BILLINGSLEY CREEK
Wildlife Management Area

Management Plan
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Idaho Department of Fish and Game
Magic Valley Region
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EXECUTIVE SUMMARY

The 284-acre Billingsley Creek Wildlife Management Area (BCWMA) is located in Hagerman Valley near the Snake River and 1.5 miles northeast of the town of Hagerman. The area was purchased from the McCarter Cattle Company, Inc., in September 1963, with Federal Aid to Fisheries (DJ) funds. Federal Aid to Wildlife (PR) funds and Idaho Department of Fish and Game (Department) license monies fund on-going management. The area is traversed by a 1.25-mile section of Billingsley Creek.

The area supports wildlife habitat for upland game, waterfowl, mule deer (Odocoileus hemionus) and other species. Waterfowl hunting is best when surrounding waters freeze. Waterfowl are attracted to the slow flowing and meandering Billingsley Creek. Fishing is good for rainbow and brown trout for those able to float the stream.

The issues generated by the public and from within the Department were determined by the planning team to not be significant enough to warrant a detailed analysis of management alternatives. BCWMA is a small management area that provides hunting, fishing, trapping and other wildlife related activities. The management emphasis at BCWMA will be on providing waterfowl habitat as mitigation for the loss of waterfowl habitat at Hagerman Wildlife Management Area (HWMA). Waterfowl habitat within HWMA was sacrificed to provide spring fishing opportunity.

Management goals for Billingsley Creek Wildlife Management Area, by priority, include:

1. Enhance waterfowl and upland gamebird habitat
2. Maintain winter waterfowl habitat
3. Enhance waterfowl and upland gamebird hunting
4. Provide fishing opportunities
5. Provide wildlife appreciation opportunities

MISSION STATEMENT

The mission of Billingsley Creek Wildlife Management Area is to protect and enhance wildlife populations and habitat, and to provide for compatible uses of these resources by the public. Management emphasis will be on providing waterfowl habitat.

CHAPTER ONE - PLANNING ISSUES AND MANAGEMENT REQUIREMENTS

INTRODUCTION

Billingsley Creek Wildlife Management Area (BCWMA) is located in Hagerman Valley (HV) (southern end of Gooding County) near the Snake River and 1.5 miles northeast of the town of Hagerman (Figure 1). The area is traversed by a 1.25-mile section of Billingsley Creek. Billingsley Creek is a spring fed stream that flows northward below the Snake River canyon rim from its origin, approximately 5 miles southeast of BCWMA, to Lower Salmon Falls Reservoir. Elevations range from 2,950 ft. on the creek, to 3,200 ft. on the canyon rim. Several springs originate along the basaltic rim rock and feed a wetland before entering Billingsley Creek. In 1994, rectangular weirs were placed to measure the water from each spring. Two water rights are attached to this property. Billingsley Creek remains open during the winter because it is fed by 58°F spring water.

BCWMA is located near several Magic Valley[1] communities and provides fishing opportunity. Brown (*Salmo trutta*) and rainbow (*Oncorhynchus mykiss*) trout inhabit the stream. Several commercial fish hatcheries are located upstream from BCWMA. Hatchery fish escape into Billingsley Creek enhancing the fishing. Springs on BCWMA provide spawning habitat for wild trout. The Department stocks approximately 8,000 brown trout in Billingsley Creek annually. Foot access for fishermen is difficult due to the wetland. As a result, most fishermen use a canoe or float tube to traverse the creek.

Access to the downstream segment of BCWMA has recently become an issue. Public access on the lower end had historically been from US Highway 30 by a road that crosses private property. The private property is under new ownership and public access is not presently available through this road. The Department has an access easement to Billingsley Creek, but this easement has never been developed. This access development cost has been estimated at $20,000.00.

The area supports wildlife habitat for upland game, waterfowl and mule deer. Duck hunting is the dominant use when nearby waters freeze. Because this is a small area it can become overcrowded with hunters.

The benefits of creating open water ponds on the area have been discussed for many years. Ponds would provide additional nesting and brood rearing habitat for waterfowl. Ponds would also provide additional hunting opportunities. Removal of cattails by burning or chemicals could create additional habitat and hunting opportunities.

[1] An eight county area in south-central Idaho.

Figure 1. Map of Billingsley Creek Wildlife Management Area, Gooding County, Idaho.

Noxious weeds are controlled to reduce displacement of desirable vegetation and to comply with Idaho state noxious weed law. Control efforts have focused on Canada thistle (Cirsium arvense), Russian knapweed (Centaurea repens), and purple loosestrife (Lythrum salicaria). Loosestrife control has been done in previous years by spraying individual plants with chemicals. In 1996, biological control was conducted with the placement of 500 eggs of root-boring weevils (Hylobius Galerucella spp.). The success of this control effort will be monitored. Biological and chemical control efforts will continue.

The Department pays a fee in lieu of taxes each year. In 1998, $110.12 was paid to Gooding County for the BCWMA property.

PURPOSE OF THE PLAN

The purpose of this plan is to provide background information about BCWMA and to guide management activities and direction. It may be supplemented by specific programmatic plans. Management direction is limited by the constraints of the Federal Aid in Fisheries (DJ) and Federal Aid in Wildlife Restoration Act (PR).

DESIRED FUTURE CONDITION

The desired future condition (DFC) of BCWMA includes the following:

1. A small (284-acre) WMA containing 1.25 miles of Billingsley Creek. Seven springs flow from the cliffs, into Billingsley Creek, providing riparian vegetation interspersed through much of the area. Constructed ponds fed by spring water are available for waterfowl habitat and waterfowl hunting. Billingsley Creek will be characterized by pure water (as much as is possible considering the number of commercial fish hatcheries located upstream from BCWMA). The Department will provide input to other agencies and private fish growers in an effort to improve Billingsley Creek water quality.
2. Soil erosion will be minimized through minimization of soil disturbance, control or elimination of noxious weeds, and maintenance of biologically diverse plant communities.
3. Wildlife populations will be maintained, and when possible, hunting, fishing and trapping recreational opportunity will be provided.
4. Wildlife-associated recreation, that minimizes disturbance, will be provided for present and future generations.

PLANNING PROCESS

The BCWMA plan has been developed under the following 3-step process:

1. **Inventory of baseline resource conditions**

   Five different wildlife habitats exist within BCWMA.

2. **Issue scoping**

   Management issues have been identified through a series of public meetings. Comments from the public have been considered. Input from the Department and other agency personnel has been solicited.

3. **Long-term monitoring of results**

   Monitoring of wildlife populations that occupy BCWMA is an ongoing-process. Monitoring efforts are currently limited by personnel shortages. Utilization data of artificial Canada goose (Branta canadensis) and wood duck (Aix sponsa) nesting structures is needed. Waterfowl brood survey information is difficult to gather, but can be estimated by floating the creek. Human activity is monitored by biologists and conservation officers while performing responsibilities on BCWMA.

ORGANIZATION OF PLAN

This Management Plan includes 4 chapters and supporting appendices.

Chapter One: Includes an introduction to the Plan, and any specific detail on special management constraints existing on the area.

Chapter Two: Provides an overview of the historical management of the area and a detailed description of existing resources.

Chapter Three: Provides Issues identified by the public and the Department.

Chapter Four: Provides the preferred BCWMA management.

MANAGEMENT REQUIREMENTS/AUTHORITIES

Direction from the Commission and Director

The Idaho Fish and Game Commission (Commission) has established and approved general policies for the management of Idaho's wildlife resources (Department Policy Plan 1991-2005). The following are excepts from this plan pertaining to management of Department lands.

> *"Fish and wildlife habitat and populations will be preserved, protected, perpetuated and managed for their intrinsic and ecological values, as well as their direct benefit to man."*
>
> *"Protection and restoration of wildlife habitat will continue to be a top priority in the management program."*
>
> *"The Department will advocate land management practices that protect, restore and enhance fish and wildlife habitat, especially habitats such as wetlands and riparian areas that benefit a wide variety of fish and wildlife species."*

The Department has a responsibility to manage lands it controls for the benefit of Idaho wildlife, and where opportunities exist, to provide for wildlife-associated recreational opportunities. This plan will look at habitat condition in both the long and short-term context.

Requirements Relative to Funding

BCWMA was purchased with Federal Aid in Fisheries Restoration funds at a cost of $60,000.00. Purchase information and legal description are given in Appendix III. On-going management is funded by Federal Aid in Wildlife Restoration and Fish and Game license monies.

The Department general license funds must be used to help meet the mission and policies of the Commission as stated in *Idaho Code* 36-103(b). This code section states: *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.*

Federal and State Law Requirements

Federal funds derived from the United States Fish and Wildlife Service (USFWS) Federal Aid Program have been used, in part, to purchase and manage BCWMA lands.

Other federal and state laws also affect management of BCWMA. 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 water quality standards and guideline are in place on BCWMA lands and waters.

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 state law.

The Department is required by *Idaho Code* 63-602 to pay a Fee-In-Lieu-of-Tax (FILT) payment on lands owned by the Department and meeting certain code requirements. These fees are paid annually to the county of WMA residence.

Restrictions by Deed

Permanent and perpetual easements acquired and given include:

1. Two 40 ft. lanes for stock watering to Billingsley Creek.
2. Public access, varying in width from 30 to 50 ft. from U.S. Highway 30 to BCWMA.
3. A 20 ft. right-of-way for an existing 14 in. water pipeline.
4. A 10 ft. right-of-way for an existing private domestic water line.
5. A 20 ft. right-of-way for operation, maintenance and replacement of an existing private irrigation pump and pipeline.
6. A power line easement toTroutco Hydro Plant along the Highway 30 access.

Regulations

The Department has a published set of regulations governing public use of all Department lands. Regulations cover motor vehicle access, fires, fireworks, dog and firearm use, and other land use activities and recreational opportunities. These regulations are available from the Magic Valley Regional Office in Jerome (208-324-4359) or the Department State Office in Boise (208-334-2920).

LIFE SPAN OF PLAN

The BCWMA Management Plan will provide broad management direction into the future. This plan may be revised and updated, in whole or in part, as necessary to meet resource management objectives consistent with area goals and requirements.

PURPOSE OF WILDLIFE MANAGEMENT AREAS

Background

The Department manages over 360,000 acres of land statewide; of this total about 193,000 acres are owned (about 0.36% of Idaho's total acreage). Most of the remainder are managed under a variety of easements, agreements, and leases with private land owners and other land management agencies. A statewide network of 29 Wildlife Management Areas (WMAs) provide critical habitat for nearly every species of wildlife found in Idaho and supply thousands of recreational use-days annually.

Management Goals

The Department acquires and develops WMAs with the following 4 general goals:

1. Preserve and improve habitat for the production and maintenance of wildlife and fish populations.
2. Provide public hunting and fishing opportunities.
3. Provide non-consumptive wildlife and fish uses.
4. Provide scientific, educational and recreational uses not related to wildlife and fish.

The operation and management direction for all WMA plans are established on a priority basis and conform to these general goal statements.

RELATIONSHIP TO SPECIES MANAGEMENT PLANS

This plan and all other WMA plans provide a mechanism to integrate the habitat management program with the species management plans approved by the Fish and Game Commission. Appropriate management of wildlife habitats under Department control will complement species management plans and should aid in the achievement of desired population goals. It should be recognized, however, that the Department usually does not own or manage all habitats needed by any wildlife species through their annual life cycle. An ecosystem management approach is required to assure all needs are met for wildlife species able to move freely off Department owned and managed lands.

The goals for habitat and population levels for wildlife game species on BCWMA are consistent with the management direction for Game Management Unit 53 in the big game species management plans. Habitat and population goals for the other wildlife species reflect the management direction provided in species management plans for upland game, waterfowl and non-game species.

CHAPTER TWO - EXISTING MANAGEMENT CONDITIONS

HISTORY

BCWMA was purchased from the McCarter Cattle Company, Inc., in September, 1963, at a total cost of $60,000.00. Before being purchased by the Department the property served at different times as a sheep ranch, a dairy and a muskrat farm. A Civilian Conservation Corp (CCC) camp was located across the road from the south boundary of BCWMA. A railroad spur from Bliss to Hagerman was planned, but never completed. A railroad access grade was constructed and is still visible on the east side of BCWMA

PHYSICAL DESCRIPTION

Climate

The average daily maximum temperature is 66.6ºF and minimum is 35.7ºF with extremes at 104ºF and -25ºF for records 1982-1990 (Abramovich et al. 1998). Average annual precipitation is 10.94 in. with most falling in late-winter and early-spring. The frost free growing season is 110-140 days.

Soils

The majority of soils within BCWMA consist of the following 3 classifications (Natural Resource Conservation Service, 1999):

1. The spring areas and drainage ways consist of Fluvaquents-Histic Haplaquolls complexes, 0 to 3 percent slopes. Soil depth is very deep (60" or more). Drainage class is poorly drained. Flooding is frequent, depth to water table is 6-18". Fluvaquent soil profile is sandy loam. The Histic Haplaquolls soil profile is 0-11" black peat, 11-29" loamy fine sand.
2. Rubbleland-Calciorthids complex, 20 to 65 percent slopes. Rubbleland consists of areas that are covered by cobbles, stones, and boulders. It is commonly found at the base of steep slopes or escarpments along major drainage ways. These areas support little or no vegetation. Calciorthids soil consists of loamy fine sand, depth class very deep (60" or more).
3. Jestrick-Starbuck-Kecko very fine sandy loams, 1 to 6 percent slopes. Jestrick typical profile consists of sandy loam 0-29", very pale brown indurated duripan 29-33", basalt at 33". Starbuck is found on convex positions on basalt plains. Typical profile is sandy loam to 18" and then basalt. Kecko is found on concave positions-basalt plains. Typical profile consists of sandy loam, very deep (more than 60").

Geology

BCWMA is part of the Snake River Plain, a high volcanic plateau built by basalt lava flows which were released from cracks in the earth's crust during the last few million years (Meyers Engineering Company 1991). During these events the lava flows cooled on the surface to form a solid crust over the molten lava flow below. Approximately 15,000-30,000 years ago, the Snake River was flooded by the Pleistocene Lake Bonneville at an estimated 15 million cfs flow and an estimated 600 cubic miles of water. Rock and lava material tumbled through the canyon and deposited in slack water areas.

Geographic Location

BCWMA is located in the southern end of Gooding County, 1.5 miles northeast of the town of Hagerman (Fig. 1). Visitors coming from the west can exit Interstate 84 at Bliss and travel south on U.S. Highway 30 to Hagerman and then to BCWMA. Visitors coming from the east on Interstate 84 can take the west Wendell exit and travel the Wendell-Hagerman road to reach BCWMA.

NATURAL RESOURCES

Wildlife

BCWMA provides year-round habitat for mule deer. Security cover is provided by the forested wetlands and uplands. A rare occurrence was the sighting of 2 bull elk (Cervus canadensis) on the management area in 1997.

Upland game species include ring-necked pheasants (Phasianus colchicus), California quail (Lophortyx californicus) and cottontail rabbits (Sylvilagus nuttalli). Gray partridge (Perdix perdix) likely use the shrub steppe above the rim. Mourning dove (Zenaida macroura), a migratory bird species, frequent the area.

Waterfowl are the primary game species hunted at BCWMA. Ducks and Canada geese (Branta canadensis) use the area year-round. Waterfowl are attracted to the slow flowing and meandering Billingsley Creek. Spring water flowing into Billingsley Creek keeps the water open during the winter, attracting large numbers of ducks. Canada geese, mallard (Anas platyrhynchos), Northern pintail (A. acuta), gadwall (A. strepera), American widgeon (A. americana), green-wing teal (A. crecca), and cinnamon teal (A. cyanoptera) are observed on BCWMA at different times of the year.

The Hagerman Valley, including BCWMA, is unique because of significantly elevated winter temperatures. A variety of watchable wildlife such as, red-winged blackbirds (Agelaius phoeniceus), barn owls (Tyto alba), and great blue heron (Ardea herodias) inhabit BCWMA. Raptors, that inhabit BCWMA include red-tailed (Buteo jamaicensis), rough-legged (B. lagopus), Swainson's (B. swainsoni), Cooper's (Accipiter cooperii), and sharp-skinned hawks (A. striatus), American kestrel (Falco sparverius), and Northern harrier (Circus cyaneus).

Other mammals on the area include coyote (Canas latrans), red fox (Vulpes fulva), fox squirrel (Sciurus niger), yellow-bellied marmot (Marmota flaviventris), striped skunk (Mephitis mephitis) and porcupine (Erethizon dorsatum).

Two controlled muskrat (Ondatra zibethicus) and mink (Mustela vison) trapping permits are issued each year. Following are harvest records are for the past 5 years:

Year	Muskrat	Mink
1994	372	2
1995	188	1
1996	200	1
1997	459	0
1998	584	3

Fisheries

Brown and rainbow trout inhabit Billingsley Creek. Billingsley Creek fish were sampled by daytime electrofishing on 27 April and 11 May, 1995 through the entire length of BCWMA (Warren and Partridge - in press).

A total of 85 rainbow trout were sampled both days, with 61 identified as fish of hatchery origin. The Department does not stock Billingsley Creek with rainbow trout. The hatchery fish most likely escaped from upstream private hatcheries. Brown trout fingerlings are stocked into the uppermost end of BCWMA on an annual basis by the Department. A total of 24 brown trout were sampled on both days. There were no recaptured brown trout on May 11. Nongame fish sampled include 318 Utah chubs (Gila atraria) and 5 redside shiners (Richardsonius balteatus) (Warren and Partridge-in press).

Florence Spring, the largest spring within BCWMA, provides gravel spawning habitat for wild trout. The Department stocks approximately 8,000 brown trout in Billingsley Creek annually. Foot access to the stream is difficult due to standing water and vegetation in the wetlands. Fishing season has historically opened with the general fishing season on Saturday of Memorial Day Weekend.

Habitat Classifications

Five different vegetation cover type habitats (IDFG 1985) were found within BCWMA. The habitat classifications have been modified and updated for upland and wetland vegetated cover types to reflect current classification systems (Cowardin et al. 1979).

1. Billingsley Creek - Billingsley Creek is a riverine system and lower perennial subsystem (Cowardin et al. 1979). The class is unconsolidated bottom. The water is slow in velocity and meandering, therefore is classified as permanently flooded. Theslow flowing river meanders through BCWMA with an average depth of approximately 6 ft. and a width of approximately 25 ft. Billingsley Creek, within BCWMA, consists of 7.26 acres.

2. There are 82 acres of palustrine persistent emergent wetlands (Cowardin et al. 1979). The size of the wetland is influenced by a hydroelectric plant located at the lower end of BCWMA. The wetland is dominated by emergent vegetation that includes broadleaf cattail (Typha latifolia) and bulrush (Scirpus spp.).

3. The forested wetland (Cowardin et al. 1979) is 83 acres. Although the overall area is 83 acres, there are small areas of forested upland that exist within the outer boundaries of the forested wetland. The forested wetland is dominated by Russian olive (Eleagnus augustifolia). The upland forested habitat is dominated by poplar (Populus spp.), greasewood (Sarcobatus vermiculatus), sagebrush (Artemisia spp.), skunkbush sumac (Rhus trilobata), cheatgrass (Bromus tectorum) and other grasses.

4. The escarpment shrub steppe habitat of the basaltic rim covers 92.5 acres. Small pockets of eroded and windblown soils have provided sufficient soils to support big sagebrush, greasewood, skunkbush sumac, perennial and annual grasses and forbs.

5. The shrub steppe habitat covers 18.85 acres. This habitat is above the canyon walls. The vegetation includes sagebrush, cheatgrass, Sandberg bluegrass (Poa sandbergii), and sand dropseed (Sporobolus cryptandrus).

PUBLIC USE

The public has been provided foot access to BCWMA since it was purchased in 1963. Access is also available by floating Billingsley creek. A non-maintained administrative road exists on the east side of the property that provides Department access for weed control and water measurements. Idaho Power has permission to use this administrative access to maintain power lines. Public vehicle access to the lower end of BCWMA has historically been available through private property. The private property has changed ownership, and the new owner is currently not allowing access through his property due to liability concerns. The Department has an easement in this area that could be developed for vehicle passage. However, development for vehicle access could cost as much as $20,000.00 (P. Jeppson, Department Chief of Engineering, pers. comm.). Presently the public has foot access to Billingsley Creek via this easement. Foot access to the opposite side of Billingsley Creek is not presently available.

PHYSICAL IMPROVEMENTS

No usable buildings or facilities exist on BCWMA, although a concrete silo remains from when the property was purchased. One-quarter mile of fencing was constructed in 1998 to protect habitat and stop trash dumping that was occurring on the rim property. Fencing of the west boundary is needed to delineate BCWMA from private agricultural land.

WATER RIGHTS

The water rights include portions of water decreed to the Florence Livestock Company in the case of New International Mortgage Bank vs. Idaho Power Company. These portions include 7.33 cfs of 10.0 cfs from the waters of Billingsley Creek, priority date of November 4, 1885; and 4.6 cfs of 9.7 cfs of Florence Livestock Spring, priority date of April 1, 1900 (Appendix I).

CHAPTER THREE - ISSUES, CONCERNS, AND OPPORTUNITIES

ISSUE IDENTIFICATION

Issue identification included 4 major elements: a series of local meetings in which elected officials and the concerned public were invited to evaluate public opinion; Department internal review of legal documents and lands; input from the public through letters, public comment in newspapers, or via personal contacts; and issue identification by Department employees.

Public Issues

The Department conducted public scoping meetings in April, 1996 at Burley and Gooding and in February, 1999 at Burley, Gooding, Fairfield, Hailey, and Twin Falls to provide a forum for people to express their opinions regarding future management of BCWMA. At each meeting, constraints imposed by the conditions of purchase were identified, and resource inventory information was provided. Public issues and concerns were grouped into 3 categories.

Noxious Weed Control - Noxious weed control has been identified as a problem along the western BCWMA boundary. This boundary adjoins private agricultural property. Canada thistle and Russian knapweed occur along this boundary. Spring and fall treatments with chemicals have been recommended to control these weeds (T. Ruby, Gooding County Weed Agent, pers comm.).

Public Access to the Lower End of BCWMA - Access to the lower end of BCWMA has historically been through private property. This access was important to waterfowl and, upland bird hunters and others desiring access to Billingsley Creek and the lower portion of BCWMA. People floating the 1.25 miles of Billingsley Creek, within BCWMA, were able to take out at this location. The private property providing this access route was sold to another individual who is not currently allowing public access.

Lack of Open Water for Hunting and Waterfowl Habitat - creation of small, spring-fed ponds would provide waterfowl hunting opportunities and waterfowl habitat.

Department Issues

Four issues were identified by Department staff as important to future management of BCWMA. A brief introduction to each are presented below.

Noxious Weeds - One of the important issues associated with future management of BCWMA is the control of the aforementioned noxious weeds. Chemical control will be used spring and fall to control thistle and knapweed. Chemical and biological control will be used, as appropriate, to control purple loosestrife. Noxious weed control will be done in coordination with the Gooding County Weed Agent.

Public Access to the Lower End of BCWMA -Access to Billingsley Creek and the lower portion of BCWMA has historically been available via a road on private property and then across a hydro-electric structure. The private land and hydro-electric facility is under new ownership and the owner is not currently allowing public access. The Department has an easement that presently provides foot access to Billingsley Creek. People floating Billingsley Creek must carry their canoes approximately 1/8 mile to their vehicles. Foot access across Billingsley Creek is not available.

Lack of Open Water for Hunting and Waterfowl Habitat - Creation of small, spring-fed ponds would provide additional waterfowl hunting opportunities and waterfowl habitat. Control of cattails and bulrush could also create open water to provide waterfowl habitat and hunting opportunities.

Management of BCWMA for Waterfowl Habitat - A spring fishing season will continue on Hagerman Wildlife Management Area (HWMA) (Gorgen et al. 1999), which is located 3 miles away from BCWMA. However, high numbers of fishermen on HWMA during the spring negatively influences waterfowl nesting and brood habitat. Since HWMA was purchased with PR funding, this funding requires that HWMA be managed for "The restoration, conservation, management, and enhancement of wild birds and wild mammals, and the provision for public use of and benefits from these resources." As mitigation for the waterfowl production loss on HWMA, BCWMA will be managed for waterfowl habitat although it was purchased with DJ funding sources.

CHAPTER FOUR - MANAGEMENT DIRECTION

The issues generated by the public and from within the Department were determined by the planning team to not be significant enough to warrant a detailed analysis of alternatives. BCWMA is a small management area that currently provides hunting, fishing, trapping, and other wildlife related activities. The Department proposes to manage BCWMA for waterfowl habitat. Management of BCWMA for waterfowl habitat will serve as mitigation for the loss of waterfowl habitat and waterfowl production that is sacrificed in lieu of providing spring fishing opportunity at HWMA. Waterfowl habitat will have priority over fishing opportunity. Several issues for BCWMA were identified and will be considered in future management.

MANAGEMENT GOALS

The desired future condition will be attained by successfully accomplishing the following goals:

1. Enhance waterfowl and upland gamebird habitat
2. Maintain wintering waterfowl habitat
3. Enhance waterfowl and upland gamebird hunting
4. Provide fishing opportunities that do not interfere with waterfowl production
5. Provide wildlife appreciation opportunities

MANAGEMENT OBJECTIVES AND STRATEGIES

The specific goals needed to reach the desired future condition are prioritized below.

I. Goal: Enhance waterfowl and upland gamebird habitat.

The variety of wetland, riparian and upland habitats on BCWMA produce waterfowl and upland gamebirds. This production contributes to hunting and wildlife appreciation on BCWMA and the surrounding area.

Objective: Increase waterfowl and upland gamebird production.

Strategies

1. Maintain the existing 4 Canada goose nesting platforms. Add 4 additional goose nesting platforms near Billingsley Creek by 2001.
2. Maintain 4-8 wood duck nesting boxes.
3. Continue to prohibit motorized vehicles within BCWMA to reduce disturbance of nesting birds.

4. Maintain existing boundary fences (approximately 1 mile) and construct additional fence (approximately 1 mile) to mark the property boundary, reduce littering, exclude livestock and motorized vehicles. (Target date: 2005)

5. Construct 2-3 small ponds (approximately 0.5-1 acre in size), when funding is available, to attract duck pairs and provide duck brood rearing habitat.

6. Control noxious weeds.

7. Evaluate fishermen impacts on nesting and brooding waterfowl, and delay or close the fishing season if necessary to maximize waterfowl production.

8. Control cattails and bulrush with chemicals or burning to provide open water for brood production. (Completion date: Based on available funding)

II. Goal: Maintain wintering waterfowl habitat.

Mild fall and winter temperatures combined with attractive waterfowl habitat contribute to BCWMA importance as a waterfowl wintering area. Spring water (approximately 58° F) flowing into Billingsley Creek keeps the creek open throughout the winter.

Objective: Provide wintering waterfowl habitat.

Strategies

1. Prohibit public vehicle access within BCWMA.

2. Provide open water by creating small (0.5-1 acre ponds) and by controlling cattails and bulrush.

III. Goal: Enhance waterfowl and upland gamebird hunting.

Mild fall and winter temperatures combined with attractive waterfowl habitat contribute to BCWMA importance as a waterfowl hunting area. Duck hunting is excellent when surrounding waters begin to freeze. Ducks are attracted to the slow flowing, but open Billingsley Creek.

Objective: Enhance the waterfowl and upland gamebird hunter experience.

Strategies:

1. Provide hunter access by maintaining the 2 existing parking lots. If feasible, create a parking lot for sportsmen accessing the lower portion of BCWMA.

2. Maintain foot access on both sides of Billingsley Creek from the existing parking lots.

3. Construct 2-3 small ponds (approximately 0.5-1 acre in size), when funding is available, to provide additional hunting opportunity.

4. Control cattails and bulrush to provide open water areas for hunting.

IV. Goal: Provide fishing opportunities.

BCWMA is located near several Magic Valley communities and provides a quality fishing experience. However, further degradation of water quality may diminish this condition. Fishermen use must not interfere with the goal to provide waterfowl nesting and brood rearing habitat.

Objective: Provide fishing opportunities for rainbow and brown trout.

Strategies:

1. Maintain walk-in fishing access.

2. Maintain the 2 existing parking areas. If feasible construct a parking area for fishermen desiring access to lower BCWMA.

3. Advocate measures to improve water quality by water uses upstream from BCWMA.

4. Establish fishing seasons that do not interfere with providing waterfowl habitat.

V. Goal: Provide wildlife viewing opportunities

The variety of wetland birds, songbirds and raptors contribute to BCWMA importance as a wildlife viewing area. The Hagerman Valley is unique in the region because of significantly elevated winter temperatures. This phenomenon makes the area important to a wide variety of wintering bird species.

Objective: Provide wildlife viewing opportunities.

Strategies

1. Maintain 2 existing parking areas. If feasible, construct a 3rd parking area for users to have access to lower BCWMA.

2. Maintain foot access within BCWMA.

3. Develop an informational brochure. (Target date: 2002)

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APPENDIX I

LEGAL DESCRIPTION AND WATER RIGHTS

LAND ACQUISITIONS:

Gooding County

Year	*Funds Used*	*Acres*	*Acquired From*
1963	DJ	283.62	McCarter Cattle Company, Inc.

Legal Land Description: T.7S, R.13E., R. 13 E., B.M., Sec. 12, SW1/4NW1/4, except 8.31 acres lying above and north of the Rim Rock, NE1/4SE1/4, NW1/4SE1/4, and those portions of S1/2SE1/4NE1/4 and NE1/4SE1/4, Sec. 11, lying east of a line generally located 100 feet west of Billingsley Creek; and those portions of W1/2SW1/4, SE1/4SW1/4, Sec. 12, lying north of a line generally located 100 feet south of Billingsley Creek and that portion of SW1/4SE1/4 lying west of county road; Sec. 13, that portion of NE1/4NW1/4 lying north of a line generally located 100 feet south of Billingsley Creek and that portion of NW1/4NE1/4 located north and east of a line generally located on west side of marsh area of Billingsley Creek and that portion lying west of county road.

WATER RIGHTS:

License Number	*C.F.S.*	*Source*	*Use*
1602 (Priority Date: November 4, 1885)	7.33	Billingsley Creek	Irrigation
(Priority Date: April 1, 1900)	4.60	Florence Livestock Spring	Irrigation

Note: All water with no license number is from court decree.

APPENDIX II

FEDERAL AID PROJECT STATEMENT AND PROGRESS REPORT

HAGERMAN WILDLIFE MANAGEMENT AREA

Management Priorities:

1. Maintain Winter Waterfowl Habitat
2. Provide Sanctuary to Hold Waterfowl in Magic Valley
3. Enhance Waterfowl & Upland Gamebird Production
4. Provide Fishing Opportunities
5. Provide Miscellaneous Benefits

BILLINGSLEY CREEK WILDLIFE MANAGEMENT AREA

Management Priorities:

1. Enhance Waterfowl & Upland Gamebird Production
2. Maintain Waterfowl & Upland Gamebird Hunting
3. Maintain the Area for Wintering Waterfowl
4. Maintain the Area for Fishing
5. Provide Wildlife Appreciation Opportunities

*Activities without a planned cost are outside-funded (D.J., license, etc.)

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
MAINTAIN WINTER WATERFOWL HABITAT						
Management Program – Maintain winter habitat						
Maintain winter habitat at current level (ponds and associated vegetation)	1211	77 acres 1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Control access to wetland habitat during winter	1211	77 acres 1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain waterfowl hunting area outside the WMA boundary	1211					Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
Prohibit vehicle access to marsh complex	1211					Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Allow public viewing of waterfowl from selected sites	1211	1 observation blind				Species benefited:
PROVIDE A SANCTUARY TO HOLD WATERFOWL IN MAGIC VALLEY DURING THE HUNTING SEASON						
Management Program - Hold waterfowl in Magic Valley						
Maintain winter habitat at current level (ponds and associated vegetation)	1211	77 acres				Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Control access to wetland habitat during winter	1211	77 acres				Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain waterfowl hunting area outside the WMA boundary	1211					Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Prohibit vehicle access to marsh complex	1211					Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
ENHANCE WATERFOWL AND UPLAND GAMEBIRD PRODUCTION						
Management Program - Provide nest sites and brood raising habitat						
Irrigate grass-alfalfa for grazing, nesting and brood rearing habitat.	1322	47 acres 11 weeks		17,446		Species benefited: CAGO

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
Maintain irrigation system (pump, mainline, pipe, etc.)	1211	1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain uplands in an undisturbed condition	1211	670 acres				Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain fence	1211	5.5 miles 4.0 miles 1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain stable water levels	1211	77 acres 1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Measure and record water flows	1211	Monthly-BCWMA Weekly-HWMA 2 weeks		3,172		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain dikes	1211	2.5 miles 1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain and clean water structures	1211	22 structrs 2 weeks		3,172		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
Maintain Canada geese nesting structures	1211	20 structrs-HWMA 4 structrs-BCWMA 1 week		1,586		Species benefited: CAGO
Maintain wood duck nest boxes	1211	30 boxes				Species benefited: WODU
Management Program - Provide brood rearing habitat						
Provide Canada goose pasture through cooperation with an adjacent landowner	1322	27 acres 1 week		3,172		Species benefited: CAGO
Management Program – Monitoring						
Monitor populations	1460	1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Monitor artificial nest utilization	1211	26 nests 30 boxes 1 week		1,586		Species benefited: WODU, CAGO
Management Program - Improve winter habitat						
Irrigate trees and shrubs	1211	30 acres 2 weeks		3,172		Species benefited: Pheasants, Quail
Maintain residual alfalfa	1211	34 acres 1 week		1,586		Species benefited: Pheasants, Quail
Plant winter wheat	1322	20 acres 7 weeks		11,102		Species benefited: Pheasants, Quail
Maintain shrub, tree, and riparian habitat	1211	760 acres 2 weeks		3,172		Species benefited: Pheasants, Quail

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
PROVIDE FISHING OPPORTUNITIES						
Management Program - Monitor and regulate fisheries program						
Stabilize impoundment water levels	1211					Species benefited:
Prohibit boat motors	1630					Species benefited:
Litter clean-up	1211	1 week		1,586		Species benefited:
PROVIDE MISCELLANEOUS BENEFITS (e.g., wildlife viewing, upland hunting, nongame habitat, trapping, photography, etc)						
Management Program - Provide miscellaneous benefits						
Maintain species observation list	1630					Species benefited: List not currently available
Provide wildlife viewing opportunities by maintaining access roads	1211	1.5 miles 1 week		1,586		Species benefited:
Maintain parking areas	1211					Species benefited:
Maintain wildlife viewing blind	1211					Species benefited:
TECHNICAL ASSISTANCE						
Review of public projects, including wildlife tracts	1710	4 weeks		6,344		Species benefited:
Assistance to private landowners	1720	10 weeks		15,860		Species benefited: Pheasants, Quail, Waterfowl

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
ADMINISTRATION						
Management Program – Administrative duties						
Develop planning documents, review and evaluations, meetings, coordination with other agencies, etc.	1630	3 weeks		4,758		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain files, prepare administrative documents (reports, budgets, purchasing requests, time sheets, etc.	1630	5 weeks		7,930		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Other duties (as assigned)	1630	3 weeks		4,758		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Management Program - WMA, facilities and equipment maintenance						
Maintain shop, storage buildings, box car, residence and lawn	1211	2 weeks		3,172		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain equipment tractors, drills, grader, trailers, etc.	1211					Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Maintain regulatory signs	1211	1 week		1,586		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS*
		Planned	Actual	Planned	Actual	
Control noxious weeds	1211	4 weeks		6,344		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU
Custodial functions (vegetation monitoring, vehicle closure compliance checks, misc. monitoring of the WMA, etc.)	1211	2 weeks		3,172		Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU

Total Pr Contract With Overhead	$ 37,285
Outside Funds	78,546
Grand Total	$115,831

Note: Operating funds from this budget supplement the Habitat Maintenance budget. The Habitat Maintenance budget is used for operating funds for the Minidoka and Niagara Springs Habitat Districts and for payment of temporary employees.

NARRATIVE

Land acquisition for Hagerman Wildlife Management Area (HWMA) began in 1940. HWMA now consists of 880 acres including 223 acres licensed from the United States Fish and Wildlife Service (a mostly dry land portion of the Hagerman National Fish Hatchery).

HWMA includes 16 ponds that are heavily used by waterfowl in the winter and fishermen during the summer months. The spring-fed water that flows through HWMA is relatively warm providing open water for up to 100,000 ducks and more than 4,000 Canada geese during the winter months. Mallards are most numerous with a variety of other ducks represented. Because of the sanctuary provided by HWMA, these waterfowl remain in the area and provide hunting in several counties as they fly to and from HWMA.

HWMA is located in close proximity to a number of Magic Valley communities. As a result, the area receives hundreds of fishermen each season. The 1 March opening on a portion of HWMA is extremely popular with fishermen. This early fishing opening does conflict with the goal to enhance waterfowl production. Hagerman State Fish Hatchery stocks an average of 51,000 trout annually on HWMA to satisfy angler demand. Most of these fish are rainbow trout with some being Kamloops.

One cooperative agreement exists with an adjacent landowner. Through this agreement, livestock grazing is allowed on 7 acres of HWMA. In exchange, several hundred Canada geese are allowed to graze undisturbed on 20 acres of irrigated private pasture.

Sixty-three acres are irrigated for waterfowl and upland bird nesting cover, food plots, and goose pasture.

Billingsley Creek Wildlife Management Area (BCWMA) was purchased from the McCarter Cattle Company, Inc., in 1963. The area was purchased with federal aid for fisheries (DJ) funds. Ongoing management is funded by federal aid to wildlife (PR) funds and Fish and Game license monies.

The 284 acre BCWMA lies in the Hagerman Valley near the Snake River and 2 miles northeast of the town of Hagerman. The area is traversed by a meandering 1.25 mile section of Billingsley Creek. BCWMA elevations range from 2,950' on the creek, to 3,200' on the canyon rim. Several springs originate along the basaltic rim rock and feed a wetland before entering Billingsley Creek. In 1994 rectangular weirs were placed to measure the water from each spring. A yearly report is sent to the Idaho Department of Water Resources containing this data. Because the creek is spring fed by water that is approximately 58°; it remains open all winter.

Five different wildlife habitats, as defined by Judd and Brown (1973 Department employees) exist in this management area:

1. Billingsley Creek meanders through BCWMA with an average depth of 6' and a width of 25'. The stream is rich in aquatic plants which harbor many aquatic insects. Rainbow trout and German brown trout are abundant and fast growing. It is also an important area for mallards during extremely cold winters when nearby waters are frozen. Waterfowl also use this habitat for brooding.
2. The wetland covers approximately 82 acres. Most of the marsh is covered with, broadleaf cattail, and hardstem bulrush. There are many other aquatic plants here that provide cover for waterfowl and other wildlife.
3. The mixed shrub-steppe habitat is approximately 83 acres. It is intermixed with Russian olive, black cottonwood, greasewood, sagebrush and annual and perennial grasses. Many different wildlife species utilize the area, including California quail, ring-necked pheasants, hawks, nongame birds, small mammals, and reptiles.
4. The escarpment shrub habitat of the basaltic rim covers approximately 92.5 acres. Small pockets of eroded and windblown soils have provided sufficient soils to support big sagebrush and grasses. Raptors, small birds, small mammals and reptiles are at home there.
5. The big sagebrush habitat covers 18.85 acres. This habitat is above the canyon walls. The chief types of vegetation are big sagebrush and annual and perennial grasses.

BCWMA supports excellent wildlife habitat and is open to upland game, waterfowl, and deer hunting (shotgun only). Duck hunting is excellent when the weather turns cold and nearby waters freeze. Ducks are attracted to slow flowing, but open Billingsley Creek.

Two controlled muskrat and mink trapping permits are issued each year. Several hundred muskrats and a few mink are taken each year by the trappers.

Noxious weeds are controlled within BCWMA to limit spread to adjacent private land, and reduce displacement of desirable cover and/or forage vegetation. Control efforts have centered on Canada thistle; however, purple loosestrife is now present along Billingsley Creek. Loosestrife control had been done in previous years by spraying individual plants with chemical. In 1996 biological control was conducted with the placement of 500 eggs of root-boring weevils near the mouth of Florence Spring.

BCWMA is a relatively small piece of property, but has important wildlife and public values. Duck hunting, fishing, wildlife observation, canoeing, hiking and other activities are enjoyed by people that use the area.

Benefits:

Hagerman WMA:

1. Wintering area for up to 100,000 ducks and 4,000 Canada geese.
2. Average Canada goose production approximately 200 goslings.
3. Average duck production is approximately 400 ducklings.
4. Sixteen ponds provide habitat for fish and wildlife.
5. A cooperative agreement with an adjacent landowner provides 26 acres of Canada goose grazing pasture.
6. An estimated minimum of 50,000 hours of fishing effort spent on the area annually results in an economic contribution to the community of over $500,000.00.
7. Excellent waterfowl observation opportunity each fall and winter.
8. Four controlled muskrat/mink trapping permits issued each year

Billingsley Creek WMA:

1. Area traversed by meandering 1.25 mile section of Billingsley Creek.
2. Open to upland game, waterfowl, and deer hunting (shotgun only).
3. Two controlled muskrat/mink trapping permits issued each year.
4. Fishing opportunities for brown and rainbow trout.
5. Provides excellent late season waterfowl hunting.

ABBREVIATION CODES TO BE USED IN THIS REPORT*

Mallard	MALL	Wood Duck	WODU
Gadwall	GADW	Redhead	REDH
American Wigeon	AMWI	Canvasback	CANV
American Green-winged Teal	AGWT	Lesser Scaup	LESC
Blue-winged Teal	BWTE	Ring-necked Duck	RNDU
Cinnamon Teal	CITE	Bufflehead	BUFF
Northern Shoveler	NSHO	Ruddy Duck	RUDU
Northern Pintail	NOPI	Canada Goose	CAG

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