

HAGERMAN
Wildlife Management Area

Management Plan
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Idaho Department of Fish and Game
Magic Valley Region
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Jerome, ID 83338

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EXECUTIVE SUMMARY

Hagerman Wildlife Management Area (HWMA) is located 2 miles south of Hagerman, Idaho in southwestern Gooding County. State Highway 30 divides a portion of HWMA.

Land acquisition for HWMA began in 1940 with 423.47 acres. 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).

Sixteen ponds are located at HWMA and include: 6-Oster Lakes, 4-Anderson Ponds, 2-Bass ponds, 1-Goose Pond, 1-Riley Creek Impoundment, 1-Hatchery Settling Pond and 1-West Pond. Spring water flows through HWMA and is 58°F. The springs provide open water for approximately 50,000 ducks and 4,000 Canada geese during the winter. Predominantly mallards winter on HWMA, but many waterfowl species are present. Because of the sanctuary provided by HWMA, some waterfowl delay migration, while a portion of the population are year-round residents.

HWMA is located near several Magic Valley communities. As a result, the area provides opportunities to hundreds of fishermen each year. The 1 March opening on a portion of HWMA, is popular with fishermen. This early fishing opener conflicts with waterfowl production goals. Hagerman State Fish Hatchery stocks an average of 51,000 catchable rainbow trout (*Oncorhynchus gairdneri*) annually on HWMA.

One cooperative agreement exists with an adjacent landowner. This agreement allows livestock grazing on 6 acres of HWMA. In exchange, several hundred Canada geese are provided grazing on 20 acres of privately owned irrigated pasture.

Idaho Department of Fish and Game (Department) conducted open house forum meetings to provide an opportunity for the public to express their opinions regarding the future management of HWMA. Also, issues were identified internally by Department staff as important to future management of the area. Two issues were considered significant to the future management of HWMA. Three management alternatives were developed for each significant issue. Preferred alternatives were selected by the Regional Supervisor (RS).

Issue 1: Fishing Opportunity and Impacts on Waterfowl Nesting and Brood-Rearing Habitat.

Management Alternative 1: (No Action)--Maintain current fishing season opener (March 1) (Preferred Alternative).

Management Alternative 2: Delay the fishing season opening until 1 July.

Management Alternative 3: Close the fishing season.

Issue 2: Waterfowl Hunting Opportunity within HWMA.

Management Alternative 1: (No Action)--Maintain current waterfowl hunting closure.(Preferred alternative)

Management Alternative 2: Provide Controlled Waterfowl Hunting Opportunity.

Management Alternative 3: Provide hunting opportunity under established general season framework throughout season.

The RS made a final decision and recommendation different from the management team. He selected Alternative 1 for Issue 1 and Alternative 1 for Issue 2. HWMA management goals will include:

1. Provide secure winter habitat for approximately 50,000 waterfowl
2. Maintain waterfowl production
3. Maintain upland game habitat
4. Provide fishing opportunities
5. Provide consumptive public benefits (e.g., upland hunting, non-game hunting, trapping)
6. Provide non-consumptive public benefits (e.g., hiking, sightseeing, photography, wildlife observation)

MISSION STATEMENT

The mission of Hagerman Wildlife Management Area is to protect and enhance wildlife and fish populations, and habitat, and to provide for compatible uses of these wildlife resources by the public.

CHAPTER ONE - PLANNING ISSUES AND MANAGEMENT REQUIREMENTS

INTRODUCTION

The 880-acre Hagerman Wildlife Management Area (HWMA) is located 2 miles south of Hagerman, Idaho, in southwestern Gooding County (Figure 1). State Highway 30 divides a portion of the management area. HWMA is situated on a gentle south-facing slope between the Snake River canyon wall and the river.

Sixteen ponds are located at HWMA and include: 6-Oster Lakes, 4-Anderson Ponds, 2-Bass Ponds, 1-Goose Pond, 1-Riley Creek Impoundment, 1-Hatchery Settling Pond, and 1-West Pond. The water supply for the ponds is Brailsford Ditch (Len Lewis Spring), Big Bend Ditch (Tucker Springs), and Riley Creek (approximately 17 springs flowing from the escarpment above the Hagerman National Fish Hatchery) (Figure 1). Spring water is 58°F. Several of the ponds freeze during winter despite a constant inflow of "warm" spring water.

Habitats include an estimated 163 acres of open water ponds and wetlands, 119 acres of cottonwood-willow riparian, and over 460 acres of sagebrush (*Artemisia* spp.) steppe. Additional narrow belts of aquatic and riparian habitats occur along Riley Creek, natural springs, and irrigation ditches and drains. Russian olive (*Elaeagnus angustifolia*) trees are scattered throughout the area. There are also 70 acres of irrigated waterfowl and upland game bird nesting and brood rearing habitat and annual food plots (Figure 1). There are 30 acres of irrigated tree and shrub plantings (Figure 1). A Department trout hatchery (Hagerman State Fish Hatchery) occupies 35 acres in the middle of HWMA.

Land was acquired for HWMA beginning in 1940 with the purchase of 423.47 acres from Richard W. Tucker. An additional 170.28 acres were purchased in 1941, and 58.37 acres were added in 1951. Beginning in 1953, and continuing today, 223 acres are licensed from the U.S. Fish and Wildlife Service. Subsequent, small acreage additions resulted in the current HWMA size of 880.52 acres. Land purchases were accomplished through the Federal Aid in Wildlife Restoration program (Appendix I). The Federal Aid in Wildlife Restoration program is authorized by the Federal Aid in Wildlife Restoration Act of 1937, as amended (16 U.S.C. 669-669i), and is often referred to as the Pittman-Robertson Act (PR).

HWMA is located within Basin 36 for statewide water adjudication efforts. The adjudication efforts are being processed.

The majority of HWMA has always been closed to waterfowl hunting. However, waterfowl hunting did occur on Riley Creek, Oster Lakes and the south end of HWMA until 1979. Firing lines surrounded the core of HWMA. Problems with the accumulation of lead shot and duck crippling loss forced the closure of the management area to duck hunting (Further discussed on p. 13).

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

PURPOSE OF THE PLAN

The purpose of this plan is to document wildlife and habitat resources, and the resultant management issues, and to guide management activities and direction on HWMA into the future. This plan also establishes management direction, and will be supplemented by specific annual programmatic plans. Management direction is limited by the constraints of the Federal Aid in Wildlife Restoration Act.

DESIRED FUTURE CONDITION

The desired future condition (DFC) of HWMA is briefly described as including the following key elements:

1. An area providing excellent winter habitat for waterfowl. Approximately 50,000 waterfowl would be expected to winter on this area. Winter waterfowl habitat provided by ponds, canals, and associated vegetation. Irrigated food crops to be grown as needed.
2. An area providing optimum waterfowl and upland game bird nesting and brood rearing habitat.
3. An area providing limited upland game hunting opportunities.
4. An area providing fishing opportunities.
5. Soil erosion will be minimized through minimization of soil disturbance, control or elimination of noxious weeds, and restoration of biologically diverse plant communities.
6. An area providing non-consumptive recreation that does not disturb wildlife during critical (e.g., nesting, brood rearing, wintering) times of the year.
7. HWMA will be valued by the citizens of Idaho and the nation as a significant waterfowl wintering area.
8. HWMA will be a good neighbor to adjoining landowners.

PLANNING PROCESS

The HWMA plan has been developed throughout the following 6-step process.

1. Inventory of baseline resource conditions

Mid-winter waterfowl counts have been conducted for many years. Numbers of waterfowl counted have varied from a few thousand to over 100,000 (Appendix II). Weather conditions prior to the counts have a great influence on the number of waterfowl counted. Mild weather conditions allow the birds to spread out to

other open waters in the region. Severe weather concentrates the birds on HWMA where the 58° F spring water keeps several ponds open.

2. Issue scoping

Management issues were identified through public scoping meetings held at Burley and Gooding in April 1996 and in Burley, Gooding, Fairfield, Hailey and Twin Falls in February 1999. Scoping included a Department survey of public opinion; Department internal review of legal documents and lands; and input from the public through letters, public comment in newspapers, telephone conversations or via personal contacts.

3. Development of Alternatives

Alternatives developed are based on (1) issues identified during scoping (internal and external), and (2) management constraints due to existing agreements and legal requirements.

4. Selection and Implementation of Preferred Alternative

The final Preferred Alternatives were selected following final public review of the preliminary alternatives developed in this draft management plan.

5. Long-Term Monitoring of Results

The mid-winter waterfowl survey and brood surveys will be conducted to document the continuing value of HWMA as a waterfowl management area.

6. Adaptive Management Based on Results of Monitoring

If monitoring indicates that progress toward DFC is not being achieved, the Department will adjust management as needed to meet those conditions.

ORGANIZATION OF PLAN

This Management Plan includes 5 chapters and supporting appendices.

Chapter One: Includes an introduction to the Plan, and includes detail on any 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: Identifies issues and alternatives for management of the area.

Chapter Four: Provides an evaluation of the biological, physical, social, and economic effects of each alternative relative to constraints, mandates, and opportunities.

Chapter Five: Discusses the preferred management alternatives and provides rationale for choices, provides specific goals and objectives, and includes a monitoring plan to ensure the DFC will be met by the Department.

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 in the Idaho Fish and Game Policy Plan 1990-2005: A vision for the Future (IDFG 1991). Below is a summary of those sections of the policy plan pertinent to the management of Department lands.

Management - *"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."*

Cooperation - *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. The Department strives to provide healthy and sustainable wildlife populations.

This plan will attempt to look at habitat conditions in both the short- and long-term context (at both fine and broad landscape scales) and opportunities to manage and restore habitats through practices designed to reduce short- and long-term risks to species and their habitats on HWMA lands.

Requirements Relative to Funding

The majority of the annual operating funding for HWMA is currently derived from general license funds and PR funds. Each funding source includes some special requirements as noted below:

PR funds must be used for restoration, conservation, and enhancement of wild birds and wild mammals, and the provision for public use of and benefits from these resources (Federal Aid Handbook).

The Department general license funds must be used to help meet the mission and policies of the Commission: *"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."* (Idaho Code 36-103(b))

Federal and State Law Requirements

Federal funds derived from the USFWS Federal Aid in Wildlife Restoration Program Act (PR) have been used, in large part, to purchase and manage HWMA lands.

Other federal and state laws also affect management of HWMA. 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 HWMA 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 law and the State of Idaho is required to ensure the counties do so.

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 submitted annually to affected counties based on the number of qualifying acres.

Restriction by deed

Various canal, pipeline, and electrical transmission right-of-ways have been granted.

Regulations

The Department has a published set of regulations governing public use of all Department lands and access areas. Regulations cover motor vehicle access, fires, fireworks, dog use, 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).

The Department complies with other state and federal regulations as they apply.

LIFE SPAN OF PLAN

This HWMA 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 (Appendix VII).

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 is managed under a variety of easements, agreements, and leases with private landowners and other land management agencies. A statewide network of 29 Wildlife Management Areas (WMAs) varying in size, 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 in mind:

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 statements 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 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 HWMA 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 CONDITION

HISTORY

The Hagerman Valley (HV) region has extensive Native American history. Both Shoshone and Bannock Indians journeyed to the area now known as HWMA, often from great distances, to feast on chinook salmon and steelhead migrating up the Snake River to spawn. Semipermanent camps were established and utilized year after year, as tribes made use of the fish and other wildlife resources found in HV (Hagerman Historical Society Files).

The Snake River's Lower and Upper Salmon Falls proved to be significant bottlenecks for migrating salmon and steelhead, concentrating fish in the pools below. There, they became vulnerable to the spears and nets of native fishermen. Fish not immediately eaten were smoked or salted for later use; others were traded to white immigrants for items normally unavailable to the Indian tribes (Hagerman Historical Society Files).

In the 1860's, homesteaders following the Oregon Trail, through southern Idaho, passed through the HV. The Trail skirted the southern edge of the Snake River, just a river's width from the southern boundary of HWMA. For some, this glimpse combined with an already long, weary trip, was all the persuasion needed to end the journey and settle in the HV. During the mid-to late 1800's, a number of farms and ranches sprung up in the HV. The Tucker Ranch, became the Hagerman Valley Refuge in 1940 and currently HWMA (Hagerman Historical Society Files).

HWMA, Idaho's first Wildlife Management Area (WMA), was established principally to provide habitat for waterfowl and upland game birds. PR funds were used to purchase this property.

PHYSICAL DESCRIPTION

Geology

HWMA 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. An estimated 15 million cfs flow and an estimated 600 cubic mi. of water, moved rock and lava material through the canyon and deposited it in slack water areas. The polished boulders or "melon gravel", upwards of 10 ft. in diameter, are common on HWMA today.

Soils

Most of the HWMA soils consist of loamy fine sand as classified in the following list (Natural Resources Conservation Service, In Press):

WPC - Wako-Ackley loamy fine sand complex, 2 to 6 percent slopes.

FKE - Fathom-Kudlac-Anchustequi complex, 8 to 35 percent slopes.

FAC - Fathom loamy fine sand, 4 to 10 percent slopes.

KVR - Kecko-Vining-Rock out crop complex, 2 to 15 percent slopes

The typical upper soil profile (0 to 7 in.) consists of loamy fine sand. The soils are well drained. Depth class ranges from moderately deep (20 to 40 in. to a duripan) to very deep (more than 60 in.). Hazard of erosion by water is slight, by wind severe.

Wetland soils change dramatically and are described as:

CHB - Fluvaquents-Histic Haplaquolls complex, 0 to 3 percent slopes.

The soil profile (0 to 7 in.) is fine sandy loam. Depth class is very deep (60 in. or more). This soil is poorly drained with flooding frequent. Restriction to rooting depth is a high water table at 6 to 18 in. Hazard of erosion is none.

Climate

A National Weather Service Cooperative Reporting Site is located in the town of Hagerman. The average daily maximum is 66.6°F and minimum is 35.7°F with extremes at 104°F and -25°F (Abramovich et al. 1998). Average precipitation is 10.94 in. with most of it falling in late winter and early spring. The frost-free growing season is 110-140 days.

Geographic Location

HWMA is located approximately 2 mi. south of Hagerman, Idaho in southwestern Gooding County. State highway 30 divides a portion of the management area.

NATURAL RESOURCES

Vegetation

HWMA is dominated by 460 acres of shrub/steppe, 163 acres of open water ponds and wetlands, 116 acres of cottonwood (*Populus* spp.)-willow (*Salix* spp.) riparian, 70 acres of irrigated nesting and brood rearing habitat and annual food plots, and 30 acres of irrigated tree and shrub plantings.

The sagebrush steppe is characterized by basin big sagebrush (*Artemisia tridentatatridentata*), rabbitbrush (*Crysothamnus* spp.), Indian ricegrass (*Oryzopsis hemenoides*), Sandberg bluegrass (*Poa sandbergii*), sand dropseed (*Sporobolus cryptandrus*), cheatgrass brome (*Bromus tectorum*), penstemon (*Penstemon* spp.), and mustard (*Sisymbrium* spp.). Four acres of silver sagebrush (*Artemisia cana cana*) was successfully planted in 1993.

Most of the ponds within HWMA were constructed in the 1940's and 1950's. All are fed from springs that emerge from the nearby basalt cliffs. The ponds are dominated by hardstem bulrush (*Scripus acutus*), cattails (*Typha* spp.), sedges (*Carex* spp.) and rushes (*Juncus* spp.).

The riparian zones along the spring seeps, irrigation canals and Riley Creek have a mixture of Russian olive, willow (*Salix* spp.), cottonwood (*Populus trichocarpa*), black locust (*Robinia pseudoacacia*), poplar (*Populus* spp.), skunkbrush sumac (*Rhus trilobata*), Woods rose (*Rosa woodsii*), sedges, rushes, cattails (*Typha latifolia*).

Nine fields are available to be irrigated. Irrigation is done with corrugation (siphon tubes and gated pipe) and handlines. Nesting cover includes various plantings of alfalfa (*Medicago sativa*), intermediate wheatgrass (*Agropyron intermedium*), pubescent wheatgrass (*A. trichophorum*), and sand dropseed. One 9-acre field is planted to winter or spring wheat as a food source for waterfowl. Nine acres of alfalfa is mowed regularly to provide succulent green vegetation for Canada geese. A cooperative agreement with a neighbor allows cattle grazing on 6 acres of HWMA; and in exchange, several hundred geese, including goslings, are allowed to graze undisturbed on 20 acres of private irrigated pasture.

Irrigated tree and shrub plantings were accomplished in the 1960's. Some of these plantings remain today. Trees planted included evergreens (*Pinus* spp.), black locust (*Robinia pseudogacia*), poplar (*Populus* spp.), Russian olive, plum (*Prunus* spp.), wild mulberry (*Morus* spp.) and mountain ash (*Sorbus* spp.). The shrub plantings included multiflora (*Rosa multiflora*) and yellow (*R. spp.*) rose, honeysuckle (*Lonicira* spp.), cotoneaster (*Cotoneaster* spp.), snowberry (*Symphoricarpos* spp.), blackberry (*Rubus* spp.), creeping raspberry (*Rubus* spp.), elderberry (*Sambucus* spp.), dogwood (*Cornus* spp.), currant (*Ribes* spp.), and cherries (*Prunus* spp.) (Manchurian, sand, Korean, Mayday, and Nanking (*P. tomentosa*)) (Cherry 1966).

Wildlife

In 1978, 70 young Canada geese (*Branta canadensis*), were raised from salvaged eggs at the Jerome Game Farm, and transplanted to HWMA. Gosling production has increased every year, and approximately 200 are now observed annually (IDFG 1991).

Although accurate production counts of ducks are difficult to obtain, at least 400 ducklings are produced on HWMA annually (IDFG 1991). Species of ducks that nest on HWMA include mallards (*Anas platyrhynchos*), gadwall (*Anas strepera*), red heads (*Aythya americana*), and ruddy ducks (*Oxyura jamaicensis*).

HWMA is an important wintering area for waterfowl. During the winter, HWMA is occupied by approximately 50,000 ducks and 3,000 Canada geese (Appendix II). Mallards make up most (approximately 95 %) of the duck population, but many other species are present (Appendix III).

The majority of HWMA has always been closed to waterfowl hunting. However, waterfowl hunting did occur on Riley Creek, Oster Lakes and the south end of HWMA until 1979. Firing lines surrounded the core of HWMA. Lead shot accumulated in wetland sediments and along the HWMA boundary for 20 years due to hunting in these areas. Between 1978 and 1980, 1,566 mallards were examined to assess lead poisoning at HWMA (Hompland 1981). Hompland did

an X-ray analysis of gizzards from hunter-shot ducks and found a lead shot ingestion rate of 15%. Fluoroscopy of bait-trapped mallards and X-ray analysis of gizzards indicated that 9% contained ingested shot (Hompland 1981). Postmortem examination and analysis of kidney and liver tissues indicated that 15% of bait-trapped mallards contained toxic levels of lead (Hompland 1981).

The "firing line," (hunters congregating along the HWMA waterfowl hunting boundary and pass shooting at ducks), was eliminated in 1979 by extending the area closed to waterfowl hunting outside the HWMA boundary. After the closure, efforts were made to cover the accumulated lead shot on the dikes and in shallow water areas. Furthermore, a 30' wide channel was constructed in the wetland between 1977 and 1981. Recent sampling (1995) for lead shot revealed significant concentrations still present in some shallow water areas with firm clay bottoms (G. Hompland, Department Regional Conservation Officer, pers. comm).

Many wildlife species occupy HWMA (Appendix IV). Ring-necked pheasants (*Phasianus colchicus*) and California quail (*Lophortyx californicus*), are year-round residents and several broods are produced each year. Mourning doves (*Zenaidura macroura*) utilize HWMA during the spring, summer and fall. Nuttall's cottontails (*Sylvilagus nuttallii*), and yellow-bellied marmots (*Marmota flaviventris*) are common in rocky and sagebrush covered habitat.

Mule deer (*Odocoileus hemionus*) take advantage of the interspersed woody thickets, and open fields. Muskrats (*Ondatra zibethicus*), beaver (*Castor canadensis*), mink (*Mustela vison*), raccoon (*Procyon lotor*), striped skunks (*Mephitis mephitis*), weasels (*Mustela* spp.), coyotes (*Canis latrans*), and river otters (*Lutra canadensis*) can be found in the wetland and upland habitats.

Fisheries

HWMA is located near a number of Magic Valley communities. Consequently, the area receives heavy fishing use. Since 1940, a series of 16 ponds have been developed with dikes and dams to provide habitat for fish and wildlife and to create recreational opportunities. Water and wetland vegetation constitutes about 163 acres of the total area.

The aquatic habitat is suitable for both coldwater and warmwater fish species depending on spring inflow and distance from spring heads. The ponds are shallow with mean water depths of approximately 3 ft. and maximum depths of 6.5-8.0 ft. All ponds are characterized by having muck (decaying organic matter) bottoms, which during the summer support extensive algae growth. Bulrush (*Scirpus acutus*), is common along shoreline areas and provides cover for fish. Overhanging vegetation is scarce, except at Oster Lakes where trees and shrubs are abundant (F. Partridge, Regional Fisheries Manager, pers. comm.).

An angler survey, conducted in July-October 1984, found anglers expended 24,000 hours of effort. This survey did not cover the March-June period which is the peak period for trout anglers on the Oster Lakes, Riley Creek and Riley Creek Impoundment (early fishing opener) and as much effort would be expended during this period. With that additional time period and the increase in area effort due to increased population and decreased access at Summer gravel ponds, an expected minimum of 50,000 hours of fishing effort is spent on HWMA annually.

Based on the economic value of this effort, the fishery at HWMA contributes over \$500,000.00 to the economy. Cost to the Department for the fish stocked is about \$25,500.00 based on the average annual stocking of 51,000 trout/year (F. Partridge, Regional Fisheries Manager, pers. comm.).

In addition to trout, largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) provide fair to excellent fishing opportunity depending on the individual pond. The warmwater fishery may be enhanced with adjusted water flows in the ponds; however, additional evaluation of current pond conditions and potential changes needs to be done prior to suggesting any significant changes. Changes in water management probably would not have any significant effects on waterfowl since fishery improvements wouldn't be necessary in the winter. Some summer flows may be improved with additional water structures (i.e., an outlet on the northwest end of Anderson # 2 would move water through a larger part of Anderson # 3) (F. Partridge, Regional Fisheries Manager, pers. comm.).

Threatened and Endangered Species

Only one species that occurs on HWMA is listed as threatened. Bald eagles (*Haliaeetus leucocephalus*) are occasionally observed roosting, or flying above the ponds. The USFWS has primary management authority for bald eagles.

PUBLIC USE

Public use of HWMA has been permitted since the Department purchased the property. Use patterns have occasionally been changed to properly manage the area and the wildlife resource. For example, duck hunting was eliminated when it was documented that many birds were being lost by crippling and from ingesting lead shot that was accumulating within the pond system. The fishing season was delayed until 1 July on the Anderson ponds, Bass ponds, Goose pond and West pond to provide undisturbed nesting and brood rearing areas, and to protect spawning bass. Public vehicle access to these areas was also prohibited to provide security for waterfowl and upland bird production. In addition, the dike system has now deteriorated from wind and water erosion. Any travel in the dike system by vehicles is dangerous.

Many people continue to use HWMA for fishing, picnicking, waterfowl observation, hiking, upland bird hunting, educational tours by schools, trapping, swimming, horse back riding, dog training and other enjoyable outdoor activities. An incidental survey (summer-early fall 1998) documented the following activities of 66 adults:

- Fishing - 42%
- Swimming - 41%
- Hunting - 15%
- Hiking - 2%

PHYSICAL IMPROVEMENTS

One administrative site exists on HWMA. The resident manager formerly used the residence and garage (built in 1949). They are currently used part-time by employees or graduate students working in the Magic Valley Region. In addition, there is a shop and a 7 bay storage building that was built in 1950. The residence, garage, shop and storage building are in need of maintenance (e.g., painting, windows, siding, roofing etc.). The residence roof was replaced in 1998. In approximately 1990, a hay shed was sided and converted to a storage building. Four metal granaries are used for storage. A history of major developments and occurrences are listed in Appendix V.

WATER RIGHTS

Thirteen water rights exist on HWMA (Appendix VI).

CHAPTER THREE - ISSUES, CONCERNS, OPPORTUNITIES AND ALTERNATIVES

ISSUE IDENTIFICATION

Issue identification included 3 major elements: local meetings in which elected officials and the concerned public were invited to evaluate public opinion; Department internal review of legal documents and lands; and input from the public through letters, public comment in newspapers, telephone conversations or via personal contacts.

Public Issues

The Department conducted open house format 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 HWMA. 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 2 categories.

Water Quality - One respondent (a muskrat trapper) felt that water quality had deteriorated in the last 5 years. He believes the cause is waste from fish hatcheries. As a result, fishing has been negatively affected and muskrat populations reduced.

Fishing Access - Fishermen would like to fish HWMA earlier than the present fishing opener. The Anderson ponds, Goose pond, Bass ponds and West pond are closed to fishing until 1 July to allow for waterfowl production and to protect spawning bass.

Department Issues

Four issues were identified by the Department staff as critical to future management of HWMA. The issues include:

Noxious Weeds - One of the dominant issues associated with future management of HWMA is the issue of noxious weed control. Several species of noxious weeds occur on the area including Canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), poison hemlock (*Conium maculatum*), Russian knapweed (*Acroptilon repens*), punctervine (*Tribulus terrestris*) and purple loosestrife (*Lythrum salicaria*). Although not a legally designated noxious weed, sandbur (*Cenchrus longispinus*) is troublesome in certain fields. Dedicated, persistent, timely and continuous effort is needed to control these weeds.

Waterfowl Hunting Opportunity - Places to hunt waterfowl in Magic Valley are limited because of limited access to the Snake River. Allowing controlled waterfowl hunting within HWMA would provide some quality hunting opportunity. The current use of non-toxic shot allows the consideration of this hunting opportunity.

Increased Fishing Access and Waterfowl Nesting and Brood Rearing Habitat - Since 1940, a series of 16 ponds have been developed with dikes and dams to provide habitat for fish and wildlife and to create recreational opportunities. Water surface area currently constitutes about 163 acres of the total area. An estimated 50,000 hours of fishing effort is spent at HWMA annually.

A portion of HWMA is open to fishing beginning 1 March each year. This opening is popular. Temperatures at HWMA are normally 6-7° F warmer than much of Magic Valley, which increases its desirability to fishermen. While this early fishing season is popular, it directly conflicts with the objective to provide habitat for waterfowl nesting and brood rearing. Fishermen numbers are so high, and visits are so frequent, that birds are unable to utilize these areas for nesting and brood rearing habitat. Other portions of HWMA are not open to fishing until 1 July to protect spawning bass and to provide habitat for waterfowl production. Allowing fishing that eliminates the ability of waterfowl to use the management area is contrary to the Federal Aid in Wildlife Restoration program that was used to purchase HWMA.

Pond Depth - Concern was expressed about the decreased depth of several ponds due to the inflow of sand and other sediments. The resulting shallow water is not providing the best habitat for either fish or waterfowl. It is felt that the shallow water areas freeze quicker than deep ponds, therefore resulting in less winter habitat for waterfowl.

MANAGEMENT ISSUES AND ALTERNATIVES

HWMA was purchased with Federal Aid in Wildlife Restoration program funding. The following are eligible for funding under the Federal Aid Program: A) The restoration, conservation, management, and enhancement of wild birds and wild mammals, and the provision for public use of and benefits from these resources. B) The education of hunters and archers in the skills, knowledge, and attitudes necessary to be responsible hunters or archers.

It must be emphasized that the purpose of developing issues and alternatives was to define and outline each of the basic approaches to management of HWMA that were consistent with Federal Aid in Wildlife Restoration funding and purposes for which the land was acquired. The scoping process revealed two main issues relative to management of HWMA. Preferred management directions were developed to indicate the direction the Department would like to proceed. This will allow the public to focus their comments.

Two issues were considered significant and 3 management alternatives were developed for each alternative.

Issue 1: Fishing Opportunity and Impacts on Waterfowl Nesting and Brood-rearing Habitat.

Alternative 1: (No Action)--Maintain current fishing season opener (1 March)-Preferred Alternative

Currently the fishing season opens in the Riley Creek Impoundment, Riley Creek and Oster Lakes on 1 March each year. Excessive numbers of people fishing in these areas throughout the fishing season prevent waterfowl from nesting and brood rearing. Implementation of this alternative would maintain the fish opener on 1 March and waterfowl would continue to be disturbed and no waterfowl production in these areas would be expected. Waterfowl production is expected to be 25% less on HWMA under this alternative.

Alternative 2: Delay fishing opener to 1 July.

The fishing season opener would be delayed to 1 July. Fishing opportunity would be reduced and the opener would be delayed past the critical period for waterfowl nesting and brood-rearing. Fishing opportunity would still be provided and waterfowl habitat would be protected. Broods of Canada geese and ducks would be produced. Waterfowl production could increase by 25% under this alternative. Late nesting and brood rearing could still be negatively impacted by this fishing opener.

Alternative 3: Close fishing season.

Fishing seasons would be terminated on HWMA. Total emphasis would be on habitat protection for waterfowl nesting and brood-rearing. The maximum number of waterfowl would be produced under this alternative. Broods of Canada geese and ducks would be hatched and raised under protected conditions.

Issue 2: Waterfowl Hunting Opportunity Within HWMA.

Alternative 1: (No Action)--Maintain current waterfowl hunting closure-Preferred Alternative.

This alternative would maintain the current emphasis on maintenance of waterfowl security cover. The current hunting closure would be maintained. Waterfowl would winter on HWMA undisturbed.

Alternative 2: Provide Controlled Waterfowl Hunting Opportunity

This alternative would provide for a controlled hunt opportunity scenario. Precise implementation will not be evaluated, but the general effects of a controlled hunting situation will be evaluated in relation to the effects it would have on security cover to waterfowl.

Alternative 3: Provide hunting opportunity under established general season framework throughout season.

This alternative would provide for general hunting opportunity on HWMA which would follow the established general hunting seasons. Wintering waterfowl would be disturbed.

CHAPTER FOUR - EFFECTS OF ALTERNATIVES

Each of the alternatives developed has obvious effects on public use of HWMA. This chapter will highlight the effects of each alternative.

Issue 1: Fishing Opportunity and Impacts on Waterfowl Nesting and Brood-Rearing Habitat

ALTERNATIVE 1

Under this alternative, management emphasis on HWMA would continue as currently practiced. The fishing season in Riley Creek Impoundment, Riley Creek and Oster Lakes would open to fishing on 1 March each year. Thousands of fishermen would be expected to use this area. A typical weekend opening attracts as many as 3,000 anglers (Grunder 1984). Continuous fishing pressure would not allow waterfowl to use these areas. Waterfowl production would not be expected on any of these areas. This alternative was preferred by the RS and submitted to the public as the preferred alternative.

Physical Effects

Under this alternative, large numbers of fishermen will utilize these areas on opening day and heavy use will continue throughout the season. Well traveled trails will be created by fishermen using the boundaries of the waters. Littering and trampling of the vegetation will be associated with this high level of fisherman use.

Biological Effects

Heavy use by fishermen will preclude the use of these areas by waterfowl. Korschgen and Dahlgren (1992) stated that several waterfowl studies have identified human disturbance as the cause of desertions or abandonments of nests, especially during early incubation. In addition, human disturbance during the brood rearing period can break up and scatter broods or frighten parents into running ahead of their ducklings or goslings (Korschgen and Dahlgren 1992). Human disturbance also has effects on non-breeding waterfowl through compelling waterfowl to change food habits, feed only at night, lose weight, or desert the feeding area (Korschgen and Dahlgren 1992).

Fishing pressure is so heavy and constant that waterfowl are chased from these areas. Because of the excessive use by fishermen, waterfowl cannot use the area for resting, loafing or brood production. Waterfowl brood production is estimated to be 25% less than potential as a result of fishermen using these areas during the spring and early summer when waterfowl production would normally occur. Nesting boxes for Canada geese and wood ducks can not be placed in these areas due to high fisherman use that would not allow the birds to successfully nest and raise their young.

Social Effects

Under this alternative large numbers of fishermen would continue to fish these areas beginning 1 March each year. A HWMA angler survey conducted in 1984 found anglers expended an estimated 24,000 hours of effort at Oster Lakes, Riley Creek and Riley Creek Impoundment during the early fishing season (1 March through June) (F. Partridge, Regional Fisheries Manager, pers. comm.). Rainbow trout are liberally stocked in these waters to provide good fishing. Twenty eight thousand, nine hundred (28, 900) fish were stocked in these waters during January through June, 1998. Fish ranged from 2-3 fish/lb. and 9.4 to 10.7 in. in length. Higher numbers were stocked in previous years as funding allowed (J. Chapman, Hagerman State Fish Hatchery Manager, pers. comm.).

Economic Effects

Large numbers of fishermen participate in the 1 March fishing opener. As a result, significant numbers of licenses, fishing equipment, vehicle gas, meals, etc. are purchased. An expected, annual minimum of 24,000 hours of fishing effort is spent during this early fishing season. Based on the economic value of this effort, the fishery during this early season contributes approximately \$369,792.00 to the economy. Cost to the Department of the fish stocked annually is about \$15,895.00 based on the stocking of 28,900 trout/year (F. Partridge, Regional Fisheries Manager, pers. comm.).

Mitigation

Allowing the fishing season to open 1 March on Riley Creek, Riley Creek Impoundment and the Oster Lakes negatively effects the ability of waterfowl to nest and raise young in these areas. For example, no waterfowl production has been observed on Oster Lakes by Department personnel. The areas that open to early fishing comprise approximately 25% of the water area of HWMA. The loss to waterfowl production by allowing this early fishing opening is significant, and conflicts directly with the primary mission and objectives of HWMA.

Under this alternative, mitigation measures to provide the lost waterfowl nesting habitat would be required. As a result, Billingsley Creek Wildlife Management Area (BCWMA) will be managed solely for the purpose of waterfowl nesting and brood rearing habitat (Gorgen, et. al. 1999). No fishing access will be developed within BCWMA.

ALTERNATIVE 2

Alternative 2 is designed specifically to focus on providing waterfowl habitat during the most critical time by delaying the fishing opening on the entire HWMA until 1 July. This alternative would provide a 25% increase in waterfowl nesting and brood rearing habitat. This alternative would delay the fishing opening on the 6 Oster Lakes, the Riley Creek Impoundment and Riley Creek until 1 July to coincide with the balance of HWMA. This alternative was preferred by the management team.

Physical Effects

Alternative 2 would increase the amount of waterfowl habitat available for nesting and brood rearing. Nests and broods would not be disturbed. Habitat on the affected area would be available for nesting and brood rearing during the critical time for waterfowl production. Waterfowl broods would be able to use the area undisturbed by fishing activity. Goose nesting structures and wood duck nesting boxes would be placed within the area. Affects of heavy fishing use (e.g., trails, litter, noise) would be delayed until 1 July.

Biological Effects

At least a 25% increase in waterfowl nesting and brood rearing habitat would be expected. There would be more waterfowl produced, therefore, more hunting and viewing opportunity in Magic Valley. The placement of 10 goose nesting structures would increase Canada goose production by an estimated 30-60 goslings annually. Wood duck nesting boxes would be placed in appropriate locations to provide nesting sites. Waterfowl and upland game birds would be able to nest in the habitat surrounding the waters.

Social Effects

This alternative would displace fishermen that normally fish HWMA during the period of March through June. The 1 March fishing opening on a portion of HWMA is popular with fishermen. The Hagerman State Fish Hatchery stocked 28,900 catchable trout for the early opening in 1998. This stocking effort has undoubtedly contributed to the popularity of this early fishing opening. Fishermen that normally fish this area would need to find other fishing areas. Many waters (e.g., Snake River, most reservoirs, the majority of waters in Gooding County) in the area are open to year-round fishing. Many of the fish that are stocked within HWMA for the early opening, could be stocked in these nearby waters to provide fishing success. Crowded fishing conditions would occur on 1 July each year.

Economic Effects

Alternative 2 would delay fisherman use of these areas to 1 July. Fishermen desiring to fish in the spring would have to use other waters in the area. A few fishermen might quit fishing if these areas were not available until 1 July. Young and handicapped fishermen may also be affected. There would be some economic loss to local communities and to the Department if the opening date was delayed. However, waterfowl production would increase. The loss of fishing income would likely be off set by the increased income in waterfowl hunting income to local communities and the Department.

Mitigation

Delay of the fishing opening on Riley Creek, Riley Creek Impoundment and Oster Lakes until 1 July would provide an opportunity for waterfowl to nest and rear their young. Waterfowl would still suffer some negative impacts by fishermen using the area starting 1 July; e.g., young birds may not be capable of escaping the area when disturbed by fishermen. Overall, waterfowl production would greatly increase under this management.

Hundreds of fishermen may be displaced by selection of this alternative. To offset this negative impact some mitigation opportunities include:

- Develop Billingsley Creek Wildlife Management Area (BCWMA) (purchased with Federal Aid to Fisheries monies) for maximum access for fishermen.
- Stock additional fish in Billingsley Creek.
- Create a pond fishery within BCWMA.
- Seek other nearby sites to provide fishing opportunities.
- Stock other nearby waters with extra fish.

ALTERNATIVE 3

Under this alternative, fishing seasons would be terminated on HWMA. Total emphasis would be on habitat protection for waterfowl nesting and brood rearing habitat. In addition, under this alternative, the Department would be in compliance with the Federal Aid in Wildlife Restoration Act requirement to manage HWMA for restoration, conservation, and enhancement of wild birds and wild mammals.

Physical Effects

Alternative 3 would eliminate the human impact on waterfowl during the nesting and brood rearing periods. The roads and trails used to provide fisherman access would be used only occasionally for management purposes. Vegetation would grow on these infrequently used roads and trails providing additional habitat. Roads and trails would be rehabilitated if they didn't naturally revegetate. Littering within the management area would be greatly reduced.

Biological Effects

This alternative would provide maximum habitat for the production of ducks and geese. Waterfowl would be able to nest and raise their young undisturbed by human activity. Waterfowl production would be expected to increase to the maximum extent possible on HWMA. Waterfowl would be able to utilize artificial nesting structures placed on these areas. Thousands (39,560 in 1998) of catchable fish would not be planted within HWMA.

Social Effects

Thousands of fishermen days would be lost, or certainly displaced, as a result of this alternative. New fishermen might be lost as a result of not having an easy pond-type place to fish. Fishermen would need to find other waters to fish. Off-site waterfowl hunting success would be expected to improve with the increase in waterfowl production. The numbers of waterfowl hunters would likely grow as a result of increased hunting opportunity.

Economic Effects

Some fishermen might give up fishing as a result of this alternative. Licenses, fishing equipment, vehicle gas, etc. might not be purchased, or at least delayed, if this area was not available for fishing. The number of waterfowl hunters could be expected to increase as hunting

success in areas surrounding HWMA improved. The purchase of licenses, waterfowl stamps, hunting equipment, vehicle gas, etc. would be expected to increase.

Mitigation

Under this alternative hundreds of fishermen would be displaced. Some mitigation measures could include the following:

1. Purchase other sites to provide fishing opportunity.
2. Develop BCWMA to provide fishing opportunities.
3. Plant fish that were stocked at HWMA in other nearby waters to improve fishing in these waters.

Issue 2: Waterfowl Hunting Opportunity Within HWMA.

ALTERNATIVE 1

This alternative would maintain the current emphasis on maintenance of waterfowl security cover. The current hunting closure would be maintained. Approximately 50,000 waterfowl would continue to winter undisturbed on HWMA. Winter waterfowl observation opportunities would be unlimited and easily available, even from vehicles. Off-site hunting opportunities are enhanced with this alternative. As thousands of waterfowl fly to and from HWMA they provide hunting opportunities. Canada goose hunting is excellent as the birds fly to feed in nearby corn (*Zea mays*) and winter wheat (*Triticum aestivum*) fields. This was the preferred alternative selected by the Regional Supervisor.

Physical Effects

Under this alternative physical effects stay as currently managed. Water structures and water flows are maintained to provide open water for wintering waterfowl. The dike system is maintained to provide ponds with stable water depths and vegetation. Littering, vegetation trampling and other results of human use are minimized.

Biological Effects

Approximately 50,000 waterfowl are able to winter within HWMA undisturbed from human activity. Swans, eagles and other water associated birds are able to use this protected area. The potential for disease (e.g., avian cholera, avian botulism, duck plague) is present with the concentration of thousands of waterfowl in a small area (Windingstad and Laitman 1988).

Some diseases that affect waterfowl, such as avian botulism, have been recognized for many decades as a major cause of death (Windingstad and Laitman 1988). Others, such as duck plague, are relative newcomers to the known roster of waterfowl diseases (Windingstad and Laitman 1988). Unfortunately, the number of waterfowl diseases as well as disease-breeding conditions are on the increase. As human development expands and encroaches on wetlands,

more waterfowl are forced into less habitat. The result, crowding can promote the spread of infectious diseases from one bird to another as well as increase the risk of diseases caused by toxicant and other noninfectious agents. Although millions of waterfowl die of disease each year (Windingstad and Laitman 1988), it is often difficult to "see" the disease process occurring. Sick and dying birds usually seek cover to hide, and predators and scavengers consume their remains. When disease becomes epidemic and sick and dead birds become too numerous for predators and scavengers to eliminate, the disease process becomes far more noticeable. Waterfowl diseases are caused by bacteria, viruses, parasites, fungi, and toxic substances (Windingstad and Laitman 1988). One disease preventative technique applicable at HWMA is to provide continuous flowing water at as high of volume as possible. Waterfowl can be hazed from HWMA, if that were desirable, in an attempt to reduce the spread of disease.

Social Effects

Off-site waterfowl hunting is excellent as a result of thousands of waterfowl being held in the area by HWMA. Canada goose hunting has particularly increased in popularity with sportsmen. Excellent goose hunting is available as the geese leave HWMA to feed in near- by corn or winter wheat fields. Non-consumptive waterfowl observation opportunity within HWMA is enjoyed by many people, sportsmen and non-sportsmen. Waterfowl hunting opportunities continue to be limited by the steep Snake River canyon and difficulty in obtaining access to private property. The waterfowl hunting closure boundary is kept outside the management area so no "firing line" is created. Safety issues are greatly reduced since the hunters are spread out over a wide area. On 26 May, 1988 a meeting of the Waterfowl Sanctuary Advisory Committee met at the Magic Valley Region Department office in Jerome. Among other decisions, the committee expressed it's opposition to waterfowl hunting on HWMA. The committee also stated that past hunting on HWMA resulted in poor sportsmanship, and high crippling loss. And the cost and time required by Department personnel to administer a hunt would be prohibitive for the limited hunting opportunity provided (C. Kvale, meeting minutes 5-31-88).

Economic Effects

Holding thousands of waterfowl in Magic Valley is beneficial to sportsmen. Off-site hunting opportunities are enhanced under this management. Some on-site hunting opportunity is given up in exchange for providing this waterfowl sanctuary. People that might take up, or return, to waterfowl hunting with easy access will not do so under this alternative.

Mitigation

This alternative would maintain the current emphasis on maintenance of waterfowl security cover. The current hunting closure would be maintained and no waterfowl hunting opportunities would be provided within HWMA. Mitigation measures could include:

- Providing off-site waterfowl hunting as the birds fly to and from HWMA to feed.
- Providing excellent waterfowl observation within HWMA.
- Providing a security area for waterfowl and other birds (e.g., swans, eagles).

ALTERNATIVE 2

This alternative would provide for a controlled hunt opportunity scenario. Precise implementation will not be evaluated, but the general effects of a controlled hunting situation will be evaluated in relation to the effects it would have on security cover to waterfowl.

Alternative 2 was designed to provide controlled waterfowl hunting opportunities within HWMA boundaries. Waterfowl hunting has been prohibited within HWMA since 1979. Hunting before that time, resulted in a large amount of toxic lead shot accumulating on the area. Crippling lost was considerable as a result of hunters shooting at high flying ducks. With the advent of non-toxic shot, waterfowl hunting on the area could be allowed. HWMA serves as a wintering area for approximately 50,000 ducks and 4,000 Canada geese. With the placement of hunting blinds and non-toxic shot, some controlled waterfowl hunting could be provided. However, there is the potential of waterfowl being disturbed, leaving HWMA, and perhaps leaving Magic Valley as a result of constant hunter disturbance. Non-game birds (e.g., swan, eagles) would not be provided a sanctuary from hunting and disturbance, although blinds would be strategically located by Department personnel. Administration and law enforcement would be greatly increased. Could limited entry be administered without great frustration to hunters and the Department? Regulations would be complicated to allow hunting while still providing a waterfowl sanctuary. This was the preferred alternative recommended to the RS by the management team.

Physical Effects

Under this alternative, waterfowl hunting blinds would be constructed and maintained by Department personnel or successful applicants. Hunters would be required to use these blinds for all waterfowl hunting. Trails to the blinds would need to be maintained. Littering would likely become a problem. Vehicle movement within the area would increase.

Biological Effects

Hunting within HWMA would reduce the undisturbed area that is available for waterfowl. However, hunting blinds could be located so waterfowl would still have some security and resting areas. Non-game birds (e.g., swans, eagles) would not have a protected sanctuary. Dispersal of the waterfowl by hunting activity might lessen the danger of fatal diseases (e.g., avian cholera, avian botulism, duck plague), that can occur when waterfowl are concentrated in small areas (Windingstad and Laitman 1988). By implementing this alternative the possibility for disease could decrease because the waterfowl would be dispersed.

The number of waterfowl diseases as well as disease-breeding conditions are on the increase (Windingstad and Laitman 1988). As human development has expanded and encroached on wetlands, more waterfowl have been forced into less habitat. The resulting crowding can promote the spread of infectious diseases from one bird to another as well as increase the risk of diseases caused by toxicant and other noninfectious agents (Windingstad and Laitman 1998). Although millions of waterfowl die of disease each year, it is often difficult to "see" the disease process occurring. Sick and dying birds usually seek cover to hide, and predators and scavengers eventually devour most of them. When disease becomes epidemic and sick and dead birds become too numerous for predators and scavengers to eliminate, the disease process becomes noticeable. Waterfowl diseases are caused by bacteria, viruses, parasites, fungi, and toxic

substances (Windingstad and Laitman 1988). One disease preventative technique applicable at HWMA is to provide continuous flowing water at as high of volume as possible. This may flush some of the disease agents through the HWMA pond system.

Social Effects

Waterfowl hunting sites are limited in Magic Valley due to the steep Snake River Canyon and restrictions to hunting on private property. Allowing limited waterfowl hunting within HWMA would provide some quality hunting opportunity. The frustration level of hunters desiring to hunt HWMA, but unable to draw a "permit" may be an issue. Administration of the limited, controlled hunting would be very demanding on Department employees. Waterfowl observation and other bird watching would be reduced. Safety concerns of mixing hunters and the non-hunting public would increase. On 26 May, 1988 a meeting of the Waterfowl Sanctuary Advisory Committee met at the Magic Valley Region Department office in Jerome. Among other decisions, the committee was opposed to allowing waterfowl hunting within HWMA. The committee stated that past hunting on HWMA resulted in poor sportsmanship, and high crippling loss. And the cost and time required by Department personnel to administer a HWMA hunt would be prohibitive for the limited hunting opportunity provided (Kvale, meeting minutes, 1988).

Economic Effects

License sales might increase with the availability of waterfowl hunting sites. This would be a desirable hunt for waterfowl hunters. People that have given up waterfowl hunting because of limited places to hunt might return to the sport if easy access was available to them. Sales of ammunition, decoys, clothing, gasoline, meals, etc., could be expected to increase within the local economy. The economic cost to the Department may be high under this alternative. Administration of the controlled hunt scenario (e.g., selecting permittees, determining hunting days, issuing permits, checking hunters in and out of the management area, maintenance of blinds, enforcement, etc.) would be time consuming.

Mitigation

This alternative would provide controlled waterfowl hunting within HWMA. The waterfowl security area would be reduced in size. Hunter activity within HWMA might cause the waterfowl and other non-game birds to leave the area. Mitigation could include:

- Hunting might be allowed a limited number of days during the week.
- Hunting blinds could be located away from the main concentration of wintering waterfowl.
- Hunters could be restricted to shooting only from within the blinds.

ALTERNATIVE 3

This alternative would provide for general waterfowl hunting opportunity on HWMA, which would follow the established general hunting seasons.

Physical Effects

This alternative would have the greatest physical effect of the alternatives. Vehicles and hunters would be constantly moving about HWMA. Trails would be established throughout the pond system. Litter would greatly increase. Toilets should be provided and maintained. Parking areas would need to be improved or developed.

Biological Effects

This alternative would have the greatest biological effect of the alternatives. HWMA would no longer serve as a sanctuary for waterfowl. The number of waterfowl using HWMA would dramatically decrease. Waterfowl concentrations would move to the Snake River and other open waters where they would be subject to hunting pressure. Many of the waterfowl would be expected to leave the Magic Valley and fly down river to other sanctuaries such as Deer Flat National Wildlife Refuge, near Nampa. Non-game birds (e.g., swans, eagles) would not be able to use HWMA due to the large number of hunters. The likelihood of disease occurring as a result of large numbers of waterfowl concentrating within a small area would be greatly reduced within HWMA.

Social Effects

Waterfowl hunting within HWMA would be popular with some hunters, but unpopular with others. Hunting conditions would be excellent on the slow flowing streams and ponds. However, the easy access would immediately result in crowded hunting conditions and hunter dissatisfaction. Waterfowl observation by the non-hunting public would not be available, as few waterfowl would be on HWMA. Law enforcement efforts would need to increase as large numbers of hunters concentrated on the area. The current excellent goose hunting in near-by fields would likely end as the geese were displaced from HWMA. An example of the unpopularity of this hunt occurred on 26 May, 1988 when a meeting of the Waterfowl Sanctuary Advisory Committee met at the Magic Valley Region Department office in Jerome. Among other decisions, the committee was opposed to allowing waterfowl hunting within HWMA. The committee stated that past waterfowl hunting within HWMA resulted in poor sportsmanship and high crippling loss. Also, the cost and time required by Department personnel to administer a HWMA hunt would be prohibitive for the limited hunting opportunity provided (C. Kvale, meeting minutes, 1988).

Economic Effects

This alternative might initially increase the number of license buyers due to easy access and the opportunity to hunt slow moving streams and ponds. Hunters without dogs could successfully hunt some of the area. Young hunters and others could enjoy this "easy" type of waterfowl hunting. However, waterfowl hunting in a several county area might be negatively effected. Allowing unrestricted waterfowl hunting within HWMA would displace thousands of waterfowl. If they were to leave the area and migrate elsewhere, waterfowl hunting opportunity within

Magic Valley would greatly decrease. Sales of licenses, stamps, hunting equipment, meals, etc. would then be negatively impacted.

Mitigation

This alternative would provide for general waterfowl hunting opportunity within HWMA, which would follow the established general hunting seasons. Thousands of waterfowl would lose a critical wintering area. These waterfowl would likely migrate from the area. Mitigation could include:

- Closing Billingsley Creek and Niagara Springs WMAs and other waterfowl wintering areas to hunting.
- Purchase of other property to provide waterfowl wintering areas.

CHAPTER FIVE - DEPARTMENT RESPONSES TO ISSUES, CONCERNS, OPPORTUNITIES AND ALTERNATIVES SELECTED

Public input and professional review of issues, concerns, and opportunities has resulted in identification of potential courses of action that comply with the purpose for purchasing HWMA, responsibility to Idaho citizens, and with all applicable state and federal laws and regulations. This chapter will outline Department identified courses of action that address these matters. The range of alternatives available to the Department is relatively narrow, given the legal obligations to manage HWMA for wildlife restoration purposes.

The intent of this section is to communicate the course of future management by the Department on HWMA. It is anticipated that once the decisions regarding management direction are approved, this document will guide future management activities on HWMA until another formal review including public input is completed.

ALTERNATIVES SELECTED

The Department has selected Alternative 1 for each of the 2 identified issues. The selected alternatives are consistent with current management of HWMA. Following is a review of the identified issues and selected alternatives:

Issue 1: Fishing Opportunity and Impacts on Waterfowl Nesting and Brood-Rearing

Currently the fishing season opens in the Riley Creek Impoundment, Riley Creek and Oster Lakes on 1 March each year. Excessive numbers of people fishing in these areas throughout the fishing season prevent waterfowl from nesting and brood rearing. Implementation of this alternative will maintain the fish opener on 1 March, waterfowl will continue to be disturbed, and no waterfowl production is expected in these areas. Waterfowl production is expected to be 25% less on HWMA under this alternative.

Selected Alternative: Management Alternative 1: (No Action)--Maintain current fishing season.

Under this alternative the 1 March fishing opening will be continued in the Riley Creek Impoundment, Riley Creek and Oster Lakes. Selection of this alternative has negative consequences for the production of waterfowl. Mitigation for this production loss may include:

1. Management of BCWMA (approximately 3 mi. north) for the sole purpose of waterfowl nesting and brood rearing habitat. No fishing access would be developed within BCWMA even though it was purchased with Federal Aid in Fisheries Funding (Gorgen et al. 1999).
2. Identify additional properties to purchase or lease, and manage for waterfowl nesting and brood rearing habitat.
3. Developing additional pond habitat, within HWMA, in the area north of the Anderson ponds.

4. Reducing the size of the area, within HWMA, that is available for early fishing opportunity. This measure would lessen the negative effect of heavy fishing pressure and increase the habitat for waterfowl nesting and brood rearing.

Issue 2: Waterfowl Hunting Opportunity Within HWMA

Selected Alternative: Management Alternative 1: (No Action)--Maintain current waterfowl hunting closure.

This alternative will maintain the current emphasis on maintenance of waterfowl security cover. The current hunting closure will be maintained. Waterfowl will winter within HWMA undisturbed. Mitigation measures would include:

1. Providing off-site waterfowl hunting as the birds fly to and from HWMA to feed.
2. Providing excellent waterfowl observation within HWMA.
3. Providing a security area for waterfowl and other birds (e.g., swans, eagles).

RATIONALE FOR ALTERNATIVE SELECTION

After carefully considering the range of opportunities and constraints afforded by the lands comprising HWMA, and public desires considering future management, the Department has identified a proposed plan for action. The rationale leading to these decisions is consistent with:

1. Management requirements and authorities for which these specific lands were acquired and for which they are to be managed (described in Chapter One);
2. The mission, goals and objectives of the Department for WMAs (described in Chapter One); and
3. Issues identified by the public, the Department, and cooperating agencies (identified in Chapter Three).

Wildlife Management

Ultimately the success or failure of HWMA management is based on the effectiveness of management activities in achieving wildlife objectives; i.e., does the management area winter substantial numbers of waterfowl? Is habitat for nesting and brood rearing of waterfowl and upland game species provided? Are public access and fishing opportunities available?

The Idaho Fish and Game Commission policy directs the Department to consider the potential of wildlife to provide recreational opportunities. HWMA can provide opportunities for wildlife-associated recreation, particularly those opportunities that further the purchase goal of wildlife restoration. Examples include, providing opportunities for winter waterfowl observation, sightseeing, hiking or other types of experiences that cause only minimal disturbance to wildlife.

For these reasons, the Department proposes the following measures on HWMA:

- Maintenance of ponds, water delivery systems, riparian vegetation, and dryland habitat to provide habitat for waterfowl and upland game species.
- Development of irrigated fields to provide nesting cover, food plots, and security cover.

Vegetation Management

Wildlife is dependent on suitable habitat to provide the correct mixture of food, water, shelter and security for continued existence. The success or failure of wildlife management objectives depends on successful vegetation management. The Department has specific direction to manage HWMA lands to protect, and enhance wildlife habitat.

Efforts to reduce or (where possible) eliminate noxious weeds and the potential for future infestation by undesirable plants will feature an integrated pest management approach to weed control. Biological, chemical, and mechanical measures will be used (based on relative efficiency and expense) to reduce or eliminate noxious weeds.

Recreation Management

A variety of recreational opportunities will be provided on HWMA lands. Motorized access will be limited to designated routes to protect and enhance wildlife habitat.

Consistent with Department objectives on other WMAs statewide, recreational hunting, fishing, and trapping will be allowed. Trapping will be regulated by limiting the number of trapping permits.

Wildlife Monitoring

Priorities for wildlife monitoring are to determine the impacts of management activities on target species and other species important to the Department wildlife program.

Waterfowl are counted annually on HWMA along with the regional mid-winter waterfowl survey. Canada goose broods are counted each spring on HWMA and on the irrigated pasture of our neighbor, where the majority of the goose broods are raised. Duck production can be estimated as broods are observed within the water delivery and pond system.

Proposals for conducting additional monitoring for a variety of habitat and/or wildlife variables will be viewed favorably by the Department. Such cooperative ventures could be undertaken with universities or other state or federal agencies.

MANAGEMENT GOALS

1. Provide secure winter habitat for approximately 50,000 waterfowl.
2. Maintain waterfowl production.
3. Maintain upland gamebird habitat.
4. Provide fishing opportunities.
5. Provide consumptive public benefits (e.g., upland hunting, non-game hunting, trapping).
6. Provide non-consumptive public benefits (e.g., hiking, sightseeing, photography, wildlife observation).

MANAGEMENT OBJECTIVES AND STRATEGIES

- I. Goal: Provide secure winter habitat for approximately 50,000 waterfowl.

The most significant contribution HWMA makes to waterfowl survival is through provision of winter habitat. HWMA historically winters between 10,000 and 100,000 waterfowl including approximately 4,000 Canada geese. The number of waterfowl wintering on HWMA is influenced by the severity of the winter, which determines the amount of open water in the surrounding area. As winters become severe, waterfowl are attracted to HWMA where conditions are relatively mild and the birds are not subjected to hunting. The Snake River is adjacent to HWMA and provides continuous open water. However, during the waterfowl hunting season (early-Oct. through mid-Jan.), the birds are subject to disturbance by hunters.

HWMA includes 16 ponds used by waterfowl during the winter months. The ponds are shallow with mean water depths of approximately 3 ft. and maximum depths of 6.5-8.0 ft. Hardstem bulrush is common along shoreline areas and plentiful throughout Anderson # 3. Anderson # 3 is favored by mallards. Water for the ponds comes from nearby springs. Even with this relatively warm water (58°F), several of the ponds freeze if cold temperatures last for several days. Other ponds will stay open all winter. Maintaining a maximum flow of spring water through the ponds helps to provide open water.

Waterfowl hunting closure boundaries have been established around HWMA to provide a waterfowl sanctuary. Without the sanctuary provided by HWMA, and the legal closure, waterfowl would likely receive excessive hunting pressure causing them to migrate from Magic Valley.

Objective: Maintain security cover for approximately 50,000 waterfowl.

Strategies:

1. Continue the waterfowl hunting closure surrounding HWMA to hold large numbers of waterfowl in the Magic Valley throughout the season.

2. Prohibit public vehicle access to the pond and wetland complex.
3. Provide abundant and open water on as many ponds as possible.
4. Provide approximately 25 acres of food crops (e.g., grain and alfalfa) for waterfowl consumption.

II. Goal: Maintain waterfowl production.

HWMA provides a variety of wetland and upland habitats conducive to duck and Canada goose production. The 16 ponds and associated vegetation provide nesting sites. Approximately 70 acres are irrigated for waterfowl and upland gamebird nesting habitat and food plots. Over 460 acres of sagebrush steppe is available for nesting. Other scattered areas of nesting habitat are located throughout HWMA. The installation of wood duck nest boxes and goose nesting platforms has increased the nesting potential of both species.

A cooperative agreement with an adjacent landowner provides 20 acres of privately owned irrigated pasture for geese and their broods. Several hundred geese, including broods in the spring, use this pasture daily. Immediately adjacent to this private pasture, 6 acres of HWMA has been developed as irrigated pasture for geese.

In a successful effort to increase the goose population, 70 young Canada geese were transplanted to HWMA in 1978. Gosling production has increased each year. In 1990 187 goslings were observed. An accurate estimate of duck production is difficult to obtain, but at least 400 ducklings are produced on HWMA annually. Prevalent breeders include mallards, gadwall, red heads, and ruddy ducks (IDFG 1991).

Objective: Maintain nesting and brood-rearing habitat.

Strategies:

1. Provide 40 acres of irrigated grass/alfalfa mixtures for nesting habitat.
2. Maintain 460 acres of sagebrush steppe in an undisturbed condition.
3. Maintain stable impoundment water levels during the nesting period to facilitate production of over-water nesting ducks.
4. Delay the fishing season in the pond complex to 1 July to reduce disturbance of nesting waterfowl.
5. Maintain 20 artificial nesting platforms for Canada geese and 8 wood duck nesting boxes.
6. Limit human activities within the pond-wetland complex during waterfowl breeding and nesting season (March through June).
7. Maintain 26 acres of Canada goose irrigated grazing pasture through cooperation with adjoining landowner.

III. Goal: Maintain upland gamebird habitat.

HWMA provides a variety of habitats conducive to upland gamebird production. Habitats include: 460 acres of sagebrush steppe and 70 acres that are available to provide irrigated nesting habitat and food plots. Other scattered areas of nesting habitat are provided in association with the forested uplands, ponds, wetlands and irrigation systems that are located throughout HWMA.

Objective: Provide upland gamebird habitat

Strategies:

1. Maintain the upland habitat in good condition.
2. Provide approx. 40 acres of irrigated nesting cover.
3. Provide approx. 12 acres of irrigated food plots (e.g., wheat, sorghum, flax, corn).
4. Limit public vehicles to main access roads.

IV. Goal: Provide fishing opportunities.

HWMA is located near several MV communities. Consequently, the area is a frequented fishing spot. Since 1940, a series of 16 ponds have been developed with dikes and dams to provide habitat for fish and wildlife and to create recreational opportunities. Water surface area currently constitutes about 163 acres of the total area.

The aquatic habitat is suitable for both coldwater and warmwater fish species depending on spring inflow and distance from spring heads. The ponds are shallow with mean water depths of approximately 3 ft. and maximum depths of 6.5- 8.0 ft. All ponds are characterized by having muck (decaying organic matter) bottoms, which during the summer, support extensive algae growth. Bulrush is common along shoreline areas and provides cover for fish. Overhanging vegetation is scarce except at the Oster Lakes where trees and shrubs are abundant.

An angler survey conducted in July-October 1984 found anglers expended 24,000 hours of effort. This survey did not cover the March-June period, which is the peak period for trout anglers on the Oster Lakes, Riley Creek and Riley Creek Impoundment (early fishing opener) and as much effort would be expended during this period. With that additional time period and the increase in area effort due to increased population and decreased access at Summer Gravel Ponds, an expected minimum 50,000 hours of fishing effort is spent on HWMA annually. Based on the economic value of this effort, the fishery at HWMA contributes over \$500,000.00 to the economy. Cost to the Department for the fish stocked is about \$25,500.00 based on the average annual stocking of 51,000 trout/year (F. Partridge, Regional Fisheries Manager, pers. comm.)

In addition to the trout fishing in the east-side ponds, ponds on the west-side contain largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) which provide a fair to excellent fishery depending on the individual pond. The warmwater fishery may be enhanced with adjusted water flows in the ponds; however, additional

evaluation of current pond conditions and potential changes needs to be done prior to suggesting any significant changes. Changes in water management probably would not have any significant impacts on waterfowl since I doubt that fishery improvements would be necessary in the winter. Some summer flows may be improved with additional water structures; (i.e., an outlet on northwest end of Anderson # 2 would move water through a larger part of Anderson # 3) (F. Partridge, Regional Fisheries Manager, pers. comm.).

Objective: Continue to provide fishing opportunities

Strategies:

1. Continue the present fishing schedule, unless modification is needed to provide waterfowl habitat:
 - The 4 Anderson ponds, the bass ponds, Big Bend Ditch, Goose Pond and the pond west of Highway 30
1 July - 31 Oct
 - Riley Creek Upstream from State Fish Hatchery Diversion
OPEN all year
 - All other waters
1 Mar - 31 Oct
2. Maintain access roads, parking lots, trails and 3 toilets.
3. Stabilize and monitor water levels.
4. Maintain signs designating seasons for fishing.

V. GOAL: Provide consumptive benefits to the public (e.g., upland hunting, trapping, fishing).

Upland hunting opportunities are limited due to the small area that is safe for hunting. Hunting is not allowed around the hatchery and HWMA buildings to protect workers and people living on the area (safety zone). Even during the open hunting seasons, visitors can be seen hiking and sightseeing. Nevertheless, a few pheasants, quail, and doves are harvested each year. Six mule deer were taken during the 1996 shotgun-only hunting season. A two-week, late winter trapping season is held each year to manage muskrat populations and lessen their damage to dikes, dams, and spillways.

Objective: Provide miscellaneous consumptive benefits to the public (e.g., upland hunting, nongame hunting, trapping).

Strategies:

1. Allow upland bird hunting away from safety zones.
2. Allow trapping of fur bearing animals.
3. Provide hunting opportunity for predatory and unprotected wildlife.

- VI. Goal: Provide non-consumptive benefits to the public (e.g., hiking, sightseeing, photography).

Maintenance-only roads are common throughout HWMA. These roads provide hiking paths, opportunities for sightseeing and photography. The National Fish Hatchery Road offers an overview of HWMA. For a closer look at waterfowl, visitors can drive to the U.S. Highway 30 rest area and walk a short distance to view waterfowl on Anderson pond # 3. West Pond, just north and across Highway 30 from the rest area, provides additional waterfowl and songbird viewing opportunities. A visitor parking area is located adjacent to the pond to provide easy access. The trails around the Oster Lakes allow visitors to view waterfowl, songbirds, and other wildlife. The southern most Oster Lakes trail provides a panoramic view of the Snake River, Gridley Island and the HV.

Objective: Provide non-consumptive benefits to the public.

Strategies:

1. Maintain dikes and trails around Oster lakes.
2. Maintain non-game habitat.
3. Maintain informational signs.
4. Promote winter observation of waterfowl through an informational brochure.

DETAILED PROPOSALS

It is impossible to include all of the detail for specific programs in this overview of planning for HWMA. Not only are the details of these plans lengthy, but they are subject to change on an irregular basis. Accordingly, and so as to inform all interested parties of Department plans in as much detail as possible, as frequently as needed, detailed program plans will be appended to this plan as they are developed, reviewed by the public and cooperating agencies, and adopted.

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APPENDIX I

HWMA LAND ACQUISITION HISTORY AND LEGAL DESCRIPTION

LAND ACQUISITIONS:

Gooding County

| <i>Year</i> | <i>Funds Used</i> | <i>Acres</i> | <i>Acquired From</i> |
|-------------|-----------------------|--------------|----------------------------|
| 1940 | PR | 423.47 | Richard W. Tucker |
| 1941 | PR | 35.07 | John C. Peterson |
| 1941 | PR | 35.93 | Emerson Boyer |
| 1941 | PR | 99.28 | John W. Smeed |
| 1951 | PR | 20.00 | Myrtle Clegg |
| 1951 | PR | 6.37 | Nellis S. Corthell |
| 1950 | PR | 32.00 | W.W. Henslee |
| 1953 | *License | 223.26 | U.S. Fish & Wildlife Serv. |
| 1959 | Land Exchange | 1.45 | E.M. Elmer |
| 1979 | Mitigation & Easement | 3.69 | Edna J. Radermacher |
| | Total | 880.52 | |

* Cooperative agreement with U.S. Fish and Wildlife Service (Hagerman National Fish Hatchery)

LEGAL LAND DESCRIPTION:

1. Richard W. Tucker
7 S., R. 13 E., B.M., Sec. 36, E ½ SW 1/4, W1/2SE1/4, SE1/4SE1/4 less 1.01 acre in NE corner described as follows:
Beginning at NE corner, thence South 230', thence West 170', thence North 145`, thence North 77 West 66.8`, thence North 70', thence East 235` to point of beginning.
8 S., R. 13 E., B.M., Sec. 1, Lots 1, 2, 6 and 7, SE1/4NE1/4; T. 8S., R. 14 E.B.M., Sec. 6, Lots 4, 5, & 6. (35.21 acres taken out Hatchery). Note: See Hatchery data for exclusions on Tucker segment.
2. John C. Peterson
7 S., R. 13 E., B.M., Sec. 36, NW1/4SW1/4; (Highway R/W of 4.93 acres)
3. Emerson Boyer
Sec. 36, SW1/4SW1/4; (Highway R/W 4/07 acre).

4. John W. Smeed
 Sec. 35, SE1/4SE1/4, that part of the NE1/4SE1/4 and E1/2NE1/4 described as follows:
 Beginning at a point which lies North 1320' from the SE corner of said Section 35, thence North 3440', thence West 1206', thence S. 13 05'30" East 3551', thence East 401' to the point of beginning. (Highway R/W 3.98 acre).
5. Myrtle Clegg
 8 S., R. 13 E., B.M., Sec. 1, North 660 ft. of Lot 3 (Highway R/W of .32 acre).
6. W.W. Henslee
 7 S., R. 13 E., B.M., Sec. 36, SW1/4NW1/4 except the West 269 ft.
7. Nellis S. Corthell
 Sec. 36, West 269 ft. of SW1/4NW1/4; (Highway R/W 1.63 acre).
8. U.S. Fish & Wildlife Service
 T 8 S., R. 14 E., B.M. Tract (4) Sec.5, that part of SW1/4SW1/4 described as follows:
 Beginning at the southeast corner of said SW1/4SW1/4 thence westerly with the section line to a point 100 ft. easterly of the precipice of the upper rim rock of Snake River Canyon; thence northwesterly parallel to and 100 ft. northeast of said rim rock to the west line of said section five; thence northerly with said section line to a point 114.6 ft. south of the northwest corner of said SW1/4SW1/4; thence N. 67 00' E., 308.5 ft. to a point in the north line of said SW1/4SW1/4, 285.5 ft. east of the northwest corner of said SW1/4SW1/4; thence S. 83 40' E., 612.8 ft. to a point in the east line of said SW1/4SW1/4, 80.3 ft. south of the northeast corner thereof; thence southerly with the said east line of the SW1/4SW1/4 to the place of beginning.
 Section 6, that part of Lot 8 lying northeast of a line parallel to and 100 ft. northeast of the precipice of the upper rim rock of Snake River Canyon and southeast of the southeast right-of-way line of the 7-D waste ditch of the Twin Falls North Side Land and Water Company.
 Section 8, that part of Lot 1 and the NE1/4NW1/4 lying northeast of a line parallel to and 100 ft. northeast of the precipice of the upper rim rock of Snake River Canyon.
 Tract (4a)
 Sec. 6, Lot 7, that part of Lot 8 lying northwest of the northwest right-of-way line of the 7-D waste ditch of the Twin Falls North Side Land and Water Company and south and east of the south and east shore of Hatchery Lake; that part of SW1/4NE1/4 lying above the rim rock of the Snake River
 The following described parcel is excluded from the above described tracts:
 Sec. 6, in Lot 9 and NE1/4SE1/4, a right-of-way 100 ft. wide being 50 ft. on each side of the center line of Hatchery Lake overflow.
9. E.M. Elmer
 7 S., R. 14 E., B.M., Sec. 31, Portion of Lot 4 lying south of county road.

10. Edna J. Radermacher T. 8 S., R. 13 E., B.M., Sec 1, portion of Lot 3, more particularly described as follows:

Beginning at the section corner common to Section 35, 36, T. 7 S., R. 13 E., and Section 1, 2 T. 8 S., R. 13 E., Boise Meridian, Gooding County, Idaho; Thence S.

24' 53" E. a distance of 2721.45 ft. to the TRUE POINT OF BEGINNING: thence S. 89 31'

06" W. a distance of 682.98 ft.; thence S. 55 53" 01" E. a distance of 829.17 ft.; thence N. 0 25' 34" W. a distance of 470.41 ft. to the TRUE POINT OF BEGINNING.

This parcel of land contains 3.69 acres, more or less.

APPENDIX II
MID-WINTER WATERFOWL COUNT SUMMARY

Hagerman WMA

| <u>Year</u> | <u>Ducks</u> | <u>Geese</u> | <u>Swans</u> | <u>Total</u> |
|-------------|--------------|--------------|--------------|--------------|
| 1971 | 50,000 | 0 | 0 | 50,000 |
| 1972 | 60,250 | 0 | 0 | 60,250 |
| 1973 | 65,000 | 0 | 0 | 65,000 |
| 1974 | 25,000 | 0 | 0 | 25,000 |
| 1975 | 3,816 | 101 | 0 | 3,917 |
| 1976 | 23,525 | 35 | 0 | 23,560 |
| 1977 | 40,098 | 0 | 0 | 40,098 |
| 1978 | 8,650 | 1,000 | 2 | 9,652 |
| 1979 | 89,782 | 27 | 0 | 89,809 |
| 1980 | 120,000 | 0 | 0 | 120,000 |
| 1981 | 70,000 | 0 | 0 | 70,000 |
| 1982 | 51,260 | 200 | 0 | 51,460 |
| 1983 | 130,404 | 423 | 0 | 130,827 |
| 1984 | 6,973 | 43 | 0 | 7,016 |
| 1985 | 14,266 | 725 | 4 | 14,995 |
| 1986 | 23,314 | 96 | 0 | 23,410 |
| 1987 | 34,970 | 356 | 2 | 35,328 |
| 1988 | 9,046 | 1,203 | 0 | 10,249 |
| 1989 | 18,782 | 2,569 | 30 | 21,381 |
| 1990 | 46,731 | 3,427 | 0 | 50,158 |
| 1991 | 19,280 | 1,138 | 0 | 20,418 |
| 1992 | 13,758 | 4,117 | 0 | 17,875 |
| 1993 | 19,703 | 298 | 0 | 20,001 |
| 1994 | 55,652 | 1,686 | 3 | 57,341 |
| 1995 | 58,993 | 2,794 | 0 | 61,787 |
| 1996 | 7,545 | 98 | 0 | 7,643 |
| 1997 | 12,344 | 4,014 | 2 | 16,360 |
| 1998 | 35,614 | 3,861 | 0 | 39,475 |
| AVG | 41,031 | 782 | 2 | 41,814 |

APPENDIX III

MID-WINTER WATERFOWL COUNT - HWMA, 1998

| | <u>Species Total</u> |
|------------------|----------------------|
| Mallard | 34,116 |
| Pintail | 314 |
| Gadwall | 28 |
| American Widgeon | 503 |
| Shoveler | 29 |
| Wood Duck | 30 |
| Lesser Scaup | 75 |
| Redhead | 21 |
| Canvasback | 16 |
| Ring-Necked Duck | 302 |
| Common Goldeneye | 22 |
| Bufflehead | 110 |
| Ruddy Duck | 48 |
| Total Ducks | 35,614 |
| Canada Geese | 3,861 |

APPENDIX IV
HWMA GENERAL SPECIES INVENTORY

H=High
M=Moderate
L=Low
N=Not present

| | Species | Population Level By Season | | | |
|--------------|---------------------------|----------------------------|----|----|----|
| | | Wn | Sp | Sm | Fl |
| BIRDS | American Coot | H | H | H | H |
| | Eared Grebe | N | L | N | L |
| | Western Grebe | N | L | N | L |
| | Pied-billed Grebe | L | L | L | L |
| | Caspian Tern | N | L | L | L |
| | Forster's Tern | N | L | L | L |
| | Black Crowned Night Heron | N | H | H | H |
| | Great Blue Heron | L | L | L | L |
| | American Bittern | N | H | H | H |
| | Virginia Rail | M | M | M | M |
| | Sora Rail | M | M | M | M |
| | American Avocet | N | L | L | N |
| | Black-Necked Stilt | N | L | L | N |
| | White-Faced Ibis | N | L | N | N |
| | Spotted Sandpiper | N | L | L | L |
| | California Gull | M | M | M | M |
| | Mallard | H | M | M | M |
| | Northern Pintail | L | L | L | M |
| | Blue-Winged Teal | N | L | L | N |
| | Cinnamon Teal | N | H | H | H |
| | Green-wing Teal | H | H | H | H |
| | American Widgeon | H | M | M | M |
| | Gadwall | H | H | H | H |
| | Northern Shoveler | L | H | L | L |
| | Lesser Scaup | L | L | L | L |
| | Ring-necked Duck | H | L | N | N |
| | Bufflehead | H | L | N | N |
| | Ruddy Duck | H | H | H | H |
| | Redhead | N | H | H | L |
| | Canvasback | L | L | N | N |
| | Common Merganser | L | L | L | L |
| | Hooded Merganser | L | L | L | L |
| | Canada Goose | L | M | M | L |
| | Snow Goose | L | N | N | L |

APPENDIX IV (Cont.)

| Species | Population Level By Season | | | |
|-------------------------|----------------------------|-----|-----|----|
| | Wn | Sp | Sm | Fl |
| Tundra Swan | N | L | N | L |
| Red-wing Blackbird | N | H | H | H |
| Brewer's Blackbird | H | H | H | H |
| Yellow-Headed Blackbird | N | H | H | N |
| Turkey Vulture | N | M | M | N |
| Golden Eagle | M | M | M | M |
| Northern Harrier | H | H | H | H |
| Red-tailed Hawk | M | M | M | M |
| Rough-Legged Hawk | H | N | N | N |
| Prairie Falcon | L | L | L | L |
| Peregrine Falcon | UKN | UKN | UKN | L |
| American kestrel | H | H | H | H |
| Sharp-shinned Hawk | M | L | L | L |
| Cooper's Hawk | M | L | L | L |
| Northern Goshawk | M | N | N | L |
| Great Horned Owl | M | M | M | M |
| Screech Owl | M | M | M | M |
| Short-eared Owl | L | L | L | L |
| Common Nighthawk | N | M | M | N |
| Marsh Wren | L | L | L | L |
| Rock Wren | L | L | L | L |
| Canyon Wren | L | L | L | L |
| Dippers | L | L | L | L |
| Mourning Dove | N | H | H | N |
| California Quail | M | M | M | M |
| Ring-necked Pheasant | H | H | H | H |
| Gray Partridge | L | L | L | L |
| Red-Shafted Flicker | M | M | M | M |
| Western Meadow Lark | H | H | H | H |
| Western Flycatcher | N | M | M | N |
| Say's Phoebe | N | L | L | L |
| Horned Lark | L | N | N | N |
| Violet Green Swallow | N | M | M | N |
| Barn Swallow | N | H | H | N |
| Bank Swallow | N | H | H | N |
| Black-billed Magpie | H | H | H | H |
| Common Raven | L | L | L | L |
| Loggerhead Shrike | L | L | L | L |
| Starling | H | H | H | H |
| American Robin | L | H | H | H |

APPENDIX IV (Cont.)

| Species | Population Level By Season | | | |
|------------------------|----------------------------|----|----|----|
| | Wn | Sp | Sm | Fl |
| Evening Grosbeak | L | N | N | L |
| Black-Headed Grosbeak | N | H | H | L |
| Yellow-Breasted Chat | N | H | H | L |
| Yellow Warbler | N | H | H | L |
| Ruby-Crowned Kinglet | L | L | L | L |
| Golden-Crowned Kinglet | L | L | L | L |
| Oregon Junco | L | N | N | L |
| Song Sparrow | H | H | H | H |
| White-Crowned Sparrow | H | H | N | H |
| Tree Sparrow | M | M | N | L |
| Vesper Sparrow | L | L | L | L |
| Savannah Sparrow | N | M | M | M |
| MAMMALS | | | | |
| Muskrat | H | H | H | H |
| Beaver | M | M | M | M |
| Mule Deer | L | L | L | L |
| Yellowbellied Marmot | H | H | H | H |
| Raccoon | L | L | L | L |
| River Otter | M | M | M | M |
| Longtail Weasel | M | M | M | M |
| Shortail Weasel | M | M | M | M |
| Mink | M | M | M | M |
| Striped Skunk | M | M | M | M |
| Badger | L | L | L | L |
| Fox Squirrel | M | M | M | M |
| Sagebrush Vole | M | M | M | M |
| Longtail Vole | M | M | M | M |
| Ord's Kangaroo Rat | M | M | M | M |
| Coyote | L | L | L | L |
| Nuttall's Cottontail | L | L | L | L |
| Porcupine | L | L | L | L |
| FISH | | | | |
| Largemouth Bass | H | H | H | H |
| Bluegill | H | H | H | H |
| Rainbow Trout | H | H | H | H |
| Bullfrog | M | M | M | M |
| Brown Bullhead | M | M | M | M |
| Yellow Perch | M | M | M | M |
| Common carp | L | L | L | L |
| Shoshone sculpin | L | L | L | L |

APPENDIX IV (Cont.)

| Species | Population Level By Season | | | |
|----------------------------------|----------------------------|----|----|----|
| | Wn | Sp | Sm | Fl |
| AMPHIBIAN & REPTILES | | | | |
| Pacific chorus frog | M | M | M | M |
| Western Terrestrial Garter Snake | M | M | M | M |
| Racer | M | M | M | M |
| Gopher Snake | M | M | M | M |
| Side-blotched lizzard | M | M | M | M |
| Sagebrush lizzard | M | M | M | M |
| Western Skink | M | M | M | M |

APPENDIX V

HISTORY OF DEVELOPMENTS AND OCCURRENCES AT HAGERMAN WMA

| | |
|-----------|--|
| 1940 | Purchased 423.47 acres from Richard Tucker. |
| 1941 | Purchased 35.07 acres from John C. Peterson. |
| 1941 | Purchased 35.93 acres from Emerson Boyer. |
| 1951 | Purchased 99.28 acres from John W. Smeed. |
| 1951 | Purchased 20.00 acres from Myrtle Clegg. |
| 1950 | Purchased 32.00 acres from W.W. Hensless. |
| 1953 | License agreement with U.S. Fish and Wildlife Service, 223.26 acres |
| 1959 | Land Exchange (1.45 acres) with E.M. Elmer. |
| 1979 | Mitigation and Easement (3.69 acres) with Edna J. Radermacher. |
| 1941 | Garage and workshop completed. |
| 1943 | Bass pond constructed. |
| 1949 | Manager's residence constructed. |
| 1949 | Hatchery complex, 1st phase. |
| 1950 | Shop and storage building constructed. |
| 1951-1953 | Oster Lakes and Anderson Ponds constructed. |
| 1953 | Riley Creek bridge and dam constructed. |
| 1957 | Lower Riley Creek bridge constructed. |
| 1958 | Dikes and canals, 1st phase. Oster Lakes complex completed. |
| 1959 | Half an acre of shrubs planted below HWMA residence. |
| 1960's | Approximately 100 acres of trees and shrubs planted. |
| 1974 | Started 1 March fishing opening on Oster Lakes. |
| 1978 | Captive flock of Canada geese raised at Goose pond pen. |
| 1978-1980 | Lead poisoning study conducted by Gary Hompland. |
| 1979 | Waterfowl hunting on HWMA closed due to accumulated lead shot and crippling loss. Dragline work in Anderson Ponds and on dikes |
| 1980 | Sprinkler irrigation system installed for 40 acres. Anderson Ponds water delivery system constructed. |
| 1981 | Anderson Pond # 4 constructed. Pond perimeter channels completed. |
| ~1985 | Hay shed sided for equipment storage. |
| ~1990 | Waterfowl observation blind placed at Riley Creek Impoundment for public use. |

- 1993 Silver sage brush (*Artemisia cana cana*) interseeded into 4-5 acres just south of hatchery raceways.
- ~1990 Handicapped fishing access built at Oster Lake # 1 by National Fish Hatchery personnel.
- 1993 Department adopted habitat district organization of lands personnel.
- 1994 New sewer drain field constructed for HWMA residence.
- 1995 HWMA brochure printed for distribution to the public.
- 1996 New water flow structure installed by Engineering personnel connecting Upper and Lower Bass ponds. Began cooperative agreement with Shelby Wise to provide goose pasture on 20 acres of his private property and 6 acres on HWMA. One man shot & killed and one young woman assaulted as part of activities at Big Bend Ditch swimming hole. Five hundred beetle eggs placed at Anderson pond # 3 in an effort to control purple loosestrife. Oster lake # 4 dike repaired by Engineering personnel.
- 1997 Swimming hole on Big Bend Ditch partially filled in, and rocks placed on "beach" by the Department Engineering crew to discourage swimmers.
- 1998 Six acres of Canada goose pasture cleared of trees and planted to grass behind HWMA residence. Bridge across Big Bend Ditch rebuilt using poured concrete. Twin Falls County Juvenile Probation-Community Service Agency adopts HWMA as an Adopt-A-Wetland cooperator. Fields 4, 6, 7 and 8 planted to a drought resistant grass-alfalfa mixture to reduce labor intensive irrigation. Roof replaced on HWMA residence. Helicopter spraying of Anderson pond # 3 to control purple loosestrife. Intensive planning process began for WMAs.

APPENDIX VI

HWMA WATER RIGHTS

| Water Right # | Priority Date | Rate | Volume | Purpose | Source |
|---------------|------------------|-------|--------|---|------------------------------|
| 36-00012 | 09/01/1889 | 2.20 | - | Irrigation | Len Lewis Spr |
| 36-00028 | 10/01/1908 | 0.16 | - | Irrigation | Upper Tucker Spr |
| 36-00133A* | 12/17/1903 | 7.60 | - | Wildlife | Upper Tucker Spr |
| 36-02055 | 09/16/1947 | 64.00 | - | Fish propagation/ hatchery | Upper Tucker Spr |
| 36-02056 | 09/16/1947 | 3.00 | - | Fish propagation/bass ponds; Anderson 1,2,3 & impoundment ponds | Upper Tucker Spr |
| 36-02158 | 04/22/1956 | 8.62 | - | Irrigation, fish propagation Oster Lakes | Bickel Lake Len Lewis Spr |
| 36-02159 | 04/23/1956 | 20.00 | - | Fish propagation/ hatchery | Upper Tucker Spr |
| 36-02706 | 10/21/1952 | 45.00 | - | Irrigation; fish propagation/hatchery | Riley Cr. |
| 36-07249 | 06/05/1972 | 24.00 | - | Fish propagation/ hatchery | Riley Cr. |
| 36-07836 | 01/10/1979 | 2.47 | - | Fish propagation/ Anderson Ponds 3 & 4 | Anderson # 3 |
| 36-07855 | 05/03/1979 | 19.22 | - | Fish propagation/ Anderson Ponds 1-4 | Riley Cr. |
| 36-15153 | 03/15/1952 | 3.00 | - | Wildlife/wildlife storage | Len Lewis Spr |

*This was recommended as part of Big Bend Ditch right #36-00133; there were several objectives filed regarding this claim and it has not been decided what water, if any, will go to the Department for wildlife. This use may be transferred to #36- 00192 (also Big Bend Ditch right).

APPENDIX VII
FEDERAL AID PROJECT STATEMENT AND PROGRESS REPORT
HAGERMAN HABITAT DISTRICT

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 |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|--|---------------|---------------------|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| 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 |
| 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 |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|--|---------------|---|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| 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 |
| 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 |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|---|---------------|--|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| 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 |
| 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 |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|---|---------------|----------------------|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| 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 | | |
| Maintain shrub, tree, and riparian habitat | 1211 | 760 acres 2 weeks | | 3,172 | | Species benefited: Pheasants, Quail |
| 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: |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|--|---------------|---------------|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| 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 |
| 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 |

| ACTIVITY | ACTIVITY CODE | UNITS OF WORK | | COST | | COMMENTS* |
|---|---------------|---------------|--------|---------|--------|---|
| | | Planned | Actual | Planned | Actual | |
| Maintain regulatory signs | 1211 | 1 week | | 1,586 | | Species benefited: CAGO, MALL, NOPI, GADW, AMWI, NSHO, BUFF, AGWT, WODU, LESC, REDH, RNDU, RUDU |
| 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 | \$ 36,868 |
| Outside Funds | 76,335 |
| Grand Total | \$113,203 |

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. The 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 eager to get outdoors after a long winter of inactivity. 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 acres of BCWMA lie in the Hagerman Valley near the Snake River and 2 mi. 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 ft. on the creek, to 3,200 ft. on the canyon rim. Several springs originate along the basaltic rim rock and feed a lowland marsh 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° F 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 the WMA with an average depth of 6 ft. and a width of 25 ft. 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 marsh covers approximately 82 acres. Most of the marsh is covered with bulrush, 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 valley 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. It provides winter and hunting escape cover for pheasants and raptor feeding areas.

The area naturally 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 over. 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 on the WMA 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 the chemical Rodeo. 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. One cooperative agreement with an adjacent landowner provides 20 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 mi. 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 |
| Gadwall | GADW |
| American Wigeon | AMWI |
| American Green-winged Teal | AGWT |
| Blue-winged Teal | BWTE |
| Cinnamon Teal | CITE |
| Northern Shoveler | NSHO |
| Northern Pintail | NOPI |
| Wood Duck | WODU |
| Redhead | REDH |
| Canvasback | CANV |
| Lesser Scaup | LESC |
| Ring-necked Duck | RNDU |
| Bufflehead | BUFF |
| Ruddy Duck | RUDU |
| Canada Goose | CAGO |

Plan prepared by:

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