Scapanus orarius*)	BLM SoC, IDFG SGCN	Idaho records are from grassy riparian areas and grassy meadows in Douglas-fir and ponderosa pine forest. Within Idaho, populations occur in the Wildhorse and upper Weiser river basins. The species is the only mole occurring in Idaho, and only six records are known. This species does occur on the WMA and has been documented by staff near department managed facilities. Evidence of mole activity has also been noted elsewhere on the WMA near riparian areas with loose soil and low vegetation cover.	Habitat loss is the primary threat to the persistence of the species in Idaho. Forest encroachment into open meadows creates conditions that are unsuitable for coast moles; fire suppression affects the maintenance and creation of meadow habitats in forests.	Benefits to this species in the management area are unknown as there is little information on the management of this species on the scale of influence on the WMA. While burrowing mammal trapping does occur on the WMA around department managed facilities, the trapping of coast mole is rare.	***Suitable as a focal species.*** Occurs on the WMA; little information available on WMA scale management of this species. Relevant disturbances to the preferred riparian meadow habitats should take into account the existence of the coast mole on the landscape.
Townsend's Pocket Gopher (*Thomomys townsendii*)	SGCN	Idaho populations are in southern Idaho along the Snake River in Elmore, Owyhee, Ada, Canyon, Payette, and Washington counties. There are no documented occurrences of Townsend's pocket gopher on the Andrus WMA.	Habitat loss is the primary threat to this species. Activities that reduce plant biomass, such as habitat conversion, livestock grazing, and wildfires, can negatively affect populations. Much of the habitat in the former range has been converted to urban or agricultural habitat. Plant composition in shrub-steppe habitat is affected by livestock grazing and an altered fire regime, both which promote the establishment of invasive plants.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of Townsend's pocket gophers on the Andrus WMA or the immediate vicinity.
Pygmy Rabbit (*Brachylagus idahoensis*)	USFSR4 Sensitive, BLM Imperiled, IDFG SGCN	The species is considered rare in Idaho, though data on abundance and population trends are generally lacking. Recent surveys for presence of pygmy rabbits have augmented statewide distribution data and documented relatively abundant populations in localized areas. No sightings have been made on the Andrus WMA, and most populations occur to the east and south of the greater WMA landscape. While there is suitable habitat available no known populations exist in the area of management influence.	Loss, alteration, and fragmentation of sagebrush-steppe habitat and apparent declines in pygmy rabbit populations have elevated concern for this species range-wide. Agents of habitat loss and degradation include agricultural conversion, urbanization (and related infrastructure networks), prescribed and wildland fire, invasive plants (e.g., cheatgrass), conifer encroachment, vegetation treatments that remove sagebrush, and unsustainable livestock grazing. Fragmentation of pygmy rabbit habitat has implications for this small mammal with presumably low dispersal capabilities, including reducing overall population size, isolating disjunct populations, increasing susceptibility to disease and other localized threats, and reducing gene flow among populations.	Minimize the disturbance to intact sagebrush-steppe habitat. Should this species be found in the vicinity of the WMA in the future strategies to protect its habitat are already underway as they benefit a host of other focal species associated with sagebrush-steppe habitat.	***Unsuitable as a focal species.*** There are no known occurrences of Pygmy Rabbits on the Andrus WMA or the immediate vicinity.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Birds					
Chukar and Gray Partridge (*Alectoris chukar and Perdix perdix*)	Flagship	Chukar and Hungarian Partridge are found throughout the AWMA. Their annual numbers are strongly correlated with spring weather conditions during the nesting and early brood-rearing period and with summer drought conditions. From 1984 through 2010 an annual aerial survey was conducted between late August and early September along Brownlee Reservoir to census populations (chukars and partridge collectively). Populations have ranged from a low of 17.6 to a high of 221 birds per square mile. That annual flight was discontinued in 2011. No other survey method is currently in use to census populations annually.	Loss of habitat (nesting and brood-rearing cover) can have a negative effect on partridge populations.	Continue to maintain upland habitat.	***Suitable as a focal species.*** Upland birds and partridge populations in particular were an added priority for the creation of Andrus WMA. Partridge are a culturally and economically important wildlife species in southwestern Idaho and are a species with a good potential for developing conservation partnerships.
Ruffed & Dusky Grouse(*Bonasa umbellus and Dendragapus obscurus*)	Flagship	Dusky and ruffed grouse are found throughout the AWMA. Dusky grouse are most often found at higher elevation shrub and conifer patches. Ruffed grouse are most frequently found in the major creeks within the AWMA. There is currently no census method used to estimate AWMA populations. Harvest of forest grouse reported by AWMA hunters each year averages 80.	Loss of habitat (nesting and brood-rearing cover) can have a negative effect on grouse populations.	Continue to maintain shrub and riparian habitat on the WMA	***Suitable as a focal species.*** Upland birds and grouse populations in particular were an added priority for the creation of Andrus WMA. Grouse are a culturally and economically important wildlife species in southwestern Idaho and are a species with a good potential for developing conservation partnerships.
Harlequin Duck (*Histrionicus histrionicus*)	USFS Sensitive, BLM SoC, IDFG SGCN	In Idaho, harlequin ducks breed along streams from the Canadian border to the Selway River and in southeastern Idaho near the Wyoming border. No known occurrences of Harlequin Ducks are known from the Andrus WMA or the immediate vicinity.	Potential threats to harlequin ducks in Idaho include activities that affect riparian habitats, water yield, water quality, and increase disturbance during the breeding season.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of open water habitats within its borders.	***Unsuitable as a focal species.*** The populations of this species found adjacent to Andrus WMA are outside the area of management influence to its open water association.
Bald Eagle (*Haliaeetus leucocephalus*)	ESA Delisted, USFS Sensitive, BLM Sensitive, IDFG SGCN	In Idaho, Bald Eagle nests are concentrated in three areas – eastern Idaho along the Snake River, northern Idaho within the Pend Oreille River drainage and Kootenai Valley, and on and around Cascade Reservoir in west–central Idaho. Range-wide, the Bald Eagle population is increasing. Bald Eagles are a common sight during the winter months particularly along the Brownlee and Oxbow Reservoirs feeding on fish and winter kill deer. During warmer months it is very rare to observe Bald Eagles on or in the vicinity of the WMA.	Perhaps the greatest threat to birds in Idaho is disturbance during the nesting period from activities such as forestry (e.g., timber harvest operations), human recreation (e.g., hiking, boating, off–road vehicles, hunting), and construction projects (e.g., home–site development in forested areas overlooking lakes and other large bodies of water).	In the context of the WMA, there is very little that can be done to directly benefit this species. No known nests occur and most adults are typically gone by late February before the breeding season. There is also very little suitable habitat for this species other than the roosts that exist along the reservoirs adjacent to Idaho Power managed properties.	***Unsuitable as a focal species.*** The populations of bald eagles found adjacent to Andrus WMA are a nomadic band of individuals that typically remain in the vicinity for 2-3 of the winter months. No known occurrences of the species are found during the crucial nesting season.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Brewer's Sparrow (*Spizella breweri*)	BLM Imperiled, IDFG SGCN	Observations of Brewer's sparrow have been made in 1997 and 2010 on the WMA. The Brewer's sparrow is a shrub steppe obligate species, closely associated with big sagebrush (*Artemisia tridentata*). It can also be found in shrubby openings of piñon-juniper and mountain mahogany woodlands. Brewer's sparrow is largely a Great Basin species. Relatively abundant in suitable habitat, the estimated population size for this species in Idaho is approximately 1.2 million individual birds.	Habitat destruction and degradation are the primary threats to Brewer's sparrow populations. Activities that destroy native shrub cover (e.g., fire, chaining, herbicides, agricultural conversion, etc.) negatively impact this species. Brewer's sparrows show both negative and positive population responses to grazing, depending on habitat type and intensity. This species is a nest parasite host and rates of parasitism by the brown-headed cowbird can be influenced by grazing and habitat fragmentation.	Continue to maintain upland and sage-brush steppe habitats for nesting and foraging cover.	***Suitable as a focal species.*** Occurrences of this species on the WMA landscape and the management of its primary habitat for the benefit of a diverse group of game and nongame species makes this species suitable as a focal species.
Clark's Grebe (*Aechmophorus clarkii*)	SGCN	In Idaho, this species' breeding distribution is primarily associated with the extensive Snake River drainage in the southern and southeastern parts of the state. Observations were made of this species in 1997 along the shoreline of Brownlee Reservoir. Due to its association with large open water no habitat currently exists on the Andrus WMA but does exist in adjacent areas in particular Brownlee and Oxbow Reservoirs.	Two of the main issues for grebes nesting in Idaho are water quality and water level fluctuations. For example, nesting at Lake Lowell has become increasingly sporadic as water levels fluctuate drastically and nutrient loads have increased. Nesting colonies also are sensitive to disturbance by humans approaching the colony on foot or by boat. Adults leave nests approached by humans, exposing eggs to increased risk of depredation by gulls, crows, or ravens. Increased boat traffic through foraging and brood–rearing habitat can elevate chick mortality. Pesticides have caused localized population declines.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of open water habitats within its borders.	***Unsuitable as a focal species.*** The populations of this species found adjacent to Andrus WMA are outside the area of management influence to its open water association.
Common Loon (*Gavia immer*)	USFS Sensitive, IDFG SGCN	Wintering birds are seen on unfrozen major lakes, rivers, and reservoirs, in northern and southwestern Idaho. Observations of Common Loon were made as recently as 2008 in Brownlee Reservoir. Due to its association with large open bodies of water no habitat currently exists on the Andrus WMA but does exist in adjacent areas in particular Brownlee and Oxbow Reservoirs.	Effects of heavy metals, such as mercury, may increase mortality rates on both wintering and breeding grounds and negatively affect breeding success. Lead poisoning from lead sinkers is also a concern although birds found dead with lead poisoning usually suffered from elevated mercury levels or some other affliction. Degradation of habitat through shoreline development, campsites, human recreational use of nesting and nursery sites may force loons into marginal, less protected nesting sites. Chicks are more susceptible to predation when forced to separate from their parents by boats, jet skis, or any human intrusion; chicks are also killed by direct impact from outboard propellers and jet skis.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of open water habitats within its borders.	***Unsuitable as a focal species.*** The populations of this species found adjacent to Andrus WMA are outside the area of management influence to its open water association.
Flammulated Owl (*Psiloscops flammeolus*)	USFS Sensitive, BLM Imperiled, IDFG SGCN	Flammulated Owls have been observed in the Dukes Creek drainages as recently as 2012. It is also known to occur in many drainages on USFS lands around WMA. In Idaho, flammulated owls are widely distributed throughout the montane forested portions of the state. In Idaho, Flammulated owls were found occupying mid-elevation old-growth or mature stands of open ponderosa pine, Douglas-	Recognized threats include direct habitat loss from timber harvest practices; fire exclusion resulting in altered forest structure, stocking rates, and species composition; pesticides; and cutting of dead trees for firewood. These threats are amplified due to the low reproductive potential of this species. Forest practices that remove large-diameter pine and Douglas-fir, manage for even-age stands, and remove snags (including firewood gathering) risk reducing microhabitat and	Continued monitoring of the species on the WMA landscape by regional diversity staff and the maintaining of known preferred habitats where it currently occurs.	***Suitable as a focal species.*** Regularly documented occurrences of this species on the WMA landscape makes this species suitable as a focal species.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
		fir, and stands co-dominated by these two species.	landscape parameters required by this species. Lack of fire disturbance has created undesirable high-density vegetation conditions generally unfavorable for owl foraging and conditions favoring stand-replacing fires and insect and disease outbreaks. Changes in stand structure may also impact insect populations and habitat suitability for woodpeckers, a species essential to the conservation of all cavity nesting owls.		
Great Egret (*Ardea alba*)	SGCN	In the Great Basin, there are approximately 1119 breeding pairs. Of these, approximately 26 pairs breed in Idaho at 4–6 sites in the southern half of the state, including Duck Valley Indian Reservation and American Falls Reservoir. There have been no documented sightings of the Greater Egret on the Andrus WMA and very little preferred habitat in the nearby vicinity.	Presence of pesticides and other contaminants has been detected in great egret eggs and adults in various locations throughout the U.S. from the 1970s through 1990s. This species also may be sensitive to human disturbance during the breeding season, although in some areas they seem to be able to habituate to such disturbance.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of preferred habitat.	***Unsuitable as a focal species.*** There are no known occurrences of Greater Egret's on the Andrus WMA or the immediate vicinity.
Lesser Goldfinch (*Spinus psaltria*)	SGCN	In Idaho, the lesser goldfinch is a rare breeder with a few casual records; one published and a more recent unpublished breeding record from Bannock Co. in the southeastern region of the state. There are no known occurrences of lesser goldfinch on the Andrus WMA or the immediate vicinity.	Few apparent issues of concern since the lesser goldfinch likely benefits from the presence of weedy fields, suburban environments, irrigation, planting of introduced trees and shrubs, and increases in the number of backyard bird feeders. Increased use of herbicides that kill seed-producing weedy plants may therefore be one potential threat. Finally, in arid regions of this species' range, such as in southeastern Idaho, the importance of riparian habitat makes the lesser goldfinch potentially vulnerable to loss of these areas.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of lesser goldfinch on the Andrus WMA or the immediate vicinity.
Long-billed Curlew (*Numenius americanus*)	SGCN	In Idaho, this species forages predominately in grassland, but may switch to plowed fields and wet pastures if grasslands become too tall or dense after high spring rainfall. As of 1980, there were an estimated 3000–5000 pairs nesting in southern Idaho. Current population size of this species in Idaho is unknown. There are no known occurrences of Long-billed Curlew on the Andrus WMA; the closest known observation is in Cambridge, ID.	The largest threat to long-billed curlews in Idaho, and throughout its range, is loss of habitat. Conversion of grasslands to croplands, development of residential communities, and increasing recreational use have all resulted in the loss of suitable habitat in Idaho. Disturbance from excessive vehicle traffic (particularly off-road vehicles) and recreational use can be a substantial problem for nesting long-billed curlews, particularly during brood-rearing. Pesticides can have detrimental effects on long-billed curlews, and pesticide poisoning has been documented in neighboring Oregon. Reliable data on population sizes and trends in Idaho also are lacking.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of Long-billed Curlew on the Andrus WMA or the immediate vicinity.
Merlin (*Falco columbarius*)	SGCN	In eastern Idaho, merlin used abandoned black-billed magpie nests. During winter, merlin frequent cities, towns, feedlots and dairies where small-bird prey is abundant. An analysis of sightings from Idaho confirms that the merlin is a common	An increase in agricultural lands has caused losses of both nest sites and prey species for merlin. Because they are highly migratory and move between North and South America, merlin also may still suffer from effects of DDT and its metabolites. Currently, West Nile Virus and avian	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of merlin on the Andrus WMA or the immediate vicinity.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
		migrant and locally abundant winter resident, but a rare breeder. To date there are no known observations of merlin on the Andrus WMA.	influenza pose threats during summer months when mosquito vectors are active. The greatest threat to merlin in the future may be habitat modification by humans.		
Mountain Quail (*Oreortyx pictus*)	USFS Sensitive, BLM Imperiled, IDFG SGCN	In Idaho, mountain quail are currently restricted in their range to areas of west–central Idaho, with remnant population strongholds in the Riggins area. Observations along the Snake River near Hell's Canyon reservoir have been reported in recent years but no observations of Mountain Quail have been made on Andrus WMA.	Habitat loss and degradation from forest succession, reservoir construction, fire, weed invasion, and human developments are all important factors in some areas. Interspecific competition with California quail and chukar introduced around 1950 also is hypothesized to be a factor. The lack of clear mechanisms for the intermountain West population declines is a management problem.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of Mountain Quail on the Andrus WMA or the immediate vicinity.
Peregrine Falcon (*Falco peregrinus anatum*)	ESA Delisted, USFS Sensitive, BLM Imperiled, IDFG SGCN	In Idaho, peregrines are associated with mountains, major river corridors, reservoirs and lake basins. This species nests on cliffs, man-made towers, and in two urban settings. While there have been no documented sightings of Peregrine Falcons on the Andrus WMA a great deal of potentially suitable habitat exists.	Loss of habitat (nest sites and wetlands) and human activities are the greatest threats to the peregrine population. Rock climbing, nest disturbance, and the sudden appearance of helicopters can cause breeding peregrines to abandon nest sites. The shooting of peregrines continues, as do random electrocutions. Especially in urban settings, peregrines are killed by collisions with window, wires, motor vehicles and aircraft.	Management of preferred habitat and reducing disturbances to nest locations.	***Potentially Suitable as a focal species.*** While suitable habitat can be found on the WMA, there is limited information on its current distribution in the project area.
Red-necked Grebe (*Podiceps grisegena*)	SGCN	In Idaho, red–necked grebes occur in the Panhandle, the Upper Snake region (Henrys Lake area), and isolated wetlands in the vicinity of Lake Cascade. No known occurrences of this species are known from Andrus WMA, likely due to the lack of preferred habitat.	Highly susceptible to pollutants, as heavy metals are often detected in adults, eggs, and young. Bioaccumulation appears to occur mostly on wintering grounds. Susceptible to disturbance by recreationists during nesting, both from exposure of nests when birds are flushed off nests and separation of young from adults when rapidly approached by boats. Because of their reliance on wetland habitat, draining of wetlands and/or drought are potentially serious issues for this species in Idaho.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of wetland and open water habitats within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of Red-necked Grebe on the Andrus WMA or the immediate vicinity. There is also little to none of its preferred habitat within the WMA borders.
Trumpeter Swan (*Cygnus buccinator*)	USFSR4 Sensitive, BLM Imperiled, IDFG SGCN	Trumpeter swans found in southeast Idaho are part of the "Tri–State Population." Tri–State birds also are found in southwest Montana and northwest Wyoming. Trumpeter swans in southeast Idaho are found throughout the wetlands and lakes surrounding Island Park and east to the Wyoming line. There are no known breeding populations of trumpeter swans on the Andrus WMA or the immediate vicinity. There have been unconfirmed sightings of single individuals of the species on Brownlee and Oxbow reservoirs but are likely single birds moving through the area.	Periodic drought, crowded wintering grounds, and low local productivity threaten Idaho's swan population. Disturbance to swan nesting habitat from fishing, hiking, and off road vehicles threatens overall swan productivity. The loss of nesting habitat to consumptive land uses also is a risk. Power lines over nesting and wintering habitat kills unknown numbers of swans each year and lead poisoning is a risk as swans feed in the sediment layers where lead shot and fishing sinkers are found.	In the context of WMA management, there is very little that can be done to directly benefit this species due to the lack of open water habitats within its borders.	***Unsuitable as a focal species.*** The populations of this species found adjacent to Andrus WMA are outside the area of management influence to its open water association.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
White-headed Woodpecker (*Picoides albolarvatus*)	USFS Sensitive, BLM SoC, IDFG SGCN	Several observations were made of White-headed Woodpecker in 1998 along the south border of the WMA; The abundance of this species appears to decrease north of California and it is generally uncommon or rare in Idaho. The estimate of population size for this species in Idaho is approximately 320 individuals. Suitable habitat of dense conifer forests with timber snags on the WMA is limited.	Habitat conversion, including destructive resource harvesting (e.g., clear-cutting forests, even-aged stand management, and snag removal), logging, and changes in ecological processes such as fire suppression, and forest fragmentation have contributed to local declines of this species, particularly in Washington, Oregon, and Idaho. The primary threat to this species is the loss of live and dead large-diameter ponderosa pine.	Management of conifer timber stands to maintain even stand age. Collaborate with federal agencies to limit the reduction of timber stands adjacent to the WMA	***Potentially Suitable as a focal species.*** While population of the species are known to exist in the vicinity of the WMA, very little of its preferred habitat is found within the area of management influence.
Fish					
Bull Trout (*Salvelinus confluentus*)	ESA Threatened, USFSR4 Threatened, BLM Threatened, IDFG SGCN	In Idaho, Bull Trout are currently found in the Boise, Payette, Weiser and all drainages to the north in the Columbia River basin. Populations have been reported to be found in the Wildhorse and No-Business Drainages on the North border of the WMA but stream surveys conducted by Department staff have not identified the presence of Bull Trout.	The USFWS identified threats to bull trout persistence as "the combined effects of habitat degradation, fragmentation and alterations associated with dewatering, road construction and maintenance, mining, grazing; the blockage of migratory corridors by dams or other diversion structures; poor water quality; incidental angler harvest; entrainment into diversion channels; and introduced non–native species."	Efforts have been made to maintain aquatic corridors through all WMA waterways. This has been implemented through the installation of large culverts where bridges or creek crossings may occur. This limits the blockage of fish traffic up and down WMA waterways.	***Unsuitable as a focal species.*** There are no known occurrences of Bull Trout on the Andrus WMA and no preferred habitat.
Inland Redband Trout (*Oncorhynchus mykiss gairdneri*)	USFSR1 Sensitive, BLM Imperiled, IDFG SGCN	Current range-wide abundance in Idaho is unknown; however resident populations of redband trout above Hells Canyon dams are locally abundant in the Boise, Weiser, Payette, Owyhee and Wood/Malad river drainages. Previous stream surveys have found Inland Redband Trout to occur in all major streams and creeks on the WMA.	Habitat loss, fragmentation of current habitat, isolation of existing populations, and hybridization with coastal rainbow trout and cutthroat trout are the principal issues facing inland redband trout.	Efforts have been made to maintain aquatic corridors through all WMA waterways. This has been implemented through the installation of large culverts where bridges or creek crossings may occur. This limits the blockage of fish traffic up and down WMA waterways.	***Suitable as a focal species.*** Due to its existence on the Andrus WMA and its reliance on the maintaining of clear, clean streams across the WMA landscape this species is suitable to represent healthy waterways.
Amphibians and Reptiles					
Northern Leopard Frog (*Rana pipiens*)	BLM Imperiled, IDFG SGCN	The northern leopard frog is widely distributed across much of northern and central North America, but populations are sparsely distributed in the western portion of its range. In southern Idaho, populations have been reported in the Snake River and its tributaries, including the Boise, Payette, and Weiser rivers in the southwest, and the Portneuf River, Bear River, and Marsh Valley in the southeast. The distribution along the main stem Snake River extends discontinuously as far downstream as southern Washington County.	As with most amphibians, the loss and degradation of wetland and riparian habitat is thought to be the most prevalent threat to populations. Introduced competitors and predators, such as bullfrogs and sport fishes, can cause amphibian population declines and losses. Disease is also a concern, particularly the chytrid fungus, *Batrachochytrium dendrobatidis*.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** There are no known occurrences of northern leopard frog on the Andrus WMA.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Ground Snake (*Sonora semiannulata*)	BLM Imperiled, IDFG SGCN	This species occurs across arid and semi–arid regions of the southwestern U. S. and northern Mexico. The northern–most populations are in southwest Idaho. Additional Idaho records have been reported in the town of Star, Hell's Canyon, and Orchard Training Area. Idaho and southeast Oregon populations appear to be disjunct from Nevada populations by approximately 250 km. Populations are found in xeric habitat characterized by sandy or loose soil textures, talus slopes, and boulder fields. Vegetation is characteristically sparse, comprising shrubs, such as shadscale, sagebrush, greasewood, and bunchgrasses and annual grasses.	Habitat loss is a concern in some parts of the Idaho range. Rock quarrying for landscaping is prevalent within the Idaho range of this species. Off road vehicle use is intensive in parts of the range, as well. Pesticide and herbicide use could be a threat because ground snakes feed primarily upon small invertebrates. Habitat conversion to urban and agricultural uses is a threat in some areas.	Continued maintenance of native shrub grassland habitats.	***Unsuitable as a focal species.*** There are no known occurrences of ground snakes on the Andrus WMA.
Insects					
A Spur-throat Grasshopper (*Melanoplus digitifer*)	SGCN	In relation to Andrus WMA, this species has been observed in Adams county. Specimens were last collected during 1961. Specimens have been collected between the elevations 1160-1830 m. Habitat affiliations are not documented for this species so its potential existence on the WMA is unknown.	Specific threats to this taxon are unknown. Threats to grasshoppers include pesticides and habitat modification. Although conversion of native habitat to agricultural uses has benefited some grasshopper species, there are no data to suggest that agriculture has benefited this species.	There is a lack of essential information pertaining to habitat requirements and population status; limited distribution and no population trend data therefore no management suggestions can be made to benefit this species.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.
A Spur-throat Grasshopper (*Melanoplus payettei*)	SGCN	Few individuals of this species have been collected but the locations it was found in were areas of dry grassland in pine forests from 760-2500m. In relation to Andrus WMA, this species occurs in Washington county. Specimens were last collected during 1961. There is potential for this species to occur on the Andrus WMA, but no known populations are currently known within its borders.	Specific threats to this taxon are unknown. Threats to grasshoppers include pesticides and habitat modification. Although conversion of native habitat to agricultural uses has benefited some grasshopper species, there are no data to suggest that agriculture has benefited this species.	There is a lack of essential information pertaining to habitat requirements and population status; limited distribution and no population trend data therefore no management suggestions can be made to benefit this species.	***Potentially Suitable as a focal species.*** While populations of the species are known to exist in the vicinity of the WMA, there is suitable habitat along the borders of USFS land and adjacent grasslands. Since the species was only ever collected twice, further surveys should be conducted.
A Stonefly (*Utacapnia nedia*)	SGCN	The last observation of this species was in 1985 and occurred approximately 20 miles south of Andrus WMA. There have been no observation on the WMA and stream inventories in the past have not yielded any new observations of this species.	Threats to this species are not known, though any negative changes to aquatic habitats would be potentially threatening to this species.	There is a lack of essential information pertaining to habitat requirements and population status; limited distribution and no population trend data therefore no management suggestions can be made to benefit this species.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Gastropods					
Fir Pinwheel (*Radiodiscus abietum*)	SGCN	This species inhabits rocky sites in Douglas-fir forests. Within Idaho, populations were historically found at scattered sites throughout much of the northern forests in the state as far south as the upper Weiser River valley. Populations have not been relocated at most sites during recent years, and only a population in the Salmon River valley has been confirmed to be extant.	Much of the species habitat has been lost to logging, grazing, roads, and forest fires. The remaining site has also been logged and individuals were only found in a small rocky area that had not been entirely clear-cut	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. There is also very little preferred habitat available to the species.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.
Pixie Pebblesnail (*Fluminicola minutissimus*)	SGCN	This aquatic snail is endemic to Idaho, occurring only in the Weiser River drainage. Populations have not been relocated in recent years, and the species may be extinct. The habitat and ecology of this species are largely unknown. The species is thought to be spring-dwelling. The type locality is within ponderosa pine forests with Douglas-fir plantings at moderate elevation.	Because no extant populations are known, threats cannot be identified.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. There is also very little preferred habitat available to the species.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.
Pristine Pyrg (*Pristinicola hemphilli*)	SGCN	This aquatic snail typically inhabits small springs or seeps and occasionally larger springs, spring outflow channels, and spring-influenced stream reaches. Springs are usually in semiarid sagebrush-dominated habitat with basalt substrates, but some sites are in dense Douglas-fir forests. Habitat is characterized by cobble substrates, slow to moderate flows, and very shallow, cold, clear water. While potential habitat does exist on the Andrus WMA there are no known occurrences of the Pristine Pyrg in the nearby vicinity.	Habitat loss and habitat degradation are the primary threat to the species. Other causes include road construction and maintenance, damming and water diversion, and campground construction. Increased nutrient load in groundwater is also a potential threat to some populations.	Minimize disturbance to springs and seeps and maintain springs and seeps in their natural state.	***Potentially Suitable as a focal species.*** While populations of the species are known from the Snake River downriver from Andrus WMA, there is limited information on its distribution in the project area.
Salmon Coil (*Helicodiscus salmonaceus*)	SGCN	This terrestrial snail occurs in the lower Salmon River Valley. This taxon may be endemic to Idaho or at least a regional endemic, but this is not explicit in available references. Occupied sites are often associated with talus or rock outcrops in dry, open sage scrub at low to moderate elevations. This species appears to occur in relatively dry conditions.	No threat is identified in the literature. This species is often associated with other species of conservation concern for which road construction, livestock grazing, quarrying, and residential development are identified threats.	Benefits to this species in the management area are unknown as no threats have been identified. Protection of its preferred habitat is rocky dry areas in sage scrub should be the primary focus.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.
Sheathed Slug (*Zacoleus idahoensis*)	SGCN	This species inhabits Douglas-fir, spruce, and ponderosa pine forests that have a diverse understory of forbs and bryophytes. Habitat at higher-elevation is typically more open and includes a greater nonvascular plant component.	This species has a propensity for diverse, intact, and moist habitats and is absent from sites disturbed by timber harvest and livestock grazing. Logging and grazing are prevalent activities throughout the known range and are potential threats.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. There is also very little preferred habitat available to the species.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
		Occupied sites are typically in moist valleys, gorges, ravines, and talus fields near permanent water. The sheathed slug occurs only in Idaho and Montana. Historically, populations occurred in the lower Salmon, Little Salmon, Selway, Lochsa, and Coeur d'Alene river drainages within Idaho. This species was considered to be widespread throughout these river systems at one time. Currently, they are thought to exist in scattered locations within their original range.			
Shiny Tightcoil (*Pristiloma wascoense*)	SGCN	Records occur from mid to high elevation Douglas-fir and Ponderosa pine forests. Ecological associations are not well-known. Historically, this terrestrial snail has been reported to occur in Idaho, Washington, Oregon, British Columbia. Within Idaho four sites were documented in Washington, Adams, Boise, and Shoshone counties. Recent searches in Shoshone County and the lower Salmon failed to locate any colonies. The current status of the species in the state is unknown.	Populations are vulnerable to habitat loss, particularly as a result of land use activities that result in surface disturbance, removal of surface debris or understory plants, reduction of canopy coverage, or changes in soil moisture.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially Suitable as a focal species.*** While populations of the species are known to exist in the vicinity of the WMA, there is limited information as to its preferred habitat.
Thinlip Tightcoil (*Pristiloma idahoensis*)	SGCN	This species inhabits low elevation, low slope ponderosa pine and Douglas-fir forests. Populations are associated with a variety of substrates in moist valleys, ravines, gorges, and talus sites. This terrestrial snail occurs in Idaho, Montana, and Washington. Within Idaho, the historical distribution is thought to include Adams, Boise, Benewah, Clearwater, Idaho, Kootenai, and Shoshone counties. The current distribution is uncertain and recent records are reported from only one site near John Day Creek. This species has not been found at many of the historical sites during recent years.	Populations are vulnerable to habitat loss, particularly as a result of land use activities that result in surface disturbance, removal of surface debris or understory plants, reduction of canopy coverage, or changes in soil moisture.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. There is also very little preferred habitat available to the species.	***Potentially Suitable as a focal species.*** While populations of the species are known to exist in the vicinity of the WMA, there is limited information as to its preferred habitat in the management area.
Bivalves					
Western Ridged Mussel (*Gonidea angulata*)	SGCN	This freshwater mussel has historically existed in much of the Snake River, the Clearwater River, the Salmon River, and the Little Salmon River within Idaho. A number of historical colonies have been extirpated, including those in a large portion of the Snake River. Currently,	Habitat loss is the primary threat to populations of the western ridged mussel. As a cold-water filter feeder the species is fairly sensitive to heavy nutrient enhancement and high levels of pollution. Eutrophication of a large portion of the middle Snake River has been attributed to effluence from freshwater aquaculture,	The western ridged mussel inhabits creeks and rivers. While these filter-feeders are more pollution-tolerant than many other mussels, an emphasis should be placed on maintaining clean waterways.	***Potentially Suitable as a focal species.*** While potentially suitable habitat does occur on the WMA, there is limited information on its distribution in the project area.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
		populations are thought to be extant in parts of the middle Snake River, Hells Canyon, the lower Salmon River, and the lower Little Salmon River. While no populations are known to occur on or adjacent to the Andrus WMA, there is a notable gap in its distribution. Populations are known to occur up and down river on the Snake from the WMA but no observations have been made in the immediate vicinity.	agriculture, and urban and residential developments. The Snake River has been altered by dams, causing changes in aquatic temperature regimes and sedimentation patterns. Threats also include mining, particularly gravel and hydraulic gold mining, in some parts of the range.		
Plants					
Swamp Onion (*Allium madidum*)	SGCN	*Allium madidum* is found in the Blue Mountains, Oregon and in Idaho near Payette Lake and New Meadows. There are no known populations of this species on Andrus WMA.	Specific threats to this taxon are unknown. Threats to many plants include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** No suitable habitat in project area.
Tolmie's Onion (*Allium tolmiei var. persimile*)	SGCN	Populations of Tolmie's Onion are known to occur within three miles of the WMA, however no populations have been observed within its borders. The species is associated with scabland and xeric canyon grassland habitats.	Threats to plants include excessive or improperly timed livestock grazing, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. Future plant surveys should keep a particular eye on the existence of this species in survey areas, so that populations if they exist can be identified.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Tall Swamp Onion (*Allium validum*)	SGCN	This species is associated with swampy meadows in mountains often around 1500--2900m. *Allium validum* is a Cascade-Sierran species extending east to northeastern Nevada, eastern Oregon, and western Idaho. No populations of the species are currently known to be found on the Andrus WMA and no preferred habitat exists within its borders.	Specific threats to this taxon are unknown. Threats to many plants include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** No suitable habitat in project area.
Cusick's Camas (*Camassia cusickii*)	SGCN	Populations of Cusick's Camas are known to occur within three miles of the WMA, however no populations have been observed within its borders. The species is often associated with springs in canyon grasslands.	Specific threats to this taxon are unknown. Threats to many plants include the improper use and application of herbicides and habitat modification, specifically development of springs.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. Future plant surveys should keep a particular eye on the existence of this species in survey areas, so that populations if they exist can be identified.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Indian Valley Sedge (*Carex aboriginum*)	SGCN	There are two known occurrences of *Carex aboriginum* (Indian Valley Sedge) in the southern section of the WMA. There is also unsurveyed potential habitat throughout the WMA.	Threats to plants include improperly timed or excessive livestock grazing leading to streambank erosion, the improper use and application of herbicides, and habitat modification, specifically hydrologic change.	This species appears resilient to limited disturbance. Efforts have been made in known locations to minimize herbicide application and other human disturbances that might limit the	***Suitable as a focal species.*** Associated habitat does occur on the WMA and this species would benefit from habitat conservation and improvement.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
				perpetual occurrence of the species on the WMA landscape.	
Mahala-mat Ceanothus (*Ceanothus prostratus*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA and no information is available on its habitat associations.	Specific threats to this taxon are unknown. Threats to many plants include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.
Dwarf Gray Rabbitbrush (*Ericameria nauseosa var. nana*)	SGCN	Often associated with dry, rocky ridges and cliffs; 1200–2000m in Idaho, Oregon and Washington. While there is potentially suitable associated habitat on the Andrus WMA no known populations are known within its borders.	Specific threats to this taxon are relatively minimal but may include road development.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Idaho Hawksbeard (*Crepis bakeri* ssp. *idahoensis*)	SGCN	Prefers dry open places from 400–2200 m. Found in both California and Idaho. While there is potentially suitable associated habitat on the Andrus WMA no known populations are known within its borders.	Specific threats to this taxon are unknown. Threats to plants include invasive species, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Lichen (*Dermatocarpon lorenzianum*)	SGCN	No populations of the species are currently known to be on the Andrus WMA. The species is associated with scablands and could occur on the WMA.	Specific threats to this taxon are unknown. Threats to many plants include trampling by livestock, OHV use, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially suitable as a focal species.*** Limited information on distribution in the project area.
Bacigalupi's Downingia (*Downingia bacigalupii*)	SGCN	Found in the western United States from California to Idaho, where it is a resident of moist meadows and vernal pool ecosystems. No populations of the species are currently known to be found on the Andrus WMA and no preferred habitat exists within its borders.	Specific threats to this taxon are unknown. Threats to many plants include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** No suitable habitat on WMA. Limited information on distribution in the project area.
White Eatonella (*Eatonella nivea*)	SGCN	Found in sandy or gravelly soils, often with sagebrush scrub from 800–3100m. Distribution is from California, Idaho, Nevada and Oregon. While there is potentially suitable associated habitat on the Andrus WMA no known populations are known within its borders.	Specific threats to this taxon are unknown. Threats to plants include trampling by livestock, OHV use, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Puzzling Halimolobos (*Halimolobos perplexa var. perplexa*)	SGCN	Often found in sagebrush flats, pine woods, basaltic gravel and outcrop, sandy banks, rocky hillsides, granitic talus from 300-1500 m. Puzzling halimolobos is known from counties in Idaho (Adams, Butte, Custer, Idaho, Lemhi, Valley). While there is potentially suitable associated habitat on the Andrus WMA no known populations are known within its borders.	Specific threats to this taxon are unknown. Threats to plants include roads, invasive species, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.

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Sacajawea's bitterroot (*Lewisia sacajaweana*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA. The species occurs on barren, windswept mountain ridges with gravelly soil..	Specific threats to this taxon are often minimal. Threats include roads, trails, and OHV use.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** No suitable habitat on WMA. Limited information on distribution in the project area.
Packard's Desert-parsley (*Lomatium packardiae*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA. The species occurs in barren soil outcrops within sagebrush-steppe.	Threats are primarily OHV use and cheatgrass invasion, but may include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** No suitable habitat on WMA. Limited information on distribution in the project area.
Bank Monkeyflower (*Mimulus clivicola*)	SGCN	Populations of Bank Monkeyflower are known to occur within three miles of the WMA, however no populations have been observed within its borders. The species occurs in mesic big sagebrush areas.	Specific threats to this taxon are unknown. The species tolerates minor disturbance, but threats to could include excessive livestock trampling, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. Future plant surveys should keep a particular eye on the existence of this species in survey areas, so that populations if they exist can be identified.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Stalk-leaved Monkeyflower (*Mimulus patulus*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA. The species is known from seeps and riparian habitat in canyon grassland settings. associations.	Threats to this species include road construction, livestock trampling, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. Future plant surveys should keep a particular eye on the existence of this species in survey areas, so that populations if they exist can be identified.	***Potentially suitable as a focal species.*** Limited information on distribution in the project area.
Wild Crab Apple (*Peraphyllum ramosissimum*)	SGCN	Populations of Wild Crab Apple are known to occur within three miles of the WMA in big sagebrush and deciduous shrublands, however no populations have been observed within its borders.	Specific threats to this taxon are unknown. Threats to plants include the improper use and application of herbicides and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders. Future plant surveys should keep a particular eye on the existence of this species in survey areas, so that populations if they exist can be identified.	***Potentially Suitable as a focal species.*** Associated habitat does occur on the WMA but there is limited information on its current distribution in the project area.
Snake River Goldenweed (*Pyrrocoma radiata*)	SGCN	To date there has been one occurrence of *Pyrrocoma radiata* (Snake River Goldenweed) in the center of the WMA in canyon grassland habitat. The P. radiata occurrence is believed to be extirpated, but not all potential area has been thoroughly searched.	Threats to this species include conversion of habitat to invasive annual grasses, and potentially improper use and application of herbicides, and habitat modification.	Little is known about this species in the context of habitat management and what management might benefit it. Efforts will be made to limit disturbance to areas known to have had populations of *P. radiata*. Continued efforts will be made to find new occurrences of the species on the WMA landscape.	***Suitable as a focal species.*** Limited information on the current distribution in the project area.
Bartonberry (*Rubus bartonianus*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA. This species is endemic to Hells Canyon where it occurs in canyon talus habitat.	Specific threats to this taxon are unknown. Canyon talus habitat is often minimally disturbed by humans, but threats may include the improper use and application of herbicides, road construction, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.

Species	Status Designation(s)	Occurrence Context in Cecil D. Andrus WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Cecil D. Andrus WMA
Douglas' Clover (*Trifolium douglasii*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA. A limited amount of suitable habitat exists in mesic meadows.	Specific threats to this taxon are unknown. The species tolerates some disturbance, but threats include excessive livestock use, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Potentially suitable as a focal species.*** Limited information on distribution in the project area.
Plumed Clover (*Trifolium plumosum* ssp. *amplifolium*)	SGCN	No populations of the species are currently known to be found on the Andrus WMA and no information is available on its habitat associations.	Specific threats to this taxon are unknown. Threats to plants include invasive species, the improper use and application of herbicides, and habitat modification.	Benefits to this species in the management area are unknown as no populations are known to currently exist within its borders.	***Unsuitable as a focal species.*** Limited information on distribution in the project area.

Selection of Conservation Targets

The biodiversity of AWMA 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 AWMA for management and conservation; while still reflecting the management priorities of AWMA.

Conservation Targets for the AWMA Management Plan were selected from species ranked as potentially suitable focal species in Table 1. Invertebrates and plants are not included in this assessment due to practical considerations including lack of data and funding. Conservation Targets could also include habitats that effectively represent suites of the flagship and special status species evaluated in Table 1, regardless of their potential suitability as a focal species. A final consideration in the selection of Conservation Targets was the best professional judgment of the Brownlee District Habitat Manager and AWMA 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 AWMA (corresponding AWMA Priority in parentheses) are:

1. Elk and Mule Deer (Big Game Habitat)
2. Riparian Habitat (Special Status Species Habitat)

Elk and Mule Deer

Elk and mule deer were selected as a Conservation Target to represent Big Game Habitat on AWMA because:

- Elk and mule deer are flagship species and are the primary foundational priority for the creation of AWMA.
- Mule deer and elk rely on a broad array of habitat components including conifer forest, riparian habitat, live streams, mountain shrub, grasslands, and sagebrush to thrive within the AWMA landscape. Therefore, efforts to sustain deer and elk herds by conserving these varied habitat components will benefit a wide range of other species.

Riparian Habitat

Riparian habitat was selected as a Conservation Target to represent Special Status Species Habitat on AWMA because 73% of the species evaluated in Table 1 will benefit from efforts to protect and enhance riparian habitat. Riparian protection and restoration is the primary recommended beneficial management and conservation action for 29% of the species evaluated. Given the high species value of riparian habitat—particularly of priority species such as mule deer and elk—riparian enhancement and restoration partnerships are very achievable.

Coverage Assessment of Selected Conservation Targets

Some analysis of the amount of coverage that a Conservation Target provides toward conservation of other species is essential to determining if the selected targets are likely to be effective. For this analysis, each of the two Conservation Targets was evaluated to determine what other species would benefit from management actions taken to conserve the target. Table 2 indicates that the suite of species and habitats selected for Conservation Targets on the AWMA satisfy beneficial management and conservation actions and address threats for a number of species examined as potential focal species.

This assessment also identified species for which there is little or no management action being taken and/or where further data would be useful to inform the next planning process. These management voids merit attention and in future planning activities.

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

	Conservation Targets[a]		
Species Assessed in Table 1	**Elk and Mule Deer**	**Riparian Habitat**	**Conservation Need**
Mule Deer	X	X (P)	
Elk	X	X (P)	
Black Bear	X	X (P)	
California Myotis			Yes
Coast Mole		X	
Townsend's Big Eared Bat			Yes
Townsend's Pocket Gopher			Yes
Chukar and Grey Partridge	X	X	
Ruffed and Dusky Grouse	X	X	
Bald Eagle		X (P)	
Brewer's Sparrow	X		
Flammulated Owl			Yes
Long -billed Curlew			Yes
Mountain Quail		X (P)	
Peregrine Falcon	X (P)		
White-headed Woodpecker			Yes
Bull Trout			Yes
Inland Redband Trout		X	
Ground Snake	X		

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

Spatial Delineation of Conservation Target Landscapes

Each of the focal species selected as Conservation Targets for AWMA also utilize habitats off of AWMA to meet their annual needs. In the case of the Riparian Habitat Conservation Target, the species that will benefit from improved riparian habitats also range off of AWMA. Therefore, it is crucial that we actively participate in habitat conservation efforts within the landscape, beyond the borders of AWMA, if we are to maintain the integrity of the WMA itself. As a hypothetical example, if fawn production for the mule deer that winter on AWMA is negatively impacted by a loss of quality fawning habitat on public lands to the northeast, efforts to promote and enhance winter range on AWMA might have little impact in sustaining this mule deer population in the long term. Fawning habitat off AWMA and not winter habitat on AWMA would be the limiting factor in this example.

We used the best data available (i.e., collar data from wildlife utilizing AWMA, seasonal movement data from AWMA, and local knowledge) to construct these Conservation Target-specific landscapes. These landscapes are then utilized in the Management Program Table (pages 43-46) to identify Conservation Target-specific Management Directions, Performance Targets, and Strategies for both AWMA and the landscape.

Elk and Mule Deer Landscape

The AWMA Elk and Mule Deer Landscape (Figure 2) was estimated from known mule deer radio collar locations obtained during the annual statewide mule deer survival study and best professional knowledge. Radio collared mule deer are known to cross the Snake River and summer in the vicinity of Halfway, Oregon.

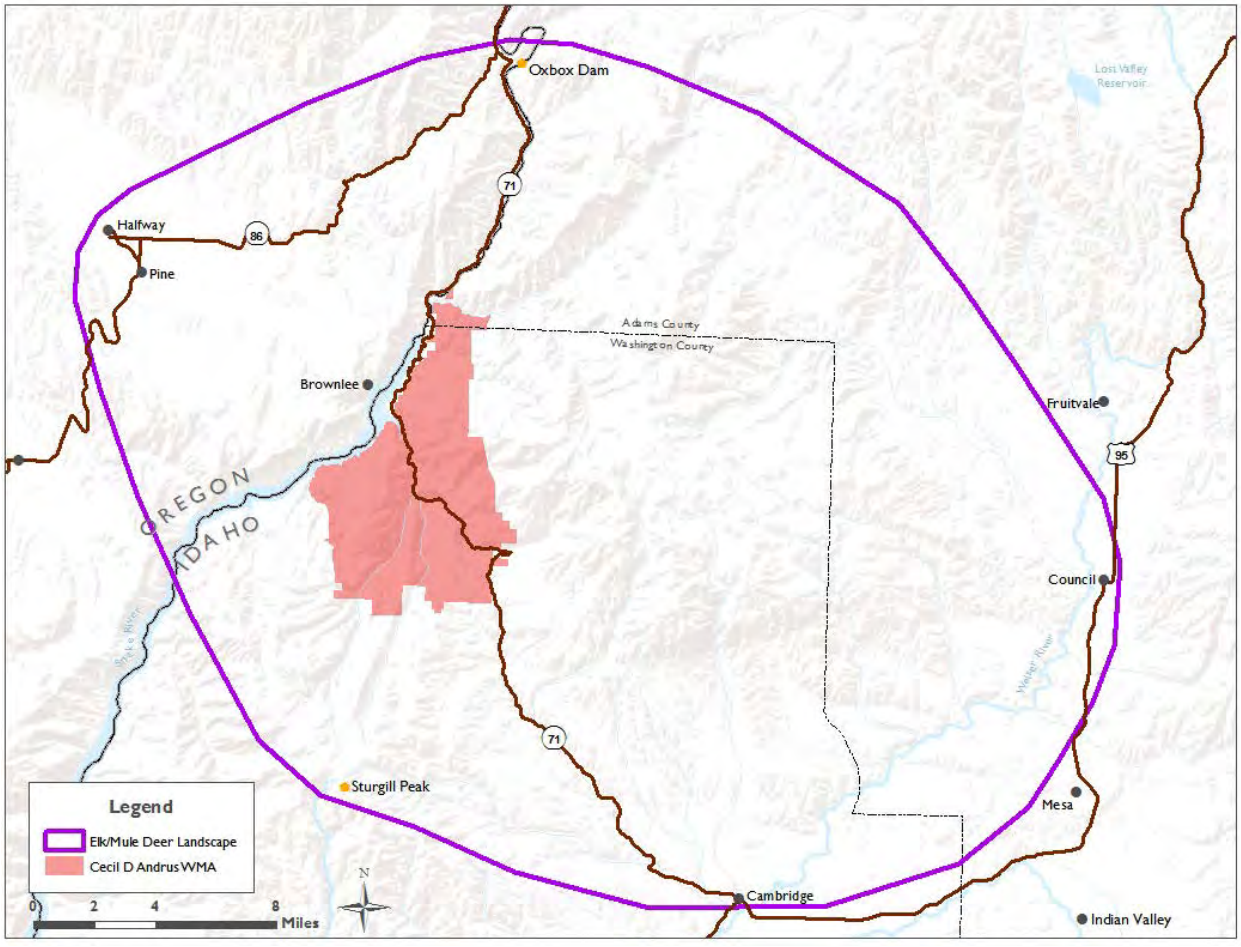

Figure 2. Cecil D. Andrus WMA Elk and Mule Deer Landscape depicting the typical year-round landscape used by elk and mule deer wintering on Andrus WMA.

Riparian Habitat Landscape

The AWMA lies within the Brownlee Creek, Wildhorse, and Snake River watersheds, and the water quality and riparian habitats within AWMA (Figure 3) are influenced by riparian habitat conditions throughout these watersheds. The majority of these watersheds are located within federal and state public lands, and are not heavily influenced by human development or agriculture.

Level 5 hydrologic units derived from the USGS Watershed Boundary Dataset (http://nhd.usgs.gov/wbd.html) available on the Idaho Department of Water Resources website (http://www.idwr.idaho.gov/GeographicInfo/NHD/) were used to delineate the AWMA Riparian Habitat Landscape.

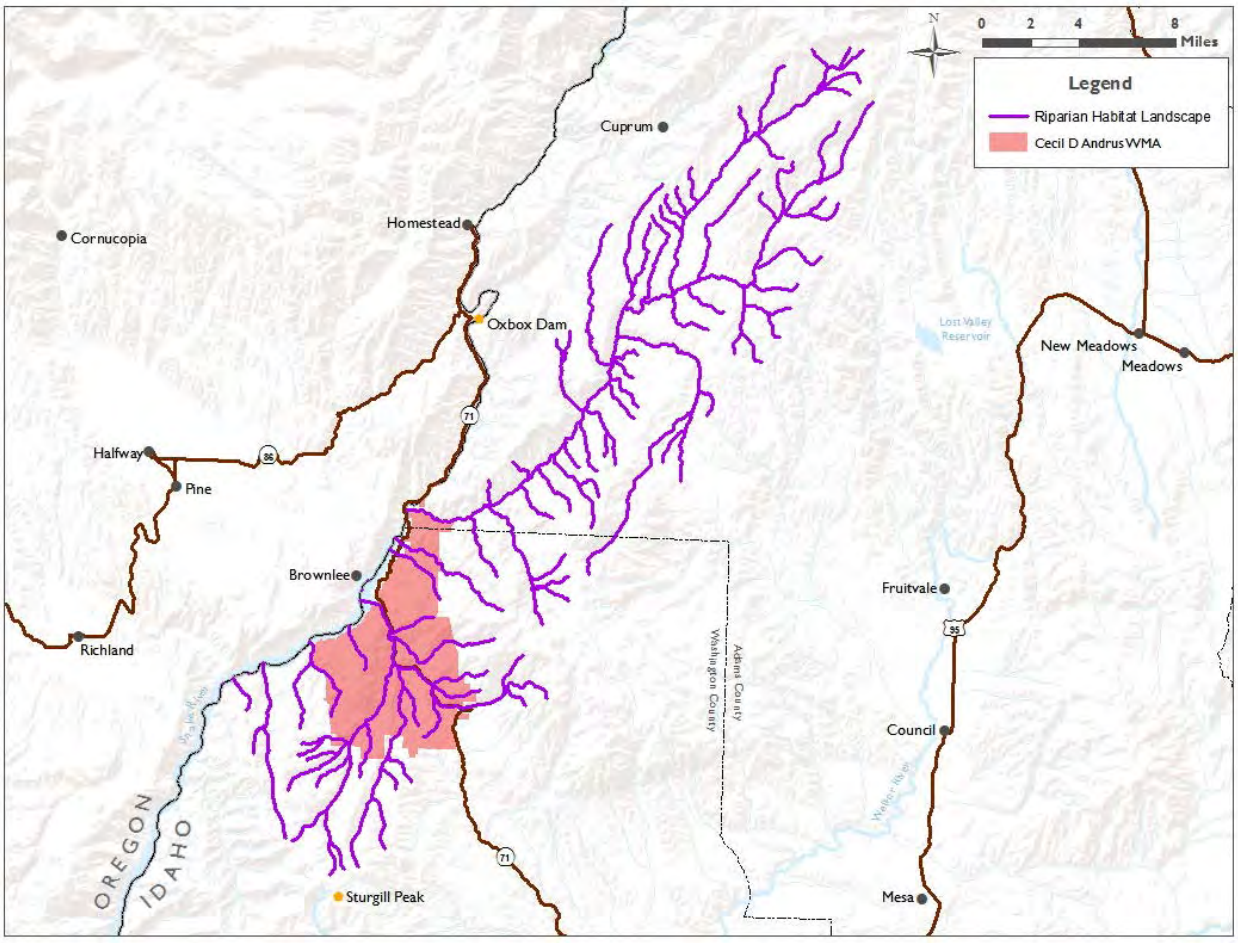

Figure 3. Cecil D. Andrus WMA Riparian Habitat Landscape depicting riparian habitat in the Brownlee, Wildhorse, and Snake River watersheds.

Cecil D. Andrus WMA Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics AWMA staff will use to manage for the Conservation Targets selected (page 38) to represent each AWMA Priority (page 20) at both the AWMA 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: Big Game Habitat					
Conservation Target: Elk and Mule Deer					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Maintain or improve vegetation condition to provide secure, high quality year-round habitat for elk and mule deer	Reduce conifer cover to < 10% in 100 ac of aspen and shrub communities over 10 years	Remove Douglas-fir/Ponderosa pine trees in aspen and shrublands using cutting or other methods	Acres restored	11, 14, 15, 30
		Over 10 years, maintain current acreage of conifer security.	Map and maintain current acreage of high-elevation, north slope conifer pockets where mature overstory is established from wildfire and harvest	Acres maintained	
		Over 10 years increase the cover of xeric big sagebrush and bitterbrush to 15% on 100 acres of grasslands which formerly supported these shrubs	Use volunteers to plant xeric big sagebrush and bitterbrush on suitable sites; experiment with different methods to increase establishment and survival of sagebrush and bitterbrush plants	Acres restored	
		Reduce noxious weed infestation cover by at least 5% over 10 years, treating >100 ac annually	Implement AWMA Noxious Weed Control Program and treat (chemical, biological, mechanical) to control infestations of priority weeds yellow star thistle, spotted knapweed and puncturevine, and limit the spread of new invaders and secondary priority noxious weed species on AWMA.	Acres treated	
			Obtain 1-2 bio-control releases for priority weed species annually		
			Conduct vegetation transect and photopoint monitoring in approximately 7-10 pastures annually		
		Reduce potential for human-caused negative impacts to vegetation composition across entire AWMA by maintaining 35 miles of closed roads and 50 access control gates	Limit motorized vehicle use to that allowed within the AWMA Access Management Plan. Mow roads and parking areas prior to September 1 annually to prevent wildfire from authorized motorized activities.	Number of human-caused wildfire ignitions and miles mowed	
		Maintain 47 livestock water tank developments and 7 ponds	Inspect all tanks and ponds annually and maintain them to working order. Replace two non or poorly functioning water tanks annually to prevent localized erosion and other impacts associated aging water containment structures.	Number of water tanks inspected and maintained to a minimum functioning level	
	Reduce wintering big game energy expenditure caused by human disturbance	Annually, manage 1,000 hunters and non-hunters on winter range to minimize elk and mule deer energy expenditure across all potential winter range habitat	Track unauthorized motorized use on the AWMA; evaluate and modify closure areas to prevent such use. Work collaboratively with adjacent public land managers to improve compliance with closures and travel plans and address specific problem areas	Number of violations detected	

WMA Priority: Big Game Habitat					
Conservation Target: Elk and Mule Deer					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
Greater Adjacent Landscape	Provide secure, high quality year-round habitat for elk and mule deer	Annually, work with agency partners to maintain USFS travel plan closures.	Report all motorized violations on adjacent USFS lands; work with USFS to improve their closure infrastructure	Number of violations detected	11, 14, 15, 30
			Learn IDL, Oregon BLM and USFS Travel Plan closures and management issues as part of greater AWMA landscape.		
		Annually, work with the LWRCWMA to reduce scale of noxious weed infestations across the greater landscape.	Collaboratively, participate in CWMA educational activities and project development.	Number of monthly meetings attended, projects input provided on and educational activities participated in	
		Protect existing high quality elk and mule deer habitat and reduce negative impacts to habitats from proposed land management actions.	Contact Southwest Region Environmental Staff Biologist quarterly to coordinate comments on forest and range projects within Big Game Units 22 & 31.	Number of projects commented on	
WMA Priority: Special Status Species Habitat Habitat					
Conservation Target: Riparian Habitat					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species.	Over 10 years, restore at least 75% of non-functioning riparian stream reaches in poor to fair ecological condition (identified in 2011 riparian assessment) to functioning and good to excellent condition; increase canopy cover to $\geq$ 25%, >50% stream shading, and 30% survival of native trees and shrubs within 10 years in restored stream reaches; evidence of natural tree and shrub reproduction should be present.	Implement native tree and shrub planting projects, focusing on degraded riparian areas with minimal woody cover and/or unstable streambanks. Treat approximately ¼ mile of identified stream reaches annually over next ten years.	Percent of non-functioning stream reaches restored; indicators of properly functioning riparian; survival of planted species.	11
			Install bioengineered streambank stability treatments where necessary.		
		Establish permanent cover adjacent to riparian habitats to improve forage and cover in riparian uplands on 6 acres at the AWMA HQ within 5 years.	Replant food plots with perennial vegetation.	Number of acres converted	
		Within ten years, prevent all excess or non-authorized cattle use in all nonfunctional riparian areas identified in the 2011 riparian assessment, specifically Box Gulch, Neil Gulch, and West Fork Brownlee Creek.	Work with involved land management agencies and livestock operators to improve condition of AMWA-managed lands outside the AWMA boundary and the larger West Fork Brownlee Creek drainage.	Linear feet of nonfunctional riparian habitat caused by cattle.	

WMA Priority: Special Status Species Habitat Habitat					
Conservation Target: Riparian Habitat					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species.	Within five years, replace or repair three damaged or non-functioning culverts at road-creek crossings identified in 2011 riparian assessment. Repair or reinforce four road-creek crossings with erosion potential identified in riparian assessment.	Work with ITD to clean out clogged culverts, identify cause of problem, and/or reconfigure or replace culvert as needed to accommodate high flows (consult with Department engineering staff on culverts within the interior of the AWMA.	Number of culverts and road crossings repaired or replaced and functioning as designed.	11
			Utilizing Department Engineering staff, investigate road crossings with erosion potential and develop plan to reinforce road and accommodate flows; implement repairs as needed.		
		Annually, evaluate status of habitat occupied by Indian Valley sedge for potential negative impacts.	Control noxious weed and other undesirable invasive non-native species in riparian and headwater springs and seeps. Avoid chemical application within occupied Indian Valley sedge habitat	Acres of habitat occupied by Indian Creek sedge	
			Use boulders, anchored large wood or other methods to stabilize headcuts and raise the water table of incised channels in the meadow at the Brownlee-Pine Creek Divide		
			Monitor the population and habitat of Indian Valley sedge (using protocols in Murphy 2010) before restoration activities and every two years after.		
Greater Adjacent Landscape	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species.	During next five years, partner with federal, state, and private landowners to improve the function and restore the condition of at least 1/2 mile of riparian area on West Fork Brownlee Creek (above AWMA boundary fence) and other streams as needed.	Partner with USFS to influence adjacent allotment use patterns and develop improvement projects to establish riparian vegetation and increase streambank stabilization.	Linear feet of degraded stream enhanced or restored.	
			Conduct planting projects to re-establish native trees and shrubs in degraded riparian habitats.		
WMA Priority: Provide Wildlife-based Recreation Opportunities					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Provide high quality wildlife-based public recreation opportunity	Manage for 1,000 wildlife-based recreation users annually.	Provide recreational hunting and fishing opportunities consistent with the AWMA mission.	Number of users	21, 22
		Maintain the AWMA office, 50 access control gates, 32 miles of motorized use road and information signage to facilitate recreation and education.	Provide maps and other interpretive materials at the AWMA HQ.	Facilities maintained annually and information projects completed.	
			Install information kiosk at 085 road on AWMA summit and an information board at the AWMA HQ office.		
			Inspect facilities and roads annually and make repairs as needed to maintain both to safe and usable levels.		
		Maintain 80% user satisfaction with the AWMA recreation experience	Monitor public use and satisfaction via the AWMA user survey.	Hunter satisfaction	
		Assist hunters with meeting Department big game mandatory reporting requirements	Provide bear, lion and wolf mandatory check during regularly-scheduled AWMA office hours each year.	Mandatory checks completed	
	Provide public educational opportunities	Provide annual volunteer opportunities to meet habitat management objectives and increase public involvement and appreciation of wildlife and habitat management.	Host 2-3 volunteer projects on the AWMA each year	Number of volunteer projects hosted	
		Increase use of AWMA for natural resource education. Develop at least one new annual educational activity in the next five years.	Work with local schools, conservation groups, universities and other organizations to develop educational opportunities related to natural resource education	Number of educational activities developed	

WMA Priority: Provide for Livestock Grazing					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Manage livestock to improve habitat condition	Develop and implement a graduate student project proposal within two years to quantify livestock impacts of the current grazing system. Based on the results, revise the livestock management plan within five years.	Create and meet with a project committee of representatives from U of I, IDL, IDFG, BLM, USFS, livestock operator and other relevant partners to identify project goals and develop its direction. Use Dempsey Trust funds to pay for project.	Thesis completed and plan revised	11
			Revise livestock management plan to reflect results of graduate student project		
		Replace two water tanks annually to maintain proper livestock distribution and reduce localized impacts.	Use developed water sources to improve livestock distribution to reduce localized impacts.	Number of tanks replaced	

WMA Priority: Maintain Safe Facilities and Working Environments					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
AWMA	Maintain and improve essential infrastructure for Department staff and the public	Annually, maintain and improve all AWMA infrastructure including 1 office, 5 residences 1 bunkhouse; 9 barns, 1 shop with parking bays; 5 bridges, 4 corrals, 52 miles of road, 100 miles of fence, 47 spring tank water developments, 7 livestock ponds, 50+ access gates(some are part of livestock fence); and 3 miscellaneous buildings.	Inspect all buildings, fences, roads, corrals and other structures each year and make necessary repairs.	Number of structures and miles of road and fence inspected.	33, 34
			Maintain the AWMA headquarters office, yard and parking areas in a safe and clean manner for public use.		
			By 2016, develop a request for replacement of permanent technician house with an energy and cost-efficient structure.	Request submitted	
			By 2019, develop a request to replace Coyote Run, Bugle Basin, and the MF bridge as one package with a replacement structure that meets the functional needs these structures currently provide.		
			Address noted deficiencies in the annual state safety inspection	Documented in response to safety inspector.	
		Maintain and improve roads and parking areas	Repair major damage to roads after winter/weather events or close them until repairs can be made to ensure public and employee safety.	Miles of road and number of parking areas maintained.	
			Ban all tracked vehicles during periods of wet weather to prevent major road damage		
			Pick trash four times a year at the Brownlee Access Site		
			Control puncture vine on AWMA roads and parking areas every 10-14 days from July - October annually		
		Maintain access program infrastructure	Inspect and maintain all access gates and fences	Number of access points and gates maintained.	
			Inspect and maintain access signage annually		
			Evaluate effectiveness of access infrastructure in meeting program goals; modify locations and types of infrastructure to address problems		

Monitoring

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

Compliance Monitoring

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

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

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

Biological Monitoring

Wildlife Management Areas across the state have a range of established biological monitoring programs and needs. Additional monitoring needs may have been identified during the development of the AWMA 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.

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.

Currently, the AWMA monitors habitat, habitat treatments, ungulate use, weed infestations, game bird habitat use, production and harvest, and big game habitat use. In Table 3, future monitoring needs associated with performance targets and strategies identified in the 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 AWMA by December 31, 2014.

Mule Deer and Elk

Andrus WMA lies within big game Units 22 and 31 and are surveyed within the Southwest Region's big game survey rotation. Surveys are used to determine elk and mule deer numbers and bull:cow:calf and buck:doe:fawn ratios. Mule deer fawns and some does are radio collared and monitored for survival on the AWMA and adjacent Oxbow face as part of the statewide mule deer winter survival study.

Upland Game Birds

Wing barrels are located on the AWMA during the upland bird season to collect wings for the statewide wing bee. Wintering turkeys are counted weekly at the AWMA headquarters.

Redband Rainbow Trout

Redband rainbow trout are a species of special concern in Idaho. The perennial streams of the AWMA have been surveyed for redband rainbow trout by Southwest Region fisheries staff; there is no set schedule at this time for future surveys.

Habitat

Vegetation transects (56) are located throughout the AWMA for upland habitat and grazing monitoring purposes. Each year, a subset of transects from low, mid, and high elevations are read for species composition and dominant grass species heights, and photos are taken. Starting in 2012, spring utilization data was collected from a subset of spring grazed pastures.

In 2011, the AWMA was the first WMA inventoried as part of the statewide, long term habitat monitoring program. Information on cover type and composition (foliar and basal cover, cover and height of bare ground and litter, cover and height of native perennial vegetation, cover of annual grasses and weeds/invasive plants, density of bitterbrush seedlings) was collected on over 200 plot points across the WMA on upland habitats (Moser 2012). For riparian habitats, information on vegetation and canopy cover, bank full width and depth, bank stability, streambed composition, natural and human-caused disturbances (e.g., livestock, roads, culverts, etc.), noxious weeds, and photographs were collected on all perennial streams. This information helped staff assess impacts to the AWMA from management programs, decisions, and environmental conditions.

Noxious weed locations are visually monitored, treated, and mapped by AWMA staff each year. Additional effort is made to detect new invader species during AWMA field activities.

Two populations of the globally rare plant, Indian Valley sedge, occur on the AWMA. Survey and monitoring data on it is collected by the Department Wildlife Bureau Diversity Program staff (Murphy 2010). A permanent habitat monitoring transect was established in 2009 and will be surveyed again in 2014.

Table 3. Biological monitoring for Cecil D. Andrus WMA, 2014-2023.

Performance Target	Survey Type	Survey Frequency
By 2023 reduce conifer invasion in shrubs by 100 acres	Mapped treatments	At five and 10 years
Reduce noxious weed infestation of yellow star thistle to less than 5% of current area in 5 years; contain spotted knapweed to core infestation area on Woodhead; map and treat spotted knapweed outliers to prevent expansion of total infested acres	Line intercept and area mapping	Annually
Enhance riparian food sources in Middle Fork and main stem of Brownlee Creek	Plant count and map	Every five years
Increase streambank stability by 5% in disturbed areas over 10 years	Department Rapid assessment method	Every five years
Enhance 1/2 mile of riparian area on West Fork Brownlee Creek above AWMA boundary fence over five years	Department Rapid assessment method	Every five years

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 AWMA.

Cecil D. Andrus WMA monitored public use intensively during 2012 and 2013 using personal contact surveys and internet surveys. Appendix IV contains a summary of that monitoring effort. AWMA staff will continue to collect visitor use data with the AWMA Visitor User Survey available to all AWMA users as part of its annual public use monitoring program.

Reporting

The AWMA will produce a five-year report on implementation of this plan in 2019, including a summary of accomplishments and progress towards meeting performance targets. During the five-year review, AWMA 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.

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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	
Desired Outcomes	
• There is no net loss of habitat.	
• The Department is highly regarded as a comprehensive source of objective, scientifically-based information on fish, wildlife, and plants in Idaho.	
A. Objective – Maintain or improve game populations to meet the demand for hunting, fishing, and trapping.	
Strategies	
1.	Set harvest rules and regulations to achieve long-term sustainability of populations and habitat.
2.	Alleviate wildlife damage to agriculture.
3.	Manage predation to achieve a balance between game and predator populations.
4.	Regularly inventory, analyze, and report on game populations and habitats.
5.	Collaborate with tribes, private landowners, and agencies to manage populations and harvest for long-term sustainability.
B. Objective – Ensure the long-term survival of native fish, wildlife, and plants.	
Strategies	
6.	Inventory, monitor, and assess the status of native fish, wildlife, and plants and the habitats upon which they depend.
7.	Identify species with the greatest need for conservation action.
8.	Restore native species where they have declined or disappeared.
9.	Assist public and private landowners in the conservation, restoration, and enhancement of native fish, wildlife, and plants.
10.	Collaborate with interested and affected parties to implement plans to recover threatened and endangered species and conserve native fish, wildlife, and plants
C. Objective – Increase the capacity of habitat to support fish and wildlife.	
Strategies	
11.	Develop measurable and achievable management objectives for fish and wildlife habitat.
12.	Assess and prioritize habitats for protection, restoration, or enhancement.
13.	Acquire interest in property where Department management can provide exceptional benefits to fish and wildlife and associated recreation.
14.	Work in cooperation with other agencies and local governments to prevent the introduction and spread of invasive species.
15.	Develop partnerships with landowners, land management agencies, and others to restore, enhance, and conserve fish and wildlife habitats.

The Compass
GOAL—Fish, Wildlife, and Habitat
D. Objective – Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans.
Strategies
16. Monitor fish and wildlife populations for disease.
17. Reduce or eliminate high concentrations of wildlife that pose significant disease risk.
GOAL—Fish and Wildlife Recreation
Desired Outcomes
• Recreational opportunities are abundant and well distributed around the state, while conflicts between recreationists are few and far between.
E. Objective – Maintain a diversity of fishing, hunting, and trapping opportunities.
Strategies
18. Provide opportunities specific to the needs of beginners, youth, people with disabilities, and families.
F. Objective – Sustain fish and wildlife recreation on public lands.
Strategies
19. Protect the public's right to use public waters for hunting, fishing, trapping, and wildlife viewing.
20. Obtain public access across private lands to public lands.
21. In partnership with land management agencies, provide information on fish and wildlife recreational opportunities and access on public land.
22. Provide fish- and wildlife-based recreation on lands owned or managed by the Department.
G. Objective – Maintain broad public support for fish and wildlife recreation and management.
Strategies
23. Support mentoring programs for new hunters and anglers.
24. Promote hunting, fishing, and trapping as legitimate uses of fish and wildlife and compatible with the conservation of all wildlife.
H. Objective – Increase opportunities for wildlife viewing and appreciation.
Strategies
25. Provide wildlife viewing opportunities on lands managed or owned by the Department.
26. Assess participation, demand, and satisfaction with wildlife-viewing and appreciation opportunities. Adjust management to achieve objectives.
I. Objective – Increase the variety and distribution of access to private land for fish and wildlife recreation.
Strategies
27. Collaborate with landowners and commercial operators to provide public recreation opportunities on private lands.

The Compass
GOAL—Working With Others
Desired Outcomes
• Fish and wildlife management is based on sound science and is responsive to the needs and expectations of Idaho citizens.
J. Objective – Improve citizen involvement in the decision-making process.
Strategies
28. Ensure that interested and affected parties are notified of opportunities to participate in decisions and that all voices are heard.
29. Provide quality and timely response to input from citizens and include rationale for decisions.
K. Objective – Increase public knowledge and understanding of Idaho's fish and wildlife.
Strategies
30. Provide user-friendly regulations and information.
31. Promote the use of Department facilities for fish and wildlife educational opportunities.
GOAL—Management Support
Desired Outcomes
• Facilities, equipment, and information systems are safe, reliable, and cost effective.
L. Objective – Attract and retain a diverse and professional workforce.
Strategies
32. Recruit and train volunteers to assist Department employees.
M. Objective – Provide equipment and facilities for excellent customer service and management effectiveness.
Strategies
33. Maintain and upgrade facilities and equipment.
34. Provide a safe, pleasant, and well-equipped work environment.
N. Objective – Improve funding to meet legal mandates and public expectations.
Strategies
35. Obtain funding through grants and partnerships that support the Department's mission.
36. Seek efficiencies and cost savings in all programs.

II. HISTORY

Travelers using Goodale's Cutoff of the Oregon Trail in the mid- to late-1800s passed through what is now part of the AWMA on their way to Baker, Oregon, to rejoin the main trail. A portion of the Cutoff route can still be seen and is marked along the Middle Fork and mainstem of Brownlee Creek.

The area within and surrounding the AWMA has a long ranching and mining history. Evidence of homesteads and mining developments can still be found. Family names that are tied to the lands forming the AWMA include Beggs, Cavenaugh, Nixon, Fairchild, and Hillman. Bits and pieces of other family histories can be gleaned from oral and written stories kept by community members and at local libraries.

In 1993, the Richard King Mellon Foundation purchased the Hillman Ranch through The American Land Conservation Program and deeded it to the Department for the purpose of wildlife conservation. This donation formed the base for the AWMA and was sought by the Department because it provided critical winter range for deer and elk in Game Management Units 22 and 31, contained fairly intact native canyon grassland communities which are representative of Hell's Canyon and are important to many species of wildlife, and because it offered valuable outdoor recreation opportunities to hunters and non-hunters alike.

The deeded acquisition consisted of 10,087 acres of private land. Associated with Department deeded property are approximately 12,821 acres of IDL State Endowment grazing lease lands. In 2001, these IDL lands were consolidated into one Miscellaneous Lease (#5040) and awarded to the Department for 10 years. In 2011, the Miscellaneous Lease was converted to a Conservation Lease (#50004) and awarded to the Department for a 20-year term. Another 320 acres of State Endowment lands are held by the Department as Mineral Lease #9140. Approximately 800 acres of BLM lands are associated with the AWMA and an MOU for their management within the AWMA was finalized in 2013. Approximately 300 acres of Payette National Forest lands are managed within the AWMA through the USFS Weiser Allotment Environmental Assessment (2011).

In 2012, an MOU with Idaho Power Corporation was developed for Lake Road maintenance and repairs.

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 Cecil D. Andrus WMA 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 AWMA. 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 AWMA lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on the AWMA.

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. PUBLIC INPUT SUMMARY AND VISITOR USE DATA

The regional wildlife habitat staff conducted open houses in Nampa and Boise in March 2012 to gather public input. A web-based survey was provided to the public for commenting on the management and direction of all WMAs. This survey was advertised on the Department website, by mailings, and news releases to inform Idaho's citizen of this opportunity to provide input on the future of WMA management. The AWMA maintains the contact information for all users who check out gate keys for motorized access and each was mailed a notice of the web-based survey and encouraged to participate. All users who came to the AWMA during the comment period were informed by staff of the survey and encouraged to participate.

The following is a list of concerns mentioned by members of the public from the web survey or from the AWMA User Survey, with a discussion of each issue (issues are **not** listed in order of importance or by the number of comments received).

Habitat Management

1. Remove livestock grazing; less livestock grazing (5 comments).

   When the AWMA was gifted to the Department, the Commission directed the Department to manage the land as a "Conservation Ranch," emphasizing wildlife conservation while maintaining some level of livestock grazing. After acquisition, the grazing leases for the IDL lands within the AWMA were transferred to the Department. The IDL and the Department jointly developed an AWMA Grazing Management Plan which reduced available AUMs from 4,000 to 1,800 and set a rest rotation grazing system in place.

   Livestock grazing on public lands is an issue that can evoke strong responses from the public, ranging from support for grazing to support for removal of all grazing. Andrus WMA receives few to no complaints about livestock grazing on the AWMA from users each year. Most complaints received are about issues on allotments outside the AWMA boundary over which the Department has no direct control.

   Vegetation monitoring occurs in a subset of pastures each year on the AWMA, in part to evaluate the impacts of grazing, and to maintain photo records of range conditions each year. In 2011, a long-term vegetation monitoring program was implemented for Department WMAs, with the WMA being the first monitored. The goal of this monitoring is to provide baseline data for all WMAs and to help managers detect and address impacts to habitats from management actions, climate, and various WMA uses, including grazing where it occurs.

   Continued livestock grazing on the AWMA meets the intent set by the Commission. The grazing program on the AWMA also serves to demonstrate that the multiple uses of wildlife values and livestock grazing can be done compatibly on public lands, and it provides public educational opportunities on rangeland management issues. Wildlife conservation issues potentially exacerbated by livestock grazing (severe drought impacts, wildfire) are jointly addressed by IDL and the Department.

2. Need more shrubs (1 comment).

   Evidence indicates the AWMA supported more shrubs in the past. Over time, land uses, natural events, and annual grass invasion decreased the shrub component on the landscape to levels found today. Sagebrush and bitterbrush are important components of winter range for mule deer and elk, and for shrub-steppe species including sage-, sharp-tailed and dusky grouse. Sagebrush and bitterbrush also provide hiding and nesting cover for many wildlife species and the insect food sources they depend on.

   Volunteers and Department staff have conducted large scale shrub plantings and seedings on the AWMA in an attempt to increase the shrub component, and one volunteer has experimented with different planting and maintenance techniques to increase shrub seedling survival. To date, seedling survival has been very poor, primarily from drought and water competition from established vegetation. Andrus WMA staff will continue to explore ways to increase shrub survival and expand shrub restoration efforts.

3. Provide more watering areas (2 comments).

   Andrus WMA has approximately 30 miles of perennial streams; additional miles of intermittent streams, approximately 47 spring/tank water developments, and seven ponds available for wildlife water. All known developable springs on the AWMA have been. Approximately half of the spring/tank developments flow water year-round; the others are more strongly tied to the amount of annual moisture received and flow longer into the summer and fall months during wet years. All ponds are snowmelt-fed and the length of time they contain water is dictated by annual moisture levels. Given the abundance and distribution of natural and developed water sources on the AWMA, there is likely little benefit from additional developments.

   The AWMA will continue to maintain all developed water sources and pursue options to enhance sources for wildlife where possible.

4. Remove all fencing (1 comment).

   Andrus WMA has extensive fence and water development infrastructure to manage livestock grazing. It is because of this level of infrastructure that the AWMA is able to maintain its high quality wildlife habitat with livestock grazing. Without it, livestock management would be more difficult and would result in increased areas of over utilization within pastures. However, fewer internal fences would reduce obstacles to wildlife movements within the AWMA, especially to wintering big game. Because the Commission intended for livestock to continue grazing on the AWMA, maintaining the fences and other infrastructure is essential to ensuring grazing can be done in a way that maintains wildlife habitat quality. Poorly maintained fences are just as dangerous as unused fences. The AWMA will continue to maintain fences in good repair, modify fences to incorporate wildlife friendly designs, and assess the need for existing fences in order to find the balance between livestock management and wildlife habitat.

One option that would allow both livestock grazing to meet the Commission's intent and remove more internal fences, would be to utilize a grazing plan that involved herding livestock rather than just pasture turnout. This option will be explored further and potentially considered for development and inclusion into future AWMA grazing leases.

5. Develop more food/cover plots (2 comments).

   Two cereal grain food plots are maintained on the AWMA; one is four acres and adjacent to the WMA headquarters; the other is two acres and above the headquarters. They have been maintained in wheat since the AWMA was acquired; except for one year when they were planted in perennial grasses in an attempt to gain control over herbicide resistant kochia (*Bassia scoparia*), annual rye, and other weeds. These two plots are in locations that are excluded from livestock use; other potentially suitable areas previously suggested for additional cereal grain plots are or are within pastures used within the livestock grazing program. Converting them to food plots would require additional permanent fencing to exclude livestock or would remove pastures essential to livestock grazing management, resulting in increased utilization of remaining pastures and negative habitat impacts to them. The long term viability of these two food plots is questionable given changes in rain and weather patterns experienced in recent years.

   Other habitat enhancement projects for wildlife food and cover have taken place on the AWMA, including planting sagebrush and bitterbrush on the winter range including the West and Middle Forks of Brownlee Creek, Dukes Creek, and above the AWMA Headquarters; planting oak (*Quercus* spp.), currant (*Ribes* spp.), and chokecherry (*Prunus virginiana*) seedlings on Brownlee and Camp Creeks; planting western junipers (*Juniperus occidentalis*) in the West Fork Brownlee Creek and Duke's Creek; and planting forage kochia (*Bassia prostrata*) plots near Grade Creek and the AWMA headquarters. There are likely other habitat enhancements that have taken place on the AWMA that are not recorded.

   Many of these habitat enhancements have had limited success establishing due to drought conditions and water competition from established vegetation. Small scale plantings near riparian areas and those where individual plants were watered weekly until established have been most successful.

   Andrus WMA staff work to keep apprised of new developments to improve success of planting projects. New techniques and materials to improve plant survival will be incorporated as they become available.

6. Have conservation buyer purchase WMA and use monies to improve habitat (1 comment).

   This concept has been used by the Nature Conservancy at their 45 Ranch in Owyhee County, Idaho. There is potential for this concept to be considered within the Department's habitat program, but there would have to be further investigation into the pros and cons of such an arrangement, and public support generated for implementing the concept if the Department chooses to pursue it.

Wildlife Management

1. Too many predators; get rid of wolves (2 comments).

   Predators are part of the wildlife component on the AWMA, and most species are managed through general and controlled hunting seasons and by special permit in the case of livestock depredations or other damages. The AWMA is open to the hunting of predator species, subject to current legal seasons and bag limits. Predators serve many functions in the ecosystem and there is a great deal of information available on the role they play and impacts they have.

   Humans have a long history of holding predators accountable for lack of hunter success or poor experiences, even when other factors contribute to those experiences. However, there are times when predators significantly impact prey populations and changes are needed for predator management, including wolves. The AWMA will continue to work with the population staff to ensure a proper balance is maintained among predator and prey species. When and where necessary, harvest management objectives can also be adjusted.

2. Better manage turkeys (1 comment).

   Andrus WMA supports year-round turkey populations. Approximately a dozen hens nest and raise their chicks on the AWMA; the majority of turkeys are present on the AWMA during the winter months. Current wintering populations are around 40 birds, and radio collar data has shown these birds summer as far away as Sturgill Peak (Powell 2012). Six acres of cereal grain food plots are maintained at the AWMA headquarters for wintering turkey use, and in 2008, the AWMA implemented a five-year experimental supplemental feeding program in an attempt to bolster turkey numbers in the area. Oak trees have also been planted along Brownlee Creek to provide long term forage for turkeys. A total of 389 turkeys from north Idaho were released on the AWMA from 2007 - 2009 in an attempt to bolster turkey numbers; they appear to have had no impact to wintering turkey numbers on the AWMA.

   Turkey populations throughout the Southwest Region have declined since peak numbers in the late 1990s. Factors include reductions in recreational winter feeding, creation of a fall hunting season, and the actual carrying capacity of the available habitat. The number of birds found on the AWMA reflects this region-wide decline and is not an artifact solely of AWMA management. Andrus WMA efforts to bolster its wintering population, especially with supplemental feeding, have not had the desired impact, indicating that larger scale issues are driving population numbers.

   Andrus WMA staff will continue to manage existing habitat for upland game birds including turkeys and make improvements where opportunities present themselves.

3. There were more birds and animals before it became a WMA (1 comment).

   The Department is not able to have a reasonable discussion as to the validity of this statement without research into historic data . Such a project is currently beyond the scope and timeline of this plan.

4. Gather more grouse information (1 comment).

   Little data is available on native grouse populations on or adjacent to the AWMA. Most local grouse information is available for sage- and sharp-tailed grouse in the Cambridge, Mann's Creek, and Indian Valley areas from lek surveys and radio tracking projects. It would be desirable to have additional information on forest grouse population dynamics, especially on the impacts of turkeys to native grouse populations. Richard Renstrom has been conducting personal research of native grouse populations on the AWMA since 1985 (Renstrom 1999), and has reported his concerns and requests for additional research to regional biologists. To date, requests for forest grouse research projects have not been approved due to limited funds and higher statewide research priorities.

5. Restrict hunting for five years to increase the number of animals (1 comment).

   The number of game animals found on the AWMA during hunting seasons is influenced by local population levels, reproductive success for that year, weather conditions, and the level of human disturbance. Animal numbers can fluctuate greatly from year to year, especially due to the level of reproductive success and weather conditions. Wildlife does not recognize the AWMA boundary, and can freely cross it. Wildlife also require habitats beyond the WMA, especially mule deer, elk, bears, and turkeys. Restricting hunting on the AWMA will not prevent animals from moving to adjacent lands where they can be hunted, nor will it address impacts from habitat or other issues beyond the WMA's borders.

   The Department primarily influences wildlife at the population level through hunting seasons and bag limits. The regulation of seasons and bag limits is addressed through the season setting process and is beyond the scope of this plan.

6. No doe hunts or cow elk tags (1 comment).

   The regulation of doe hunts and cow tags is done through the Department season setting process, and is beyond the scope of the this plan.

Infrastructure Management

1. Do more road maintenance (1 comment).

   Road damages are becoming an increasingly larger issue each year, from the combination of larger, heavier off road vehicles and the poor judgment of some AWMA users. The AWMA has a motorized vehicle access plan in place which limits types of motorized vehicles when

road conditions are very susceptible to damages. These limits help minimize damages; however, natural events and poor human judgment will not prevent all damages from happening. Road maintenance is done each year on the AWMA, and its extent is limited by available funding resources. The highest priority damages are addressed each year with available funds, but there is a backlog of maintenance needs.

Public Use Management

1. Andrus WMA is very well run (10 comments).

   Public comments gathered by the 2012 online public survey and from the AWMA user surveys indicate the access program as it is currently managed is meeting the public's expectations. The majority of users are happy with the motorized vehicle use management program and their positive comments indicate that the greater AWMA management is achieving its goals of providing quality wildlife habitat and opportunity for quality wildlife-based recreation.

2. Close antler hunting until May 1 (1 comment).

   Andrus WMA has seen a dramatic increase in the number of antler hunters from January through May each year. These hunters have increased the disturbance to wintering big game and subsequent energy loss to individual animals as they move away from human activities. This energy lost could be the critical factor determining whether individual animals survive, especially during harsh winters, or die.

   Currently there are hunting seasons open through March on the AWMA. It would be unfair to close the AWMA to antler hunting, but leave it open to upland bird, coyote, cougar, and wolf hunting. Setting an antler season alone would not prevent users from hunting antlers; and enforcement of an antler season is difficult at best. In other areas where a season has been used, it primarily works to keep the honest people honest.

   The greater issue needing to be addressed here is the one of human disturbance to big game winter security. A better method to minimize disturbance is an area closure to all public entry from January through April each year. Because the AWMA is made up of multiple land ownership, an agreement with all these land management agencies would need to be worked out to support such a closure, along with Department approval for it. However, the AWMA is only a part of the larger winter range landscape. A closure on the WMA alone would provide little benefit to wintering wildlife across the larger landscape. A larger landscape scale closure that includes the WMA would provide the best security for wintering wildlife. Generating public support for such a closure would be a major undertaking and necessary to achieve the intended wildlife benefits.

3. Have the AWMA office open longer (1 comment).

   Every attempt is made to provide office hours to meet public demand; however, the level offered is also constrained by funding and personnel resources. To meet public demand, office hours are structured to be longer in high demand periods and shorter in low demand periods during the September - December hunting seasons; and by-appointment-only during periods of no to very low demand from May - August. Volunteers also assist staff with office hours during high demand times. Although it is not possible to have office hours at a level that will meet everyone's expectations, the AWMA staff will, in its annual evaluation of office hour structure, look for areas where changes can be reasonably made to accommodate increased demand during the fall hunting seasons.

4. Don't like where non-motorized sign is in the West Fork (1 comment).

   Andrus WMA has a system of open and closed roads to allow for motorized public access. Closed roads on the AWMA are routinely violated, primarily during big game seasons. Violators often remove motorized closure signs in an attempt to camouflage their intent. At times, locations of closures have to be modified to thwart violators, which can mean closure points are moved to areas that can be better secured. The sign referred to by this comment is placed on a road that has frequently had motorized closure violations including damage to its locked gate. The closure sign was moved to its current location to make it more visible and to allow users adequate room to park and turn around before reaching the final locked gate.

5. Open roads/gates in January for more access; allow earlier motorized access in spring for bear and turkey hunting (5 comments).

   Some AWMA users have requested additional motorized access during the closed period from January through April. The AWMA motorized access program was developed to balance the needs of both wildlife and users. Motorized vehicles disturb wildlife, resulting in significant energy expenditures and shifts in use patterns, especially for big game (Wisdom et al. 2005). The AWMA seasonal closure from January 1 through April 30 occurs when wildlife are most vulnerable to energy loss that can increase winter mortality. The motorized closure serves to provide quality winter range conditions for deer and elk, one of the primary missions of the AWMA.

   This time period is also when the AWMA normally receives the majority of its annual moisture, creating conditions where the road system is highly susceptible to damages from motorized vehicle use. It only takes the poor judgment of one motorized user to create conditions which result in significant road damage by the time the wet season is over. The closure protects roads during their most vulnerable time, resulting in fewer major repairs and funds needed for road maintenance each year.

6. Give more gate keys out during hunting seasons (1 comment).

   Some WMA users have requested more than five keys be available for each gate during the hunting seasons. The AWMA key checkout program was developed to provide motorized users the opportunity for a quality recreation experience. It was modeled on the access program the previous ranch owners had used to allow public access. Key numbers were increased to five by the Department after soliciting public input on the level of motorized use that would be acceptable and still allow for a quality motorized experience. The public has strongly supported this level of motorized access, based on comments received by staff and submitted on the AWMA User Survey.

   The average party size for AWMA motorized users is 2-4 people, which results in a maximum of 20 users behind each gate associated with motorized vehicles at any one time. This level has resulted in few conflicts between users. Increasing the number of keys per gate would rapidly result in a decrease in the quality of the experience for all users and increased user conflicts, similar to what occurs on adjacent public lands. Providing the opportunity for quality wildlife-based motorized recreation is within the primary mission of the WMA; increasing the level of motorized access at each gate would ultimately conflict with that mission and create additional user conflicts.

7. No-shooting zone is too large (1 comment).

   The current AWMA No-Shooting Safety Zone was set up to protect the safety of AWMA staff, the public, and infrastructure buildings. It is approximately 1.5 miles long along Highway 71 and encompasses the headquarters, staff residences, barns and sheds, working livestock pastures, wildlife food plots, and the pullout areas used by the public for viewing wildlife. The safety zone is popular for wildlife viewing and photography. Hunters are able to travel through the safety zone to reach areas open to shooting beyond its boundaries. A reduction in the size of the safety zone would increase the potential for serious injury to people and working livestock, and damage to structures from firearm discharges. The Department has a responsibility to provide safe facilities and environments for staff and the public, and the current safety zone meets that responsibility

8. Further limit or eliminate access to ATVs (2 comments).

   Some AWMA users and survey respondents indicate they would like to see motorized access further restricted or eliminated. Many times these comments are in direct response to a discourteous field experience with a motorized user. The Department makes every effort to balance the desires of both motorized and non-motorized users on the AWMA so that both can have quality experiences. The Department promotes courteous and respectful interactions between different users and user groups on Department-owned and managed lands. The Department staff does not have the ability to referee all public interactions on the AWMA; it is up to each and every user to be respectful and courteous to other users, and to follow the WMA regulations to prevent conflicts.

However, the issue of motorized closure violations causing conflicts with non-motorized users must also be addressed. Most users of the AWMA, whether motorized or non-motorized, are respectful of other users and of WMA lands and the access management program. Some conflicts are reported each year, with the majority occurring during big game seasons. Andrus WMA staff follows up with all reported motorized violations, and each year takes steps to reduce violations including re-evaluating and modifying where closures begin. It is unfortunate but true that those who follow the AWMA access program rules are often the ones who are punished the most by the actions of violators when additional steps have to be taken to prevent violations and conflicts, and reduce road damages from the poor judgment of others.

9. Controlled access is great (3 comments).

   The AWMA access program was developed to provide all users the opportunity for a quality recreation experience and balance the needs of motorized and non-motorized users. It was modeled on the access program the previous ranch owners had used to allow public access. The Department solicited public input on the level of access, including motorized, that would be acceptable and provide for quality experiences for all users on the WMA. Comments received by AWMA staff and those submitted on the AWMA User Survey each year indicate the public is very happy with, and strongly supports, the access program in its current form. Each year, AWMA staff evaluates conflicts and comments received on the access program to identify where improvements can be made to address issues.

10. Reduce the number of mule deer hunters (1 comment).

    The AWMA and surrounding area is very popular with mule deer hunters. There is an average minimum of 133 mule deer hunters who use the AWMA each year. Because the Unit 31 side of the WMA is an any buck unit in the general season (Unit 22 is a 2-pt only unit), the majority of deer hunting pressure occurs there. The AWMA already limits the amount of motorized users; there is no limit on the number of non-motorized users. However, few are able or willing to access lands far from Highway 71 or the USFS 085 road on Brownlee Summit.

    In years of favorable environmental (cool and wet; early snow) conditions for hunting, AWMA staff receive few complaints specifically about deer hunting and most hunters are satisfied with their deer hunting experiences. In years of unfavorable (hot and dry) conditions, hunter dissatisfaction rises. The recent past has seen an increase in hotter, dryer conditions during all fall hunting seasons, making it harder for hunters to find and harvest game, decreasing hunter tolerance for other public users in the same area, and increasing hunter dissatisfaction (based on comments received by staff and from the AWMA user survey). Limiting hunter numbers on the WMA would not solve hunter dissatisfaction related to environmental conditions, nor would it be readily enforceable given the amount of access to the AWMA available to walk-on hunters from adjoining public lands. Since the AWMA is only a small part of the larger Units 22 and 31 landscape, to limit mule deer hunters and increase hunter satisfaction would require a change in the type of deer hunting allowed in

these units, most likely from general season to controlled hunt. Such a change is beyond the scope of this plan; however, the AWMA will continue to work with population and enforcement staff to reduce hunter conflicts and address hunter concerns.

11. Limit non-hunters and anglers (1 comment).

    The majority of AWMA users are hunters. On average, a minimum of 820 hunters use the WMA each year compared to 150 non-hunters and anglers. Quite a bit of non-hunter use is also from hunters during non-hunting seasons or from their family members who accompany them during hunting seasons. Currently, there appears to be very little if any conflict between hunters and non-hunters on the AWMA, and limiting an already small user group will have very little overall impact.

    However, hunting and fishing license fees and excise taxes are what pays for operating the AWMA. Users who do not possess Idaho hunting or fishing licenses are essentially reaping the benefits paid for by others. The Department is working to find ways to generate revenue for management from the non-hunting and non-fishing public, including WMA users, so that all who use and benefit from the WMAs contribute funding to their operation.

12. Improve WMAs for non-traditional users (2 comments).

    The AWMA is open to and used by non-traditional users, including sightseers, wildlife viewers, and bird watchers; ATV, horseback, and bicycle riders; and photographers. University student field trips are also hosted each year, as are other public educational events as opportunities arise. Because of the size, location, and primary goals of the AWMA, there are few improvements and public amenities available. Where additions can be made to improve the public's experiences that are affordable and fit into the mission of the AWMA, they are considered for implementation. However, non-traditional users as a whole do not contribute funding for management or improvements on WMAs. Instead they reap the benefits paid for by hunters and anglers. With limited funds available, most operating dollars are spent on improvements that benefit the hunters and anglers who fund AWMA management. If non-traditional users were to contribute funding for the WMA, those funds could be used to construct and maintain specific improvements for their benefit and fund annual expenses that benefit their interests (i.e.- road maintenance, staffing office hours, etc.).

    There is opportunity for volunteer groups from non-hunting and angling organizations to take on WMA projects that would ultimately benefit their interests. The development of wildlife viewing signage, viewing areas and birding trails are all examples of projects groups could fund, implement and maintain. The AWMA staff works with volunteers annually and are willing to work with new volunteers to improve wildlife viewing, create educational activities and other non-consumptive user opportunities.

13. Eliminate hunter survey cards (1 comment).

    AWMA hunter survey cards are an important part of the AWMA access management program. From them, data is collected on the numbers and kinds of WMA users, time spent on activities, numbers of animals harvested, hunting effort for harvest, and input on satisfaction and/or suggestions for improvement. Surveys are given out with each key checkout, and are available at many popular entry points for walk-on users. Although a few hunters view these surveys cards as a nuisance to fill out and return, the information collected from them is important for evaluating and improving the overall AWMA management program, for use in statewide management programs, and for providing use information to local and state governing bodies.

14. Research impacts of motorized access (1 comment).

    There is already quite a bit of research available on the impacts of motorized access on wildlife and habitat. Specific research papers are available at college and university libraries, and more articles on road and vehicle impacts are appearing in general circulation magazines like "*Field and Stream*" and the Rocky Mountain Elk Foundation's "*Bugle*" magazine. In general, impacts include changes to wildlife use of habitat; wildlife avoidance of roads and areas in association with roads; loss of critical energy reserves in wintering big game; increased mortality; decreased reproductive success; changes in species composition in the landscape; increased harvest success; and the increased presence and spread of noxious weeds, litter, and wildfire. Basically, not a lot of good things for wildlife are associated with the presence of roads and vehicles. That is part of why the AWMA has a motorized access management plan, to help limit the number of negative impacts to wildlife from roads and vehicles while still providing for quality public experiences. It is not necessary for the Department to conduct additional research into motorized access impacts at this time given already available knowledge.

15. Punish rule breakers swiftly; more warden patrols (2 comments).

    Few would argue with these statements. The timeline for punishing rule breakers is dictated by the legal process which is beyond the scope of this management plan. It would be highly desirable to have more game warden presence on the AMWA during the peak use times; however, there are just not enough wardens to be everywhere they are needed during hunting and fishing seasons. The Department would need additional funding in order to hire more wardens and developing that funding is beyond the scope of this plan. Staff maintains a presence on the AWMA during peak use times to help detour and/or deal with violations; however, they too are not always available when problems occur, nor are they able spend all of their time monitoring for violations.

16. Add more WMAs and make them larger (2 comments).

    Wildlife Management Areas are popular with the public and the public desires more lands managed for quality public wildlife-based recreation, especially close to large urban areas.

The Department has a program for land acquisition, and funds are used from it to add lands to WMAs. Addressing this issue of acquiring or expanding WMAs in general is currently beyond the scope of this plan.

Other Issues

1. Use more volunteers (1 comment).

   The AWMA already makes extensive use of volunteers each year. Staff hosts three project weekends each spring, each attended by 5-16 volunteers, and volunteers assist with fall office hours. Staff also uses groups requesting volunteer projects such as boy scouts, local high school classes, college students, wildlife conservation organizations, and AmeriCorps. Volunteer projects have included fence, road, and infrastructure maintenance, noxious weed control, shrub plantings, a "bioblitz" survey, and conifer removal to enhance aspen patches. Utilizing volunteers requires time and funds to prepare for, train, and host volunteers, so some limits have to be applied to the number, kinds, and times of volunteer projects that occur each year. However, every effort is made to use volunteers, even on short notice because of the mutual benefits to the AWMA and volunteers from these projects.

2. Broaden the non-hunting audience about WMAs (1 comment).

   This is being done at both a local, regional, and statewide level. Locally, AWMA staff use volunteer opportunities, community involvement, and one on one interaction to inform the public about the AWMA specifically and WMAs in general. Regionally and statewide, information is available about Idaho's WMAs. There is always a need and desire for more information about WMAs and the benefits they bring to Idaho and the public, and the Department takes advantage of these opportunities whenever possible to showcase the benefits and opportunities for wildlife-based recreation WMAs provide.

Final draft WMA plans were made available to the public on the Department website for review and comment during May-June 2014. Their availability was advertised on the Department website, by mailings, and news releases to inform Idaho's citizens of this opportunity to provide additional comment before plans are submitted to the Director for approval and adoption.

The majority of comments received on-line indicated the public strongly agreed or agreed with the AWMA management plan priorities and plan as written (7). One commenter disagreed with both but gave no specific comments on what part(s) of the priorities or plan was disagreeable. One commenter was neutral on both. Specific comments received about the plan were: no grazing and WMA access was easy to use. Concern was expressed about low deer numbers and sign during the general deer hunting season and if there was a plan to increase deer numbers.

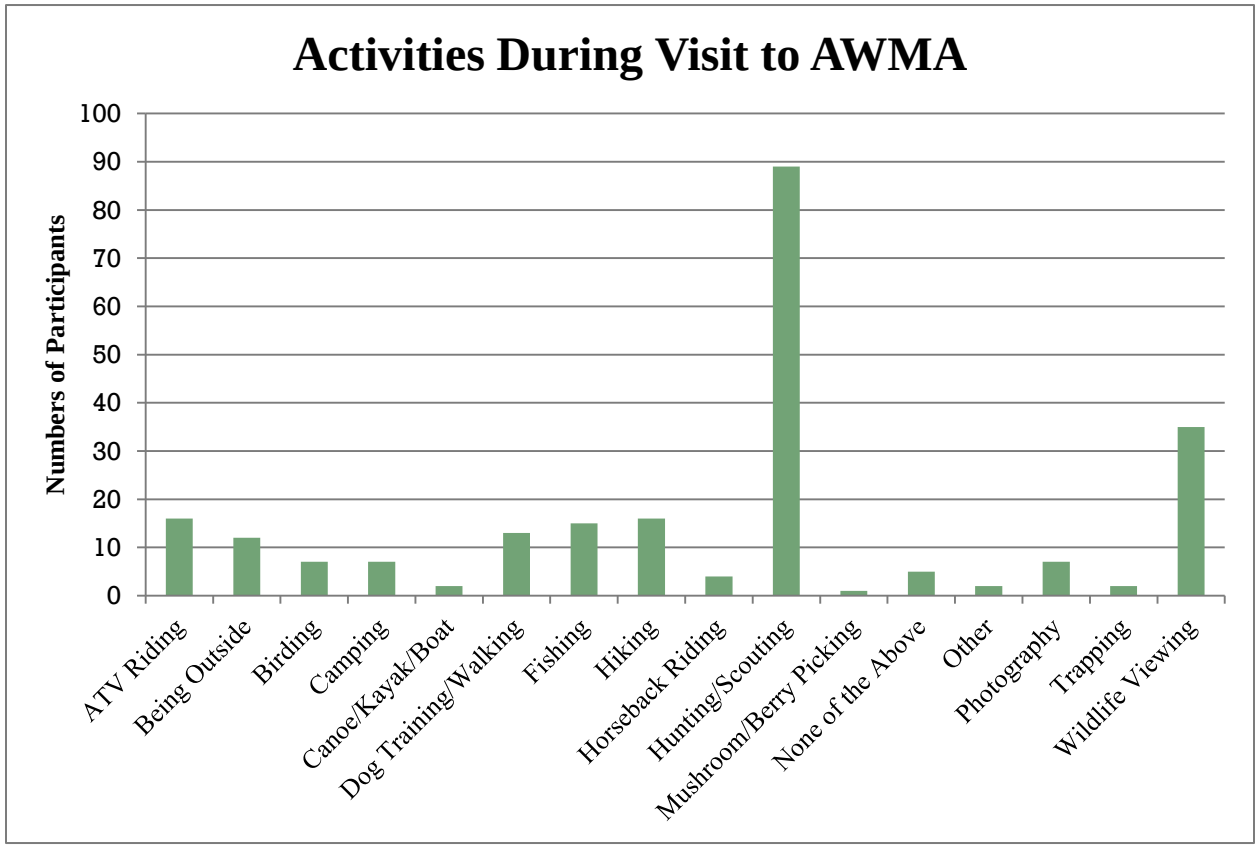
An additional written comment was received that gave input general to all WMA plans and specific to the AWMA plan. In summary, general comments were:

- WMA plans should: prioritize management of noxious weeds and OHV use, road density and road locations; expand non-consumptive wildlife opportunities for the public; and utilize best management practices for activities beyond Department control (i.e.- mining; energy infrastructure development).
- Additional emphasis should be placed on management for: threatened and endangered species; environmental education; WMA expansion to protect critical habitat; activities on adjacent public and private lands that impact or influence WMAs; motorized travel on adjacent lands; livestock grazing standards to protect habitat quality; prohibit the use of sheep and goats for grazing or as pack animals on WMAs with bighorn sheep; pack stock use; lead free ammunition and tackle use; and preventing trapping conflicts with other user groups.

Comments specific to the AMWA were that best management practices successfully used on other mining project sites should be adopted by the Department for any mineral extraction or development activities that may occur in the Grade Creek area of the AWMA.

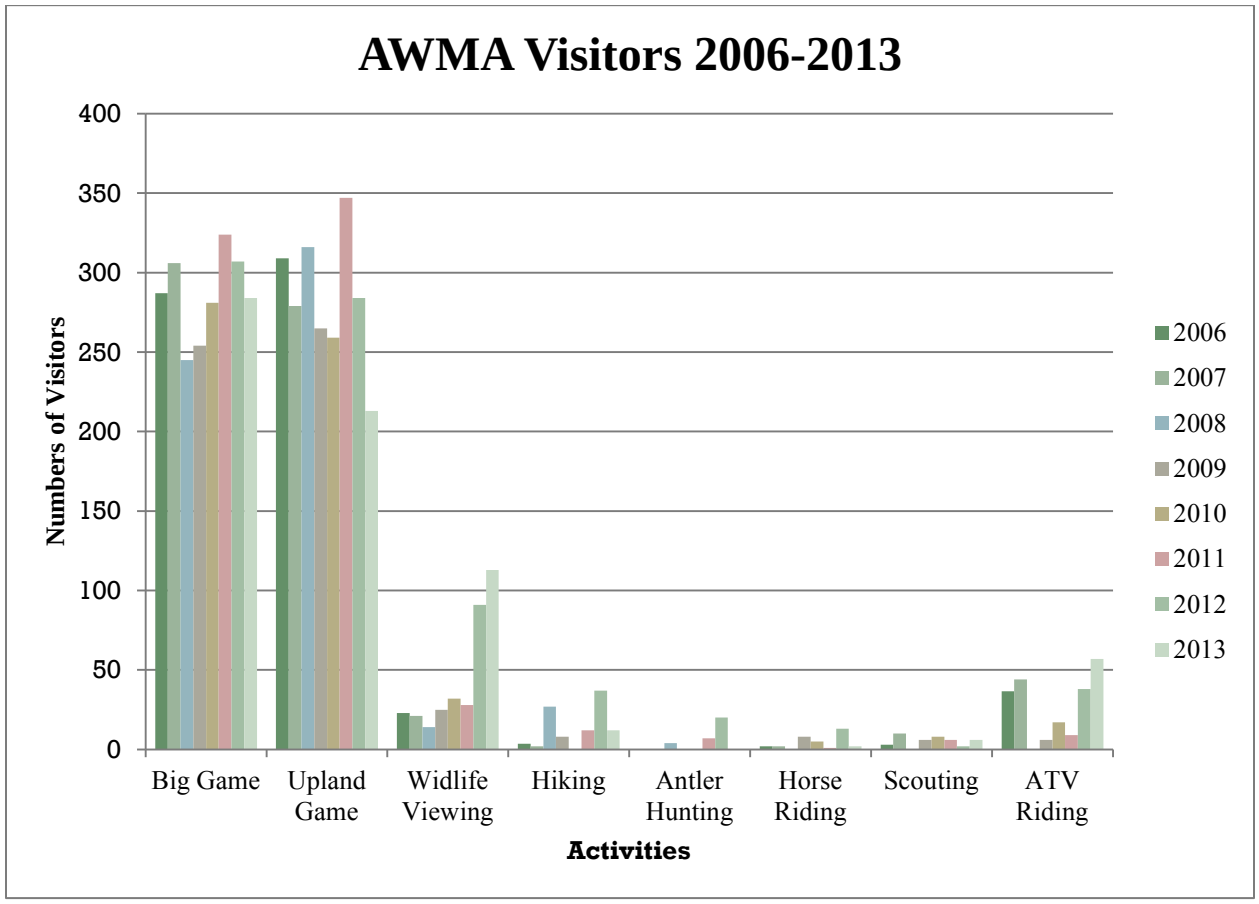
Visitor Use Data

The following participation data was collected during online and on-site surveys of AWMA users during 2012. Survey participants were asked "What are the primary WMA activities your group is participating in today?," and were given the option to choose up to three responses. The following graph depicts responses to this question.



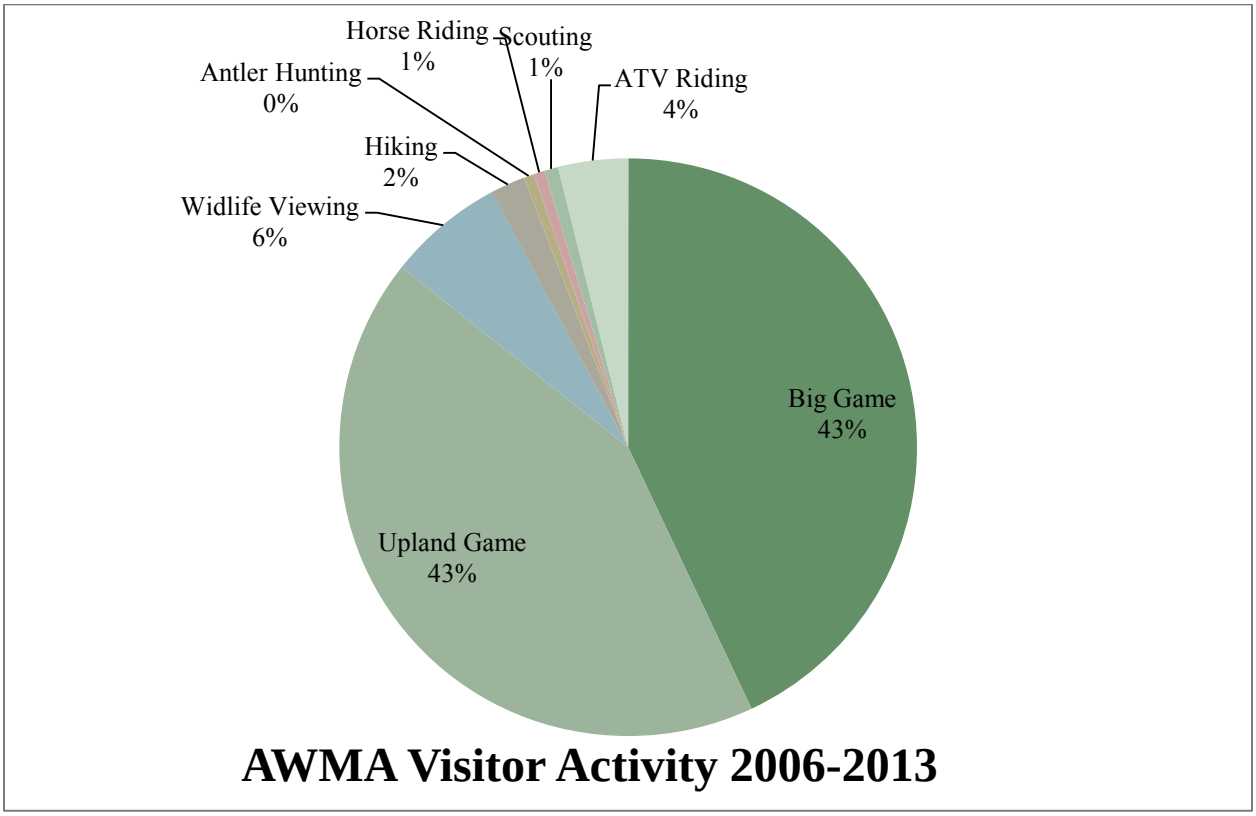
AWMA staff also use the AWMA Visitor Survey to assess visitor use of the WMA. Surveys are given to each visitor who checks out a gate key, and they are also available in survey boxes at each of the main entrance gates on the AWMA for walk-on visitors.

The following graph shows the minimum numbers of AWMA visitors from 2006-2013. These are minimum numbers because not every visitor returns a completed survey with their gate key, and many walk-on visitors do not voluntarily fill out surveys.



The majority of visitor use on the AWMA occurs during the fall big game and upland game hunting seasons each year. Variability between years in visitor numbers is often a reflection of weather, game numbers, and hunter success rates. Changes in economic conditions (fuel costs, employment security) also contribute to the variability in hunter numbers.

The following graph shows the percentage of AWMA visitors by the type of activies they reported participating in from the years 2006 through 2013.



In this graph, antler hunters, wildlife viewers, and hikers are known to be under-represented, as few surveys are received from walk-on participants in these activities. Often these visitors enter the AWMA at locations other than main access points, so their use is not captured by current survey methods. Most other visitors participating in the remaining activities check out a gate key and receive a survey before beginning their activity.

V. 2006-2013 ACCOMPLISHMENTS

Since the Cecil D. Andrus WMA plan was revised in 2006, these significant accomplishments beyond the normal regular annual activities have occurred relative to the Goals and Objectives of the 2000 plan.

Goal: Improve Habitat.

Objective: Removed fish migration barrier on Middle Fork Brownlee Creek.

Accomplishment:

- In 2007, an eight-foot diameter culvert was installed on the Middle Fork to replace an existing smaller culvert that had created the fish migration barrier on its downstream side. A second existing culvert was removed approximately 100 yards further upstream that was restricting channel width and creating erosion problems.

Objective: Collect additional baseline survey data for long term habitat monitoring.

Accomplishment:

- A statewide WMA vegetation monitoring program was developed in 2010 and the AWMA was the first WMA inventoried (2011). Information was collected on over 200 plot points in uplands and riparian areas. An AWMA-wide range vegetation assessment was also conducted by NRCS to supplement the statewide monitoring program.

Goal: Manage Infrastructure.

Objective: Remove manager's residence from flood plain; replace with a permanent structure.

Accomplishment:

- The trailer serving as the manager's house was replaced with a permanent house located outside of the Brownlee Creek flood plain. The new house is significantly more energy efficient and was constructed with defensible space against wildfire around it.

Objective: Stabilize eroding creek banks that threaten to undermine the office corral and Bugle Basin barn.

Accomplishment:

- Creek bank stabilization work was completed in 2011 at the barn and corral to stabilize bank erosion from the June 2010 high water event.

Goal: Provide educational opportunities to the public about the Department, AWMA, and habitat program.

Objective: Provide opportunities for student field trips on the AWMA.

Accomplishment:

- Andrus WMA staff provided one to two field trip experiences for University of Idaho range program classes at the AWMA each year. Topics covered include plant identification, rangeland ecology, noxious weed impacts, landscape scale issues, wildlife issues, and Department goals and management priorities.

Goal: Provide volunteer opportunities for the public to learn about wildlife, habitat, and the Department's mission.

Objective: Work with volunteers to accomplish AWMA projects while providing educational opportunities on wildlife and habitat.

Accomplishment:

- Each year, 1-3 volunteer project weekends were held on the AWMA and additional volunteer projects were hosted as opportunities allowed. In 2011 and 2013, the AMWA staff hosted AmeriCorps volunteer groups for one month each year. Projects accomplished by all volunteers include fence and water development maintenance, fence removal, noxious weed control, road and infrastructure maintenance, and riparian plantings and restoration activities. Both structured and informal educational presentations about rangeland ecology, local history and wildlife are made to volunteers during these projects.

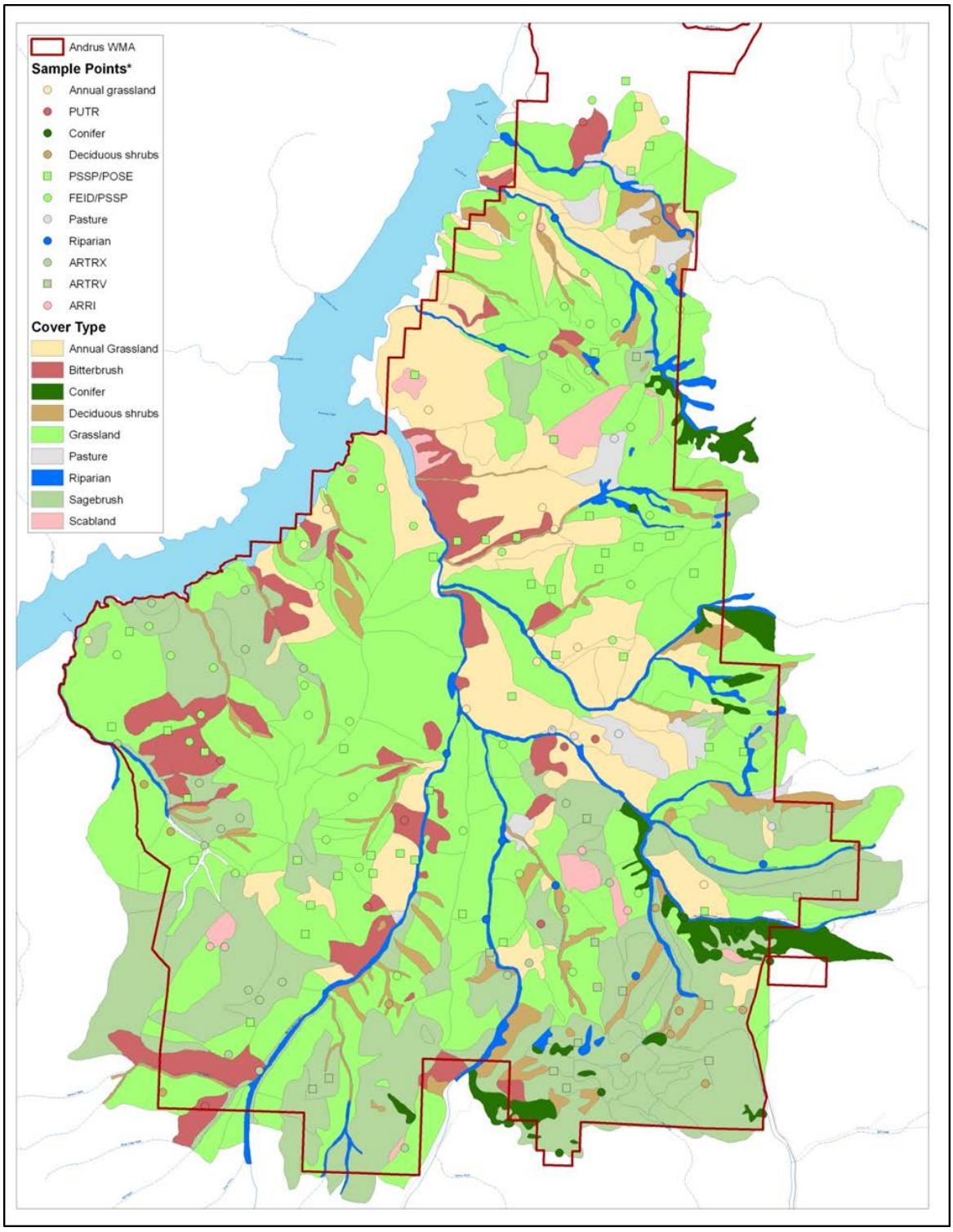
VI. VEGETATION

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

Common Name	Scientific Name	Common Name	Scientific Name
Riparian		***Forbs (cont.)***	
Thinleaf alder	*Alnus incana*	Buckwheat	*Eriogonum* spp.
White alder	*Alnus rhombifolia*	Sunflower	*Helianthus annuus*
Water birch	*Betula occidentalis*	Lomatium	*Lomatium* spp.
Redosier dogwood	*Cornus sericea*	Lupine	*Lupinus* spp.
Syringa	*Philadelphus lewisii*	Brown's peony	*Paeonia brownii*
Black cottonwood	*Populus balsamifera* ssp. *trichocarpa*	Penstemon	*Penstemon* spp.
Upland Trees		***Grasses***	
Douglas-fir	*Peudotsuga menziesii*	Crested wheatgrass	*Agropyron cristatum*
Ponderosa pine	*Pinus ponderosa*	Idaho fescue	*Festuca idahoensis*
Quaking aspen	*Populus tremuloides*	Basin wild rye	*Leymus cinereus*
Shrubs		Sandberg's bluegrass	*Poa secunda*
Big sagebrush	*Artemesia tridentata*	Bluebunch wheatgrass	*Pseudoroegneriaspicata*
Black hawthorn	*Crataegus douglasii*	Intermediate wheatgrass	*Thinopyrum intermedium*
Rabbitbrush	*Ericameria* spp.	***Noxious and Non-Native***	
Mallow ninebark	*Physocarpus malvaceus*	Cheatgrass	*Bromus tectorum*
Bitterbrush	*Purshia tridentata*	Whitetop	*Cardaria draba*
Woods' rose	*Rosa woodsii*	Spotted knapweed	*Centaurea stoebe* ssp. *biebersteinii*
Common snowberry	*Symphoricarpos albus*	Rush skeletonweed	*Chondrilla juncea*
Forbs		Poison hemlock	*Conium maculatum*
Yarrow	*Achillea millefolium*	Scotch thistle	*Onopordum acanthium*
Milkvetch	*Astragalus* spp.	Medusahead	*Taeniatherum caput-medusae*
Arrowleaf balsamroot	*Balsamorhiza sagittata*	Punctureveine	*Tribulus terrestris*
Larkspur	*Delphinium* spp.		

The following vegetation types and acres are on the Cecil D. Andrus WMA (from 2010 vegetation survey reported in: *Implementation of a Long-term Habitat Monitoring Program at Cecil D. Andrus WMA. IDFG 2012*):

Vegetation Type	Number of Acres	Percent of Total
Sagebrush-Steppe	7,040	27.6
Deciduous Shrubland	2,209	8.6
Perennial Grassland	12,010	47.0
Annual Grassland	1,933	7.6
Agriculture	6	<0.1
Forest	828	3.2
Riparian	1,518	5.9



Andrus WMA cover type map identified from 2011 vegetation sampling points.

VII. WILDLIFE AND FISH SPECIES LIST

The habitat quality and diversity of the AWMA supports a wide variety of mammals, birds, amphibians, reptiles and fish. A 1996 wildlife inventory found at least 108 vertebrate species living on the WMA.

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

Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Mammals		***Birds***	
Coyote	*Canis latrans*	Chukar	*Alectoris chukar*
Gray wolf	*Canus lupus*	Golden eagle	*Aquila chrysaetos*
Elk	*Cervus elaphus*	Ruffed grouse	*Bonasa umbellus*
Mountain lion	*Felis concolor*	Great horned owl	*Bubo virginianus*
Bobcat	*Felis rufus*	California quail	*Callipepla californicus*
Striped skunk	*Mephitis mephitis*	Northern harrier	*Circus cyaneus*
Long-tailed weasel	*Mustela frenata*	American Crow	*Corvus brachyrhynchos*
Mule deer	*Odocoileus hemionus*	Blue grouse	*Dendragapus obscurus*
Bighorn sheep	*Ovis Canadensis*	American kestrel	*Falco sparverius*
Raccoon	*Procyon lotor*	Bald eagle	*Haliaeetus leucocephalus*
Columbian ground squirrel	*Spermophilus columbianus*	Bullock's oriole	*Icterus bullockii*
Red squirrel	*Tamiasciurus hudsonicus*	Wild turkey	*Meleagris gallopavo-merriami*
Northern pocket gopher	*Thomomys talpoides*	Hungarian partridge	*Perdix perdix*
Black bear	*Ursus major*	Rufous hummingbird	*Selasphorus rufus*
Amphibians and Reptiles		Mountain bluebird	*Sialia currucoides*
Long toed salamander	*Ambystoma macrodactylum*	American robin	*Turdus migratorius*
Rubber boa	*Charina bottae*	Sharp-tailed grouse	*Tympanuchus phasianellus*
Western rattlesnake	*Crotalus viridis*	Western kingbird	*Tyrannus verticalis*
Fish		Mourning dove	*Zenaida macroura*
Redband rainbow trout	*Oncorhynchus mykiss gairdneri*		

Key Population Summaries and Surveys

Elk
The AWMA is located within the Weiser (Unit 22) and Brownlee (Unit 31) elk management zones. Approximately 130 elk winter on the Unit 31 side of the AWMA on average and 600 elk on the Unit 22 side. Wintering elk numbers can vary dramatically during extremely harsh or mild winters. Over 1500 elk have been observed on the AWMA during years of heavy to extreme snowfall, and in very mild winters, elk may remain at higher elevations and only intermittently use the AWMA

The number of elk on the AWMA during summer months is much lower than winter numbers, but no survey system is in place to document total numbers. An estimate based on annual summer observations by AWMA personnel is approximately 20 elk summer on the Unit 31 side and 15 on the Unit 22 side.

Harvest of elk reported by AWMA hunters each year for general and controlled hunts averages 15.

Mule Deer
The AWMA is located entirely within the Weiser-McCall Population Management Unit 2 (GMUs 22, 23, 24, 31, 32, 32A). Approximately 1,600 mule deer winter on the WMA on average. The AWMA is one of several areas statewide that annually participates in the mule deer fawn winter survival study. Winter survival of mule deer and especially fawns on the AWMA is correlated with summer forage production, body condition, and winter severity. Wintering mule deer numbers can vary dramatically during extremely harsh or mild winters. Over 2000 mule deer have been observed on the AWMA during years of heavy to extreme snowfall. In very mild winters, especially the 2012-2013 and 2013-14 winters, very few mule deer were observed on the AWMA until March when green up occurred and mule deer moved down from higher elevations to utilize it.

The number of mule deer on the AWMA during summer months is much lower than winter numbers, but no survey system is in place to document total numbers.

Harvest of mule deer reported by AWMA hunters each year for general and controlled hunts averages 30. Weather conditions during the general hunting season can result in high variability in hunter success. Seasons with hot, dry weather conditions and little to no precipitation usually result in poor hunting conditions and lower hunter harvest. Seasons with moister conditions and cooler temperatures usually see higher hunter harvest.

Black Bear
The AWMA is located within black bear management Data Analysis Unit 1H. The goal for this DAU is to continue to maintain the percentage of males ≥5 years of age in the harvest at or above 35%; maintain percent females in the harvest at or below 30%; and to maintain a 30% or higher hunter success rate (3-yr average success rate is 37%). Fall permits were increased from

75 to 100 in hunt area 22 beginning with the 2011 season to target an increase in male black bear harvest.

Harvest of black bears reported each year by AWMA hunters averages three.

Chukar and Hungarian Partridge

Chukar and Hungarian partridge are found throughout the AWMA. Their annual numbers are strongly correlated with spring weather conditions during the nesting and early brood-rearing period and with summer drought conditions. From 1984 through 2010, an annual aerial survey was conducted between late August and early September along Brownlee Reservoir to census populations (chukars and partridge collectively). Populations have ranged from a low of 17.6 to a high of 221 birds per square mile. That annual flight was discontinued in 2011. No other survey method is currently in use to census populations annually.

Harvest of chukar and Hungarian partridge reported each year by AWMA hunters averages 722. Not all hunters report harvest, especially those who do not use the key checkout system to access the AWMA.

Forest Grouse

Dusky and ruffed grouse are found throughout the AWMA. Dusky grouse are most often found at higher elevation shrub and conifer patches. Ruffed grouse are most frequently found in the major creeks within the WMA. There is currently no census method used to estimate AWMA populations.

Harvest of forest grouse reported by AWMA hunters each year averages 80.

Turkey

Turkeys are found on the AWMA throughout the year. The majority of birds are on the WMA during fall and winter months (Sep – Mar). Winter numbers have averaged approximately 35-50 birds the last several years. Wintering birds disperse from the AWMA to higher elevation forest lands around Sturgill Peak, Hitt Mountain, and Cuddy Mountain. Summer turkey numbers on the AWMA are approximately 6-10 hens and their broods. Brood size is often correlated with spring weather conditions during the nesting and brood rearing periods and summer drought.

Releases of turkeys from north Idaho were made on the AWMA in 2007 and 2009. A total of 389 turkeys were released in five separate releases to augment the existing population. To date, it appears to have had a limited effect on increasing turkey numbers wintering on the AWMA.

Harvest of turkey reported by AWMA hunters each year averages five.

Sage-grouse and Sharp-tailed Grouse

Both sage- and sharp-tailed grouse occur on the AWMA, but only incidentally. Several wintering sharp-tailed grouse have been observed in the Camp Creek and Long Gulch area in 2010 and 2011, and above the AWMA Headquarters in September 2012. Sage-grouse can be encountered in the Red Licks pasture area of the West Fork of Brownlee Creek during the fall months. These

grouse appear to be passing through the WMA while migrating to winter ranges. No data exists on where these birds are coming from or going to.

VIII. OTHER MANAGEMENT ACTIVITIES

Access Program

Overview

Access management is necessary to ensure that hunting and other wildlife-based recreational uses of the AWMA are compatible with the Department's primary mission to "*preserve, perpetuate and protect*" wildlife within the state of Idaho to provide "*continued supplies of such wildlife for hunting, fishing and trapping*." Access management is also necessary to ensure that the AWMA's mission to provide winter range for big game and year-round upland game bird habitat, optimize production of wildlife, and provide high-quality hunting and other wildlife-based recreation opportunities are met.

An access management plan benefits the public in that it protects resources for future use and permits recreational opportunity with minimal conflicts between users. Every attempt has been made to address current and future issues; however, additional modifications to the access plan may be needed to protect wildlife resources, the quality of recreational experience, and user safety.

History

Prior to its donation to the Department, the owners of the Hillman Ranch provided hunting opportunities for approximately 300-400 hunters annually. A check-in/check-out access system was implemented in 1988 to provide hunting opportunities with controlled entry, reduce conflicts between upland game and big game hunters, and control hunter distribution among drainages. The program was successful in providing recreational opportunities to the public with few complaints, though there were occasional problems with property damage and hunter trespass from adjacent USFS lands.

Since the Department acquired the property in 1993, the number of hunters and associated motorized access to the AWMA has more than doubled and currently ranges in excess of 800-1,000 persons each year. Because the previous access system was popular with the public and supported in public meetings, it was tested by the Department during the 1994-1997 hunting seasons and has continued under Department ownership. Some modifications were made to the original system to address the increased demands in motorized access.

Purpose

The Access Management Plan is primarily intended to allow AWMA staff to control and monitor the level of motorized vehicle use on the WMA along with other activities. Control of motorized vehicle access is important for the following reasons:

1. Motorized traffic can be regulated to levels, locations, and times it will not cause unacceptable disturbances and other effects to wildlife. Benefits from regulated traffic include:
    a. Protecting fawning and calving areas.

b. Preventing overharvest of mature males and negative impacts to big game herd sex ratios.
c. Improving security cover for wildlife, especially big game, in roaded areas.
d. Protecting big game from disturbance while on critical winter range.

2. Hunters and other users can be evenly distributed throughout the AWMA. This results in greater safety during hunting seasons and higher levels of hunter/visitor satisfaction due to fewer contacts and conflicts between users.

3. Motorized vehicles can be restricted during times of wet weather when roads are highly susceptible to damage.

Motor Vehicle Access

All motorized access onto the AWMA is controlled via locked gates. Motorized access behind gates will be permitted only on designated open roads and after checking in and obtaining a gate key at the AWMA Headquarters. Each gate has a limited number of keys available, on a first-come, first-serve basis. A map showing the designated open roads is available at the AWMA Headquarters and on the Department website. Information on daily road closures due to weather conditions can be obtained by calling or visiting the AWMA Headquarters.

Internal AWMA road closures have been implemented to provide big game security areas and to reduce conflicts between motorized and non-motorized users, annual road maintenance costs, noxious weed invasion threats, and erosion.

Non-Motorized Access

Non-motorized access (foot, horseback, mountain bike, etc.) is open year-round. Mountain bikes and other non-motorized, wheeled vehicles are restricted to existing roads only. No off-road travel is permitted with wheeled vehicles.

Seasonal Closures and Road Restrictions

The AWMA will be closed to public motorized travel from January 1 through April 30 each year to protect wintering big game and to reduce road damage. Additional motorized closures will occur during periods of wet weather when roads are highly susceptible to damage. U.S. Forest Service Road 085 that runs through the southern portion of the AWMA is exempt from this closure.

Office Hours

From September 1 through December 31, office hours are staffed daily at the AWMA Headquarters (closed Thanksgiving and Christmas days). Office hours are also staffed daily from May 1 through May 25 for spring hunting seasons. Some changes to scheduled office hours may occur between years to address visitor and management needs; contact the AWMA Headquarters to obtain current office hour information.

Key Check-out
Keys are available on a first-come, first-serve basis, and only one key per party may be checked out. Keys may be reserved in advance, by contacting the AWMA Headquarters starting September 1, for the September through December hunting season each year. Key reservations are on a first-come, first-serve basis.

Maps and Information
A map of the AWMA identifying the road access system is available at the AWMA Headquarters. Additional Department information, including hunting and fishing regulations, along with other related interpretive materials, are available at the AWMA Headquarters.

Safety Zone
A "No Shooting" Safety Zone has been established that encompasses approximately 200 acres around the AWMA Headquarters, residences, buildings and facilities, and livestock pastures associated with these facilities in order to protect people, equipment, and working livestock maintained there. The Safety Zone extends from approximately mile marker 8 to mile marker 9.5 along State Highway 71, and the perimeter is signed. A map of the "No-Shooting" Safety Zone is available at the AWMA Headquarters.

Camping
Camping on the AWMA is allowed only in pull out areas adjacent to USFS Road 085 and at the access area at the mouth of Brownlee Creek. Camping on Department-owned and managed lands in these authorized areas is restricted to 10 days in any 30-day period. No camping or overnight parking of motorized vehicles is permitted behind any WMA gates. This is to reduce user conflicts and prevent shifts in wildlife use on the AWMA in response to camping and related motorized activities.

Campfires will be prohibited under certain weather conditions. All authorized camping is primitive, and no garbage or other services are provided.

Livestock Grazing Program

Domestic livestock grazing on the AWMA will be done in accordance with the terms and conditions of the IDL Conservation Lease #M-50004, the AWMA Grazing Management Plan, the AWMA Grazing Agreement, the AWMA Annual Operation Plan, and the BLM MOU (2013).

The AWMA is composed primarily of intermingled Department and IDL lands, and limited USFS and BLM lands. When the AWMA was acquired, the AUMs associated with Department lands were reserved for wildlife. Leases associated with the IDL lands remain in effect, and livestock grazing continues to remain a part of the AWMA activities. In 2001, the State Endowment land use previously authorized under four grazing leases was reclassified for wildlife habitat and grazing use, and leased to the Department under Miscellaneous Lease #M-5040. In 2011, the Miscellaneous Lease was reclassified as IDL Conservation Lease #M50004 and issued to the Department for a term of 20 years. U.S. Forest Service permits

associated with the on/off allotments within the AWMA are managed through the Brownlee CRMP and are grazed as part of the AWMA grazing system. The majority of BLM lands lie in the Duke's Creek Grazing Exclosure; the remaining BLM lands are grazed within the AWMA grazing system.

Andrus WMA Livestock Grazing System Summary

The AWMA is divided into 20 pastures, and with the exception of the Duke's Creek Grazing Exclosure, all are grazed annually. Livestock graze one half of the AWMA in the spring and the other half in the fall, and utilize the USFS Dukes-Heath C&H Allotment adjacent to the AWMA during summer months. Grazing is rotated annually between the north and south halves of the AWMA, which provides a growing season of rest from livestock use to one half of the WMA every year.

Individual pastures are managed for moderate utilization by livestock. Low elevation pastures are grazed at the beginning of each spring grazing season, and livestock are moved to higher elevation pastures as the season progresses. In the fall, high-elevation pastures adjacent to the USFS boundary are grazed first, ending the season at low-elevation pastures. Livestock spend up to 14 days in each pasture during the spring grazing period and up to 10 days in each during the fall grazing period. Livestock are actively monitored and managed a minimum of five days per week by a range rider.

Noxious Weed Control Program

The following noxious weed species are found on the AWMA:

- Field bindweed (*Convulvulus arvensis*),
- Hoary cress or whitetop (*Cardaria draba*),
- Jointed goatgrass (*Aegilops cylindrica*),
- Poison hemlock (*Conium maculatum*),
- Spotted knapweed (*Centaurea stoebe*),
- Puncturevine (*Tribulus terrestris*),
- Canada thistle (*Cirsium arvense*),
- Scotch thistle (*Onopordum acanthium*),
- Dalmatian toadflax (*Linaria genistifolia* ssp. *dalmatica*),
- Yellow toadflax (*Linaria vulgaris*),
- Rush skeletonweed (*Chondrilla juncea*)
- Diffuse knapweed (*Centaurea diffusa*)
- Yellow star thistle (*Centaurea solstitialis*) (detected in 2009)

Upon acquisition of the AWMA, the Department immediately began an aggressive noxious weed control program comprised of integrated pest management techniques. Management and monitoring actions regarding noxious weeds reflect the Department's desire to prevent the establishment and spread of new noxious weeds, to contain and reduce the acreage dominated by

established noxious weeds, to return plant communities invaded by noxious weeds to desirable species, and to test and monitor selected treatments of noxious weeds.

The Department works in cooperation with adjacent landowners and other agencies as part of its noxious weed control program, including the IDL, the Washington County Weed Department, the Lower Weiser River Cooperative Weed Management Area , Idaho Power Company, the BLM Four Rivers Field District, and USFS Payette National Forest.

Program Objectives

1. Prevent the establishment of new invaders by immediately eradicating new infestations and minimize soil disturbances and other habitat alterations favorable to noxious weed invasion.
2. Control established noxious weed expansion using all appropriate and effective methods.
3. Map and monitor noxious weed abundance/distribution, treated areas, and the effect of control activities.
4. Coordinate control activities with neighbors and adjacent land management agencies to pool resources and more effectively develop long-term control actions.
5. Establish native or desirable non-native vegetation in treated and disturbed areas.

Current Control Methods

Biological
The following biological control (bio-control) agents have been released on the AWMA:

- *Larinus minutus* (lesser knapweed flower weevil), *Larinus obtusus* (blunt knapweed flower weevil), *Cyphocleonus achates* (knapweed root weevil), and *Bangasternus fausti* (broad-nosed seedhead weevil) for spotted knapweed.
- *Urophora cardui* (gall flies), *Ceutorhynchus litura* (stem-mining weevils), and *Cassida rubiginosa* (defoliating beetles) for Canada thistle.
- *Cystiphora schmidti* (gall midge), *Eriophyes chondrillae* (gall mite), and *Puccinai chondrillina* (rust fungus) for rush skeletonweed.

Chemical
Herbicides have been the primary method used to control noxious weeds on the AWMA. Restricted-use pesticides are used minimally.

Land Use Practices
A variety of land use practices are used to address noxious weed control needs:

Mechanical
Mowing and tillage are used for weed control; however, their application is limited due to steep terrain. Only a small portion of the AWMA has been tilled, approximately six acres. Kochia (*Bassia scoparia*) has been the primary weed problem in tilled areas, and herbicide control is

also required. Additionally, hand pulling, cutting, and digging have been used to remove isolated or minor infestations of weeds in sensitive areas.

Domestic Livestock Grazing
The current grazing system is designed to minimize the creation of disturbed areas and favor native vegetation. A livestock quarantine clause addressing cattle shipments from areas of known noxious weed infestations is also in place to prevent new infestations. Targeted livestock grazing for weed control will be incorporated whenever appropriate.

Annual Weed Control Activities
AWMA staff inspects approximately 2,000 acres and treats 100-200 acres of noxious weeds each year. Most control activities take place from April – July and are regulated by weather and plant phenology. Fall control activities are restricted due to time constraints and potential conflicts with hunters in the field. Bio-control agents are released when plant phenology meets insect requirements, primarily early and mid-summer months.

Revegetation in areas of repeated heavy disturbance and cheatgrass/whitetop monocultures will be with desirable non-native species more readily able to establish, maintain, and compete with noxious weeds under heavy use and harsh conditions. Native plant communities spot-treated for noxious weeds are usually able to reestablish from native seedbank sources and will be augmented with native seed as needed.

The AWMA works with the Lower Weiser River Cooperative Weed Management Area (LWRCWMA) on noxious weed related issues and in the past has hosted weed control projects through the LWRCWMA. Each year, IDL contributes funds for herbicide purchase and control activities.

Weed treatments are Google Earth mapped as part of the application record. Maps will also serve as part of a database for determining effectiveness of control treatments.

Herbicide applications and records of control activities are done in accordance with the legal requirements of Idaho Code Title 22 Chapter 34, and Idaho State Department of Agriculture IDAPA 02.03.03.

All AWMA permanent staff maintain Professional Applicator's licenses for the purchase and application of restricted-use herbicides. Holders of these licenses must acquire certification credits to maintain the license. Workshops offering these credits are attended annually by AWMA staff.

IX. LAND ACQUISITIONS AND AGREEMENTS

Land Acquisitions			
Year	**Name**	**Funds**	**Source**
1993	Cecil D. Andrus WMA	Gift	Richard King Mellon Foundation

Leases			
Year	**Name**	**Funds**	**Source**
2011	Conservation Lease #M500004	License	IDL
2000	Miscellaneous Lease #M5040	License	IDL
1996	Mineral Lease #09140	License	IDL

MOU and Other Agreements		
Year	**Acres**	**Agency**
2013	800	BLM
2013	320	USFS Weiser Allotment EA

X. INFRASTRUCTURE

Structures on the Cecil D. Andrus Wildlife Management Area	
Function	Structure Type
Office	2-story house
Staff Residences	doublewide trailers (2); house (2)
Livestock Handling	horse barns w/ corrals (2)
Storage Facilities	calving shed (1)
Storage Facilities	open-bay hay shed (1)
Storage Facilities	storage/feeder shed w/ corral (1)
Storage Facilities	storage/feeder sheds (3)
Storage Facilities	open-bay shelters (3)
Shop and Parking	open-bay shed w/ machine shop
Livestock Handling	loading chutes w/o corrals (1)
Livestock Handling	loading chutes w/ corrals (2)
Livestock Handling	loading chute complex w/ scale (1)
Storage Facilities	small sheds (2)

Fences on the AWMA	
Fence Type	Miles
Boundary, 4-strand barbed wire, permanent	30
Boundary, 4-strand barbed wire, let-down	1
Pasture Division, 4-strand barbed wire, permanent	70
Pasture Division, 4-strand barbed wire, let-down	.25

Water Developments on the AWMA	
Development Type	Number
Spring development with tank	46
Pond	7

Roads on the AWMA	
Road Type	Miles
Primitive	52

AWMA Water Rights

Number	Type	Basis	Status
69-12A	Water Right - Instream stock water	Decreed	Active
69-17A	Water Right - Instream stock water	Decreed	Active
69-30A	Water Right - Instream stock water	Decreed	Active
69-35	Water Right - Irrigation	Decreed	Active
69-4107	Water Right - Instream stock water	Decreed	Active
69-4111	Water Right - Instream stock water	Decreed	Active
69-10051	Water Right - Instream stock water	Decreed	Active
69-10052	Water Right - Instream stock water	Decreed	Active
69-10053	Water Right - Instream stock water	Decreed	Active
69-10054	Water Right - Instream stock water	Decreed	Active
69-10058	Water Right - Stockwater	Decreed	Active
69-10059	Water Right - Stockwater	Decreed	Active
69-10060	Water Right - Stockwater	Decreed	Active
69-10061	Water Right - Stockwater	Decreed	Active
69-10062	Water Right - Stockwater	Decreed	Active
69-10063	Water Right - Stockwater	Decreed	Active
69-10064	Water Right - Stockwater	Decreed	Active
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69-10071	Water Right - Stockwater	Decreed	Active
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69-10084	Water Right - Stockwater	Decreed	Active
69-10085	Water Right - Stockwater	Decreed	Active
69-10086	Water Right - Stockwater	Decreed	Active
69-10087	Water Right - Stockwater	Decreed	Active
69-10088	Water Right	Decreed	Active
69-10089	Water Right	Decreed	Active

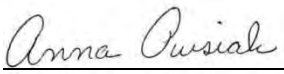
Number	Type	Basis	Status
69-10090	Water Right - Domestic	Decreed	Active
69-10091	Water Right- Domestic	Decreed	Active
69-10092	Water Right- Irrigation	Decreed	Active
69-10094	Water Right - Instream stock water	Decreed	Active
69-10095	Water Right - Instream stock water	Decreed	Active
69-10097	Water Right	Decreed	Active
69-10565	Water Right	Decreed	Active
69-11403B	Water Right	Decreed	Active
69-10093	Water Right	Decreed	Active
69-11501	Water Permit		Active
69-11502	Water Permit		Active

CECIL D. ANDRUS

WILDLIFE MANAGEMENT AREA PLAN

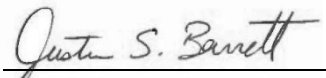
Approval

Submitted by:



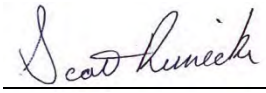
Anna Owsiak, Habitat Biologist

Reviewed by:



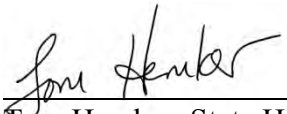
Justin Barrett, Habitat Biologist

Jerry Deal, Regional Habitat Manager



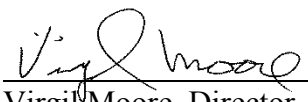
Scott Reinecker, Regional Supervisor

Chris Murphy, Bureau of Wildlife



Tom Hemker, State Habitat Manager

Approved by:



Virgil Moore, Director